

# MRV532

Receiving Card



## Specifications

## Change History

| Document Version | Release Date | Description  |
|------------------|--------------|--|
| V1.1.1           | 2024-10-22   | <ul style="list-style-type: none"><li>• Added certification information.</li><li>• Added multi-batch adjustment.</li><li>• Added a note for LCD-related features.</li><li>• Updated descriptions for load capacity.</li></ul>                    |
| V1.1.0           | 2024-09-15   | <ul style="list-style-type: none"><li>• Added features such as color management, 18bit+, HDR, and individual gamma adjustment for RGB.</li><li>• Updated descriptions for load capacity.</li><li>• Deleted seam brightness correction.</li></ul> |
| V1.0.2           | 2024-05-23   | <ul style="list-style-type: none"><li>• Added descriptions for line decoding signal.</li><li>• Updated descriptions for load capacity.</li></ul>   |
| V1.0.1           | 2024-05-15   | <ul style="list-style-type: none"><li>• Added the software copyright.</li><li>• Updated descriptions for load capacity.</li><li>• Updated product feature descriptions.</li><li>• Updated the HUB port name.</li></ul>                           |

## Introduction

The MRV532 is a receiving card developed by Xi'an NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar). Supporting various functions such as Color Management, 18bit+, HDR, Pixel Level Brightness and Chroma Calibration, Quick Adjustment of Dark or Bright Lines, Multi-batch Adjustment, Low Latency, 3D, Individual Gamma Adjustment for RGB, and 90° Image Rotation, the MRV532 can significantly improve the display effect and user experience.

The MRV532 uses 10 standard HUB320F connectors to ensure highly stable communication, supporting up to 40 groups of RGB real pixel data, 40 groups of 3-LED sub-pixel data, or 30 groups of 4-LED sub-pixel data.

- For PWM driver ICs, the maximum load capacity per card is:
  - When used with M3 controllers:
    - 512×512@60Hz (For 8bit video sources)
    - 512×384@60Hz (For 10bit and 12bit video sources)

- When used with COEX controllers:
  - 512×512@60Hz (For 8bit and 10bit video sources)
  - 512×384@60Hz (For 12bit video sources)
- For common driver ICs, the maximum load capacity per card is:
  - When used with M3 controllers:
    - 512×384@60Hz (For 8bit video sources)
    - 256×384@60Hz (For 10bit and 12bit video sources)
  - When used with COEX controllers:
    - 512×384@60Hz (For 8bit and 10bit video sources)
    - 256×384@60Hz (For 12bit video sources)

## Certifications

RoHS, EMC Class A.

**If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem.**

**Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.**

## Features

### Improvements to Display Effect

- Color Management
  - Support standard (Rec.709 / DCI-P3 / Rec.2020) and custom color gamuts, enabling more precise colors on the screen.
- 18bit+
  - Improve the LED display grayscale by 4 times to avoid grayscale loss due to low brightness and allow for a smoother image.
- HDR
  - Support HDR10 and comply with the SMPTE ST 2084 and SMPTE ST 2086 standards.
  - Support HLG.

- Pixel Level Brightness and Chroma Calibration

Work with NovaStar's high-precision calibration system to calibrate the brightness and chroma of each pixel, effectively eliminating differences and enabling high consistency for both brightness and chroma.

- Quick Adjustment of Dark or Bright Lines

The different brightness of seams caused by splicing of modules or cabinets can be corrected to improve the visual experience. The correction is easy and takes effect immediately.

- Multi-batch Adjustment

Adjust the brightness of cabinets or modules to minimize display discrepancies caused by variations in production batches.

- Low Latency

The latency of video source on the receiving card end can be reduced to 1 frame (only when using modules with driver IC with built-in RAM).

- 3D

Work with the controller that supports 3D function to enable 3D output.

- Individual Gamma Adjustment for RGB

Working with NovaLCT and the controller that supports this function, the receiving card supports individual adjustment to red gamma, green gamma and blue gamma, which can effectively control image non-uniformity at low grayscale conditions and white balance offset, allowing for a more realistic image.

