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## **Thank you for purchasing HUAWEI MU709s-6 HSPA+ mini PCIE Module (hereinafter referred to as the MU709s-6)**

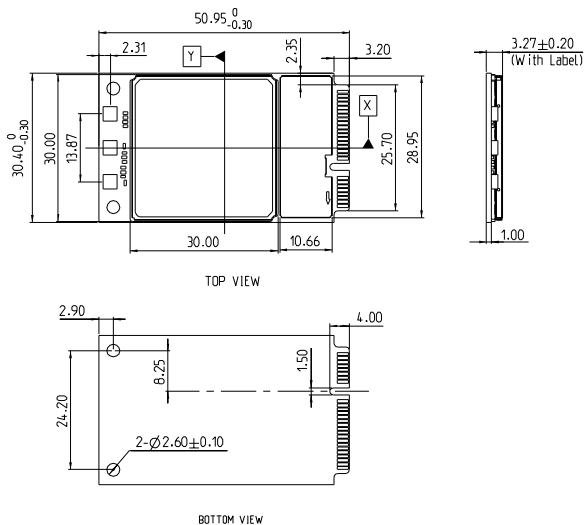
### **Note:**

- This manual briefly describes the dimension, the position of RF connectors and Pin definitions.
- You are recommended to read the manual before using the MU709s-6.

## **Getting to Know the MU709s-6**

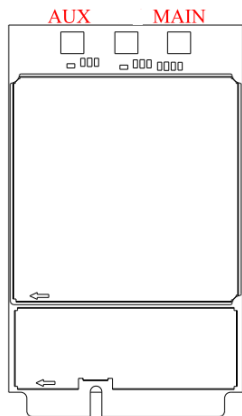
### **Dimension**

- The package of the mini PCIE module is 52 pin PCIE with a dimension of 51 mm × 30.4 mm × 3.3 mm. It is applied to the user interface board, and can be used as a wireless terminal in a network environment.



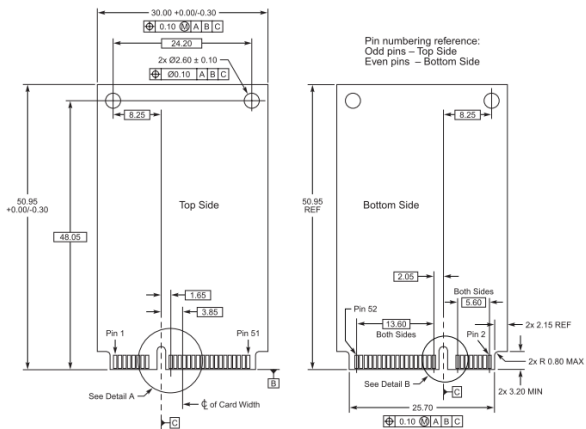
## Position of RF Connectors

The PCIe Adapter module provided two antenna connectors (MAIN\_ANT and AUX\_ANT) for connecting the external antennas.



## Pin Definitions

- The sequence of mini-PCIE interface is shown below.



- The Pin definitions of the MU709s-6 Mini PCIe interface is shown below.

■

| PIN No. | Pin Name                              |                        | I / O | Description   | DC Characteristics (V) |              |              |
|---------|---------------------------------------|------------------------|-------|---------------|------------------------|--------------|--------------|
|         | Mini PCI Express Standard Description | HUAWEI Pin Description |       |               | Min.                   | Typ.         | Max          |
| 1       | WAKE#                                 | WAKE#                  | O     | OC 门. 用来唤醒主机. | -0.3                   | -            | -            |
| 2       | 3.3Vaux                               | VCC_3V3                | P     | 3.3 V DC 电源   | 3.0                    | 3.3          | 3.6          |
| 3       | COEX1                                 | NC                     | -     | 不连接           | -                      | -            | -            |
| 4       | GND                                   | GND                    | -     | 地             | -                      | -            | -            |
| 5       | COEX2                                 | NC                     | -     | 不连接           | -                      | -            | -            |
| 6       | 1.5 V                                 | NC                     | -     | 不连接           | -                      | -            | -            |
| 7       | CLKREQ#                               | NC                     | -     | 不连接           | -                      | -            | -            |
| 8       | UIM_PWR                               | UIM_PWR                | O     | USIM 卡电源      | -                      | 1.8/2.8<br>5 | -            |
| 9       | GND                                   | GND                    | -     | 地             | -                      | -            | -            |
| 10      | UIM_DATA                              | UIM_DATA               | I/O   | USIM 卡数据信号    | -0.3                   | 1.8/2.8<br>5 | 2.1/3<br>.05 |
| 11      | REFCLK-                               | NC                     | -     | 不连接           | -                      | -            | -            |
| 12      | UIM_CLK                               | UIM_CLK                | O     | USIM 卡时钟信号    | -0.3                   | 1.8/2.8<br>5 | 2.1/3<br>.05 |
| 13      | REFCLK+                               | NC                     | -     | 不连接           | -                      | -            | -            |