- 90° Image Rotation

The display image can be rotated in multiples of 90° (0°/90°/180°/270°).

## Improvements to Maintainability

- Automatic Module Calibration

After a new module with flash memory is installed to replace the old one, the calibration coefficients stored in the flash memory can be automatically uploaded to the receiving card when it is powered on, which ensures unchanged uniform display brightness and chroma.

- Module Auto Light-up (dedicated firmware required)

After a new module with flash memory is installed to replace the old one, the configuration file stored in the memory can be automatically uploaded to the receiving card when it is powered on. This ensures the module can be lighted up without issue.

- Module Flash Management

For modules with flash memory, the information stored in the memory can be managed. The calibration coefficients and module ID can be stored and read back.

- One-click to Apply Calibration Coefficients in Module Flash

For modules with flash memory, when the Ethernet cable is disconnected, users can hold down the self-test button on the cabinet to upload the calibration coefficients in the memory of the module to the receiving card.

- Mapping 1.1

The cabinets can display the controller number, receiving card number, and Ethernet port information, allowing users to easily obtain the locations and connection topology of receiving cards.

- Settings of a Stored Image in the Receiving Card

The image displayed during startup, or displayed when the Ethernet cable is disconnected or there is no video signal can be customized.

- Temperature and Voltage Monitoring

Real-time monitoring of the temperature and voltage of the receiving card, without the need for other external devices.

- Bit Error Detection

Real-time monitoring of the communication of the Ethernet port on the receiving card which helps users troubleshoot network communication problems.

- Firmware Program Readback

The receiving card firmware program can be read back and saved to the local computer.

- Configuration Parameter Readback

The receiving card configuration parameters can be read back and saved to the local computer.

## Improvements to Reliability

- Dual NCP Backup

The NCP file is stored in the application area and factory area of the receiving card at the same time. Typically, the NCP file in the application area is used. However, during a factory reset, the NCP file can be retrieved from the factory area.

- Loop Backup

The receiving card and controller form a loop via the primary and backup line connections. When a fault occurs at a location of the lines, the screen can still display the image normally.

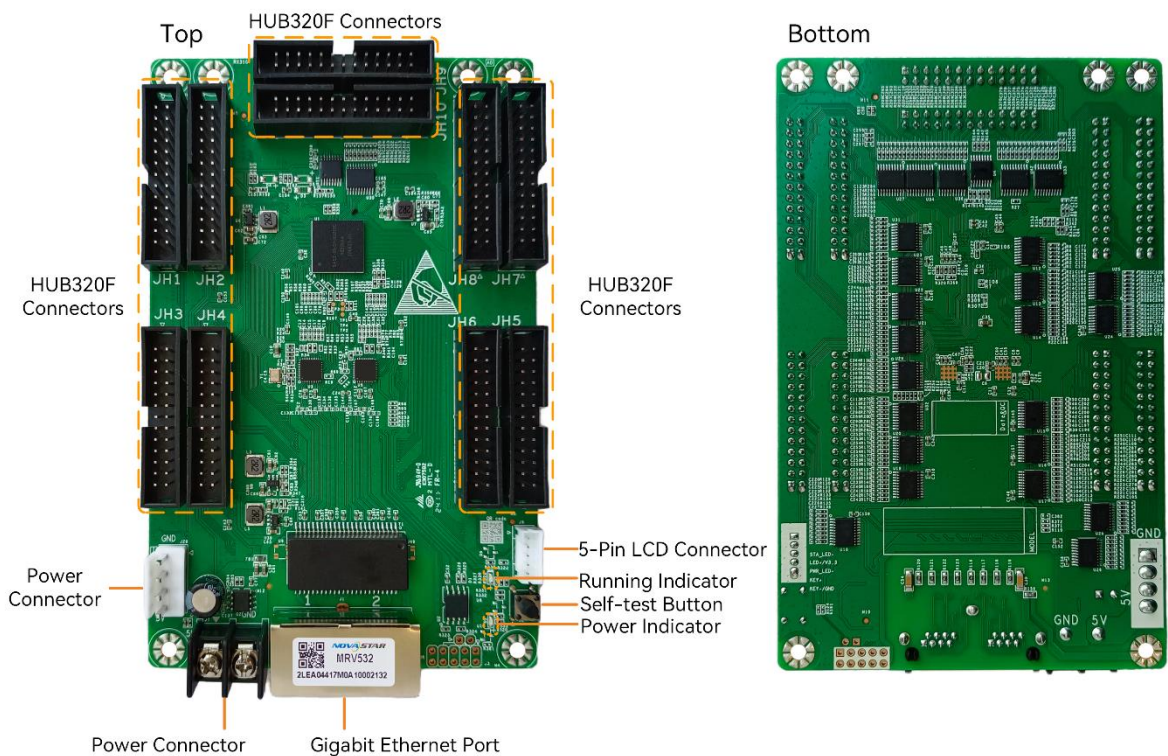
- Dual Backup of Configuration Parameters

The receiving card configuration parameters are stored in the application area and factory area of the receiving card at the same time. Users usually use the configuration parameters in the application area. If necessary, users can restore the configuration parameters in the factory area to the application area.

- Dual Program Backup

Two copies of firmware program are stored in the receiving card at the factory to avoid the problem that the receiving card may get stuck abnormally during program update.

## Appearance



All product pictures shown in this document are for illustration purpose only. Actual product may vary.

| Name               | Description   |
|--------------------|---|
| HUB320F Connectors | Connect to the module.  |
| Power Connector    | Connect to the input power. Either of the connectors can be chosen. |

| Name                   | Description  |
|------------------------|--|
| Gigabit Ethernet Ports | Connect to the sending card, and cascade other receiving cards. Each connector can be used as input or output.   |
| Self-Test Button       | Set the test pattern.<br><br>After the Ethernet cable is disconnected, press the button twice, and the test pattern will be displayed on the screen. Press the button again to switch the pattern. |
| 5-Pin LCD Connector    | Connect to the LCD.  |

 Note

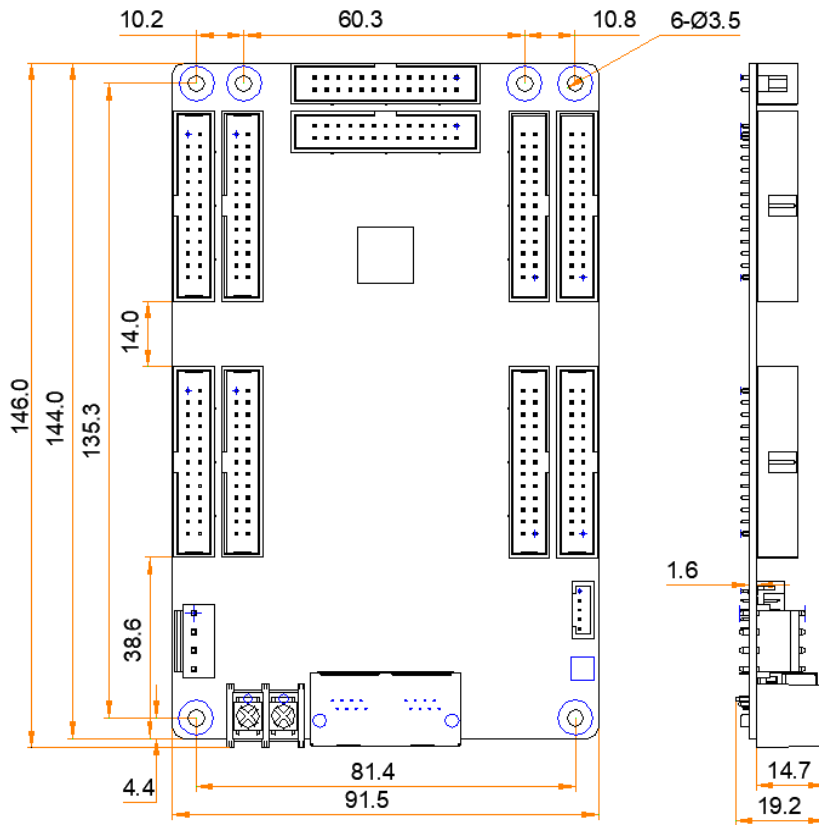
The LCD-related features are supported only by specialized firmware.

## Indicator

| Indicators        | Color | Status                      | Description   |
|-------------------|-------|-----------------------------|---|
| Running indicator | Green | Flashing once every 1s      | The receiving card is functioning normally. Ethernet cable connection is normal, and video source input is available. |
|                   |       | Flashing once every 3s      | Ethernet cable connection is abnormal.  |
|                   |       | Flashing 3 times every 0.5s | Ethernet cable connection is normal, but video source input is unavailable.   |
|                   |       | Flashing once every 0.2s    | The receiving card failed to load the program in the application area and is now using the backup program.            |
|                   |       | Flashing 8 times every 0.5s | A redundancy switchover occurred on the Ethernet port and the loop backup has taken effect.                           |
| Power indicator   | Red   | Always on                   | The power input is normal.  |

## Dimensions

The board thickness is not greater than 2.0 mm, and the total thickness (board thickness + thickness of components on the top and bottom sides) is not greater than 20.0 mm.



Tolerance:  $\pm 0.3$  Unit: mm

### Note

To make molds or trepan mounting holes, please contact NovaStar for a higher-precision structural drawing.



# Pins

## Real Pixel RGB Data Pins/3-LED Sub-pixel Data Pins

|  |  |  |  |  |
|--|--|--|--|--|
| <b>JH1</b><br>B1 1 2 G1<br>B1 JACK_SPI_CLK1 3 4 GND<br>B2 5 6 G2<br>B2 JACK_SPI_MOSI1 7 8 GND<br>B3 9 10 G3<br>B3 11 12 GND<br>B4 13 14 G4<br>B4 15 16 GND<br>HA1 17 18 HB1<br>HA1 JACK_SPI_CS1 19 20 JACK_SPI_CS1<br>JACK_SPI_MISO1 21 22 GND<br>HDCLK1 23 24 HLAT1<br>HOE1 25 26 GND             | <b>JH2</b><br>B5 1 2 G5<br>B5 JACK_SPI_CLK2 3 4 GND<br>B6 5 6 G6<br>B6 JACK_SPI_MOSI2 7 8 GND<br>B7 9 10 G7<br>B7 11 12 GND<br>B8 13 14 G8<br>B8 15 16 GND<br>HA2 17 18 HB2<br>HA2 JACK_SPI_CS2 19 20 JACK_SPI_CS2<br>JACK_SPI_MISO2 21 22 GND<br>HDCLK2 23 24 HLAT2<br>HOE2 25 26 GND             | <b>JH3</b><br>B9 1 2 G9<br>B9 JACK_SPI_CLK3 3 4 GND<br>B10 5 6 G10<br>B10 JACK_SPI_MOSI3 7 8 GND<br>B11 9 10 G11<br>B11 11 12 GND<br>B12 13 14 G12<br>B12 15 16 GND<br>HA3 17 18 HB3<br>HA3 JACK_SPI_CS3 19 20 JACK_SPI_CS3<br>JACK_SPI_MISO3 21 22 GND<br>HDCLK3 23 24 HLAT3<br>HOE3 25 26 GND    | <b>JH4</b><br>B13 1 2 G13<br>B13 JACK_SPI_CLK4 3 4 GND<br>B14 5 6 G14<br>B14 JACK_SPI_MOSI4 7 8 GND<br>B15 9 10 G15<br>B15 11 12 GND<br>B16 13 14 G16<br>B16 15 16 GND<br>HA4 17 18 HB4<br>HA4 JACK_SPI_CS4 19 20 JACK_SPI_CS4<br>JACK_SPI_MISO4 21 22 GND<br>HDCLK4 23 24 HLAT4<br>HOE4 25 26 GND | <b>JH5</b><br>B17 1 2 G17<br>B17 JACK_SPI_CLK5 3 4 GND<br>B18 5 6 G18<br>B18 JACK_SPI_MOSI5 7 8 GND<br>B19 9 10 G19<br>B19 11 12 GND<br>B20 13 14 G20<br>B20 15 16 GND<br>HA5 17 18 HB5<br>HA5 JACK_SPI_CS5 19 20 JACK_SPI_CS5<br>JACK_SPI_MISO5 21 22 GND<br>HDCLK5 23 24 HLAT5<br>HOE5 25 26 GND             |
| <b>JH6</b><br>B21 1 2 G21<br>B21 JACK_SPI_CLK6 3 4 GND<br>B22 5 6 G22<br>B22 JACK_SPI_MOSI6 7 8 GND<br>B23 9 10 G23<br>B23 11 12 GND<br>B24 13 14 G24<br>B24 15 16 GND<br>HA6 17 18 HB6<br>HA6 JACK_SPI_CS6 19 20 JACK_SPI_CS6<br>JACK_SPI_MISO6 21 22 GND<br>HDCLK6 23 24 HLAT6<br>HOE6 25 26 GND | <b>JH7</b><br>B25 1 2 G25<br>B25 JACK_SPI_CLK7 3 4 GND<br>B26 5 6 G26<br>B26 JACK_SPI_MOSI7 7 8 GND<br>B27 9 10 G27<br>B27 11 12 GND<br>B28 13 14 G28<br>B28 15 16 GND<br>HA7 17 18 HB7<br>HA7 JACK_SPI_CS7 19 20 JACK_SPI_CS7<br>JACK_SPI_MISO7 21 22 GND<br>HDCLK7 23 24 HLAT7<br>HOE7 25 26 GND | <b>JH8</b><br>B29 1 2 G29<br>B29 JACK_SPI_CLK8 3 4 GND<br>B30 5 6 G30<br>B30 JACK_SPI_MOSI8 7 8 GND<br>B31 9 10 G31<br>B31 11 12 GND<br>B32 13 14 G32<br>B32 15 16 GND<br>HA8 17 18 HB8<br>HA8 JACK_SPI_CS8 19 20 JACK_SPI_CS8<br>JACK_SPI_MISO8 21 22 GND<br>HDCLK8 23 24 HLAT8<br>HOE8 25 26 GND | <b>JH9</b><br>B33 1 2 G33<br>B33 JACK_SPI_CLK9 3 4 GND<br>B34 5 6 G34<br>B34 JACK_SPI_MOSI9 7 8 GND<br>B35 9 10 G35<br>B35 11 12 GND<br>B36 13 14 G36<br>B36 15 16 GND<br>HA9 17 18 HB9<br>HA9 JACK_SPI_CS9 19 20 JACK_SPI_CS9<br>JACK_SPI_MISO9 21 22 GND<br>HDCLK9 23 24 HLAT9<br>HOE9 25 26 GND | <b>JH10</b><br>B37 1 2 G37<br>B37 JACK_SPI_CLK10 3 4 GND<br>B38 5 6 G38<br>B38 JACK_SPI_MOSI10 7 8 GND<br>B39 9 10 G39<br>B39 11 12 GND<br>B40 13 14 G40<br>B40 15 16 GND<br>HA10 17 18 HB10<br>HA10 JACK_SPI_CS10 19 20 JACK_SPI_CS10<br>JACK_SPI_MISO10 21 22 GND<br>HDCLK10 23 24 HLAT10<br>HOE10 25 26 GND |

| Pin Definitions (JH1 as an example)  |                     |    |    |              |                         |
|--------------------------------------|---------------------|----|----|--------------|-------------------------|
| /                                    | R1                  | 1  | 2  | G1           | /                       |
| B1 / Clock signal of serial pin      | B1 / JACK_SPI_CLK1  | 3  | 4  | GND          | /                       |
| /                                    | R2                  | 5  | 6  | G2           | /                       |
| B2 / Module flash data storage input | B2 / JACK_SPI_MOSI1 | 7  | 8  | GND          | /                       |
| /                                    | R3                  | 9  | 10 | G3           | /                       |
| /                                    | B3                  | 11 | 12 | GND          | /                       |
| /                                    | R4                  | 13 | 14 | G4           | /                       |
| /                                    | B4                  | 15 | 16 | GND          | /                       |
| Line decoding signal                 | HA1                 | 17 | 18 | HB1          | Line decoding signal    |
| Line decoding signal                 | HC1                 | 19 | 20 | JACK_SPI_CS1 | CS signal of serial pin |
| Module Flash data storage output     | JACK_SPI_MISO1      | 21 | 22 | GND          | /                       |
| Shift clock                          | HDCLK1              | 23 | 24 | HLAT1        | Latch signal            |
| Display enable signal                | HOE1                | 25 | 26 | GND          | /                       |

### 4-LED Sub-pixel Data Pins

|   |    |               |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
|---|----|---------------|-----|---|---|-----|---|---|-----|---|---|-----|---|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|--------------|----|----|-----|----|----|-------|----|----|-----|---|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|--------------|----|----|-----|----|----|-------|----|----|-----|---|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|--------------|----|----|-----|----|----|-------|----|----|-----|---|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|--------------|----|----|-----|----|----|-------|----|----|-----|---|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|------|----|----|---------------|----|----|-----|----|----|--------|----|----|-----|
| <p><b>JH1</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G1</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R2</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V2</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R3</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB1</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS1</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT1</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table>     | 1  | 2             | G1  | 3 | 4 | GND | 5 | 6 | R2  | 7 | 8 | GND | 9 | 10 | V2  | 11 | 12 | GND | 13 | 14 | R3  | 15 | 16 | GND | 17 | 18 | HB1 | 19 | 20 | JACK_SPI_CS1 | 21 | 22 | GND | 23 | 24 | HLAT1 | 25 | 26 | GND | <p><b>JH2</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G4</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R5</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V5</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R6</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB2</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS2</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT2</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table>     | 1 | 2 | G4  | 3 | 4 | GND | 5 | 6 | R5  | 7 | 8 | GND | 9 | 10 | V5  | 11 | 12 | GND | 13 | 14 | R6  | 15 | 16 | GND | 17 | 18 | HB2 | 19 | 20 | JACK_SPI_CS2 | 21 | 22 | GND | 23 | 24 | HLAT2 | 25 | 26 | GND | <p><b>JH3</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G7</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R7</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V7</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R8</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB3</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS3</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT3</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table>     | 1 | 2 | G7  | 3 | 4 | GND | 5 | 6 | R7  | 7 | 8 | GND | 9 | 10 | V7  | 11 | 12 | GND | 13 | 14 | R8  | 15 | 16 | GND | 17 | 18 | HB3 | 19 | 20 | JACK_SPI_CS3 | 21 | 22 | GND | 23 | 24 | HLAT3 | 25 | 26 | GND | <p><b>JH4</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G10</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R9</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V9</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R10</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB4</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS4</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT4</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table>   | 1 | 2 | G10 | 3 | 4 | GND | 5 | 6 | R9  | 7 | 8 | GND | 9 | 10 | V9  | 11 | 12 | GND | 13 | 14 | R10 | 15 | 16 | GND | 17 | 18 | HB4 | 19 | 20 | JACK_SPI_CS4 | 21 | 22 | GND | 23 | 24 | HLAT4 | 25 | 26 | GND | <p><b>JH5</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G13</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R11</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V11</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R12</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB5</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS5</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT5</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table>     | 1 | 2 | G13 | 3 | 4 | GND | 5 | 6 | R11 | 7 | 8 | GND | 9 | 10 | V11 | 11 | 12 | GND | 13 | 14 | R12 | 15 | 16 | GND | 17 | 18 | HB5  | 19 | 20 | JACK_SPI_CS5  | 21 | 22 | GND | 23 | 24 | HLAT5  | 25 | 26 | GND |
| 1   | 2  | G1            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R2            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V2            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R3            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB1           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS1  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT1         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G4            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R5            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V5            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R6            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB2           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS2  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT2         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G7            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R7            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V7            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R8            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB3           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS3  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT3         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G10           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R9            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V9            |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R10           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB4           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS4  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT4         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G13           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R11           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V11           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R12           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB5           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS5  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT5         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| <p><b>JH6</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G16</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R13</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V13</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R14</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB6</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS6</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT6</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table> | 1  | 2             | G16 | 3 | 4 | GND | 5 | 6 | R13 | 7 | 8 | GND | 9 | 10 | V13 | 11 | 12 | GND | 13 | 14 | R14 | 15 | 16 | GND | 17 | 18 | HB6 | 19 | 20 | JACK_SPI_CS6 | 21 | 22 | GND | 23 | 24 | HLAT6 | 25 | 26 | GND | <p><b>JH7</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G19</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R15</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V15</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R16</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB7</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS7</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT7</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table> | 1 | 2 | G19 | 3 | 4 | GND | 5 | 6 | R15 | 7 | 8 | GND | 9 | 10 | V15 | 11 | 12 | GND | 13 | 14 | R16 | 15 | 16 | GND | 17 | 18 | HB7 | 19 | 20 | JACK_SPI_CS7 | 21 | 22 | GND | 23 | 24 | HLAT7 | 25 | 26 | GND | <p><b>JH8</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G22</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R17</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V17</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R18</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB8</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS8</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT8</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table> | 1 | 2 | G22 | 3 | 4 | GND | 5 | 6 | R17 | 7 | 8 | GND | 9 | 10 | V17 | 11 | 12 | GND | 13 | 14 | R18 | 15 | 16 | GND | 17 | 18 | HB8 | 19 | 20 | JACK_SPI_CS8 | 21 | 22 | GND | 23 | 24 | HLAT8 | 25 | 26 | GND | <p><b>JH9</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G25</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R19</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V19</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R20</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB9</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS9</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT9</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table> | 1 | 2 | G25 | 3 | 4 | GND | 5 | 6 | R19 | 7 | 8 | GND | 9 | 10 | V19 | 11 | 12 | GND | 13 | 14 | R20 | 15 | 16 | GND | 17 | 18 | HB9 | 19 | 20 | JACK_SPI_CS9 | 21 | 22 | GND | 23 | 24 | HLAT9 | 25 | 26 | GND | <p><b>JH10</b></p> <table border="1"> <tr><td>1</td><td>2</td><td>G28</td></tr> <tr><td>3</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>6</td><td>R21</td></tr> <tr><td>7</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>10</td><td>V21</td></tr> <tr><td>11</td><td>12</td><td>GND</td></tr> <tr><td>13</td><td>14</td><td>R22</td></tr> <tr><td>15</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>18</td><td>HB10</td></tr> <tr><td>19</td><td>20</td><td>JACK_SPI_CS10</td></tr> <tr><td>21</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>24</td><td>HLAT10</td></tr> <tr><td>25</td><td>26</td><td>GND</td></tr> </table> | 1 | 2 | G28 | 3 | 4 | GND | 5 | 6 | R21 | 7 | 8 | GND | 9 | 10 | V21 | 11 | 12 | GND | 13 | 14 | R22 | 15 | 16 | GND | 17 | 18 | HB10 | 19 | 20 | JACK_SPI_CS10 | 21 | 22 | GND | 23 | 24 | HLAT10 | 25 | 26 | GND |
| 1   | 2  | G16           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R13           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V13           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R14           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB6           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS6  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT6         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G19           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R15           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V15           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R16           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB7           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS7  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT7         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G22           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R17           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V17           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R18           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB8           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS8  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT8         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G25           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R19           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V19           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R20           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB9           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS9  |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT9         |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 1   | 2  | G28           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 3   | 4  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 5   | 6  | R21           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 7   | 8  | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 9   | 10 | V21           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 11  | 12 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 13  | 14 | R22           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 15  | 16 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 17  | 18 | HB10          |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 19  | 20 | JACK_SPI_CS10 |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 21  | 22 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 23  | 24 | HLAT10        |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |
| 25  | 26 | GND           |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |     |    |    |              |    |    |     |    |    |       |    |    |     |   |   |   |     |   |   |     |   |   |     |   |   |     |   |    |     |    |    |     |    |    |     |    |    |     |    |    |      |    |    |               |    |    |     |    |    |        |    |    |     |

| Pin Definitions (JH1 as an example)  |                     |    |    |              |                         |
|--------------------------------------|---------------------|----|----|--------------|-------------------------|
| /                                    | R1                  | 1  | 2  | G1           | /                       |
| B1 / Clock signal of serial pin      | B1 / JACK_SPI_CLK1  | 3  | 4  | GND          | /                       |
| /                                    | V1                  | 5  | 6  | R2           | /                       |
| G2 / Module flash data storage input | G2 / JACK_SPI_MOSI1 | 7  | 8  | GND          | /                       |
| /                                    | B2                  | 9  | 10 | V2           | /                       |
| /                                    | R3                  | 11 | 12 | GND          | /                       |
| /                                    | G3                  | 13 | 14 | B3           | /                       |
| /                                    | V3                  | 15 | 16 | GND          | /                       |
| Line decoding signal                 | HA1                 | 17 | 18 | HB1          | Line decoding signal    |
| Line decoding signal                 | HC1                 | 19 | 20 | JACK_SPI_CS1 | CS signal of serial pin |
| Module Flash data storage output     | JACK_SPI_MISO1      | 21 | 22 | GND          | /                       |
| Shift clock                          | HDCLK1              | 23 | 24 | HLAT1        | Latch signal            |
| Display enable signal                | HOE1                | 25 | 26 | GND          | /                       |

 **Note**

Line decoding only supports A, B, and C signals, and does not support D and E signals.

## Specifications

|                         |   |  |
|-------------------------|---|--|
| Maximum Resolution      | <ul style="list-style-type: none"> <li>• For PWM driver ICs, the maximum load capacity per card is:                             <ul style="list-style-type: none"> <li>– When used with M3 controllers:                                     <ul style="list-style-type: none"> <li>512×512@60Hz (For 8bit video sources)</li> <li>512×384@60Hz (For 10bit and 12bit video sources)</li> </ul> </li> <li>– When used with COEX controllers:                                     <ul style="list-style-type: none"> <li>512×512@60Hz (For 8bit and 10bit video sources)</li> <li>512×384@60Hz (For 12bit video sources)</li> </ul> </li> </ul> </li> <li>• For common driver ICs, the maximum load capacity per card is:                             <ul style="list-style-type: none"> <li>– When used with M3 controllers:                                     <ul style="list-style-type: none"> <li>512×384@60Hz (For 8bit video sources)</li> <li>256×384@60Hz (For 10bit and 12bit video sources)</li> </ul> </li> <li>– When used with COEX controllers:                                     <ul style="list-style-type: none"> <li>512×384@60Hz (For 8bit and 10bit video sources)</li> <li>256×384@60Hz (For 12bit video sources)</li> </ul> </li> </ul> </li> </ul> |  |
| Electrical Parameters   | Input voltage   | DC 3.8 V to 5.5 V  |
|                         | Rated current   | 0.5 A  |
|                         | Rated power consumption   | 2.5 W  |
| Operating Environment   | Temperature   | –20°C to +70°C   |
|                         | Humidity  | 10% RH to 90% RH, non-condensing   |
| Storage Environment     | Temperature   | –25°C to +125°C  |
|                         | Humidity  | 0% RH to 95% RH, non-condensing  |
| Physical Specifications | Dimensions  | 146.0 mm × 91.5 mm × 19.2 mm   |
|                         | Net weight  | 99.5 g<br>Note: It is the weight of a single receiving card only.  |
| Packing Information     | Packing specifications  | An antistatic bag and anti-collision foam are provided for each receiving card. Each packing box contains 100 receiving cards. |

|  |             |                                |
|--|-------------|--------------------------------|
|  | Packing box | 625.0 mm × 180.0 mm × 470.0 mm |
|--|-------------|--------------------------------|

The amount of current and power consumption may vary depending on various factors such as product settings, usage, and environment.

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