| PIN No. | Pin Name                              |                        | I / O | Description                | DC Characteristics (V) |          |          |
|---------|---------------------------------------|------------------------|-------|----------------------------|------------------------|----------|----------|
|         | Mini PCI Express Standard Description | HUAWEI Pin Description |       |                            | Min.                   | Typ.     | Max      |
| 14      | UIM_RESET                             | UIM_RESET              | O     | USIM 卡复位信号.                | -0.3                   | 1.8/2.85 | 2.1/3.05 |
| 15      | GND                                   | GND                    | -     | 地                          | -                      | -        | -        |
| 16      | UIM_Vpp                               | NC                     | -     | 不连接                        | -                      | -        | -        |
| 17      | Reserved                              | Reserved               | -     | 保留引脚，不连接                   | -                      | -        | -        |
| 18      | GND                                   | GND                    | -     | 地                          | -                      | -        | -        |
| 19      | Reserved                              | Reserved               | -     | 保留引脚，不连接                   | -                      | -        | -        |
| 20      | W_DISABLE#                            | W_DISABLE#             | -     | 用来禁止模块无线通信功能。<br>目前不支持此功能。 | -                      | -        | -        |
| 21      | GND                                   | GND                    | -     | 地                          | -                      | -        | -        |
| 22      | PERST#                                | RESIN_N                | -     | Reset module Active-low    | -                      | -        | -        |
| 23      | PERn0                                 | NC                     | -     | 不连接                        | -                      | -        | -        |
| 24      | 3.3Vaux                               | VCC_3V3                | -     | 3.3 V DC 电源                | 3.0                    | 3.3      | 3.6      |

| PIN No. | Pin Name                              |                        | I / O | Description | DC Characteristics (V) |      |     |
|---------|---------------------------------------|------------------------|-------|-------------|------------------------|------|-----|
|         | Mini PCI Express Standard Description | HUAWEI Pin Description |       |             | Min.                   | Typ. | Max |
| 25      | PERp0                                 | NC                     | -     | 不连接         | -                      | -    | -   |
| 26      | GND                                   | GND                    | -     | 地           | -                      | -    | -   |
| 27      | GND                                   | GND                    | -     | 地           | -                      | -    | -   |
| 28      | 1.5 V                                 | NC                     | -     | 不连接         | -                      | -    | -   |
| 29      | GND                                   | GND                    | -     | 地           | -                      | -    | -   |
| 30      | SMB_CLK                               | NC                     | -     | 不连接         | -                      | -    | -   |
| 31      | PETn0                                 | NC                     | -     | 不连接         | -                      | -    | -   |
| 32      | SMB_DATA                              | NC                     | -     | 不连接         | -                      | -    | -   |
| 33      | PETp0                                 | NC                     | -     | 不连接         | -                      | -    | -   |
| 34      | GND                                   | GND                    | -     | 地           | -                      | -    | -   |
| 35      | GND                                   | GND                    | -     | 地           | -                      | -    | -   |
| 36      | USB_D-                                | USB_D-                 | I/O   | USB D-      | -                      | -    | -   |
| 37      | GND                                   | GND                    | -     | 地           | -                      | -    | -   |
| 38      | USB_D+                                | USB_D+                 | I/O   | USB D+      | -                      | -    | -   |

| PIN No. | Pin Name                              |                        | I / O | Description                    | DC Characteristics (V) |      |     |
|---------|---------------------------------------|------------------------|-------|--------------------------------|------------------------|------|-----|
|         | Mini PCI Express Standard Description | HUAWEI Pin Description |       |                                | Min.                   | Typ. | Max |
| 39      | 3.3Vaux                               | VCC_3V3                | P     | 3.3 V DC 电源                    | 3.0                    | 3.3  | 3.6 |
| 40      | GND                                   | GND                    | -     | 地                              | -                      | -    | -   |
| 41      | 3.3Vaux                               | VCC_3V3                | P     | 3.3 V DC 电源                    | 3.0                    | 3.3  | 3.6 |
| 42      | LED_WWAN #                            | LED_WWAN #             | O     | LED 指示信号, 用来指示模块的工作状态<br>低电平有效 | -                      | -    | -   |
| 43      | GND                                   | GND                    | -     | 地                              | -                      | -    | -   |
| 44      | LED_WLAN#                             | NC                     | -     | 不连接                            | -                      | -    | -   |
| 45      | Reserved                              | PCM_CLK                | O     | PCM 时钟信号                       | -0.3                   | 2.6  | 2.9 |
| 46      | LED_WPAN#                             | NC                     | -     | 不连接                            | -                      | -    | -   |
| 47      | Reserved                              | PCM_DOUT               | O     | PCM 数据输出                       | -0.3                   | 2.6  | 2.9 |
| 48      | 1.5 V                                 | NC                     | -     | 不连接                            | -                      | -    | -   |
| 49      | Reserved                              | PCM_DIN                | I     | PCM 数据输入                       | -0.3                   | 2.6  | 2.9 |
| 50      | GND                                   | GND                    | -     | 地                              | -                      | -    | -   |
| 51      | Reserved                              | PCM_SYNC               | O     | PCM 同步信号                       | -0.3                   | 2.6  | 2.9 |

| PIN<br>No. | Pin Name                                       |                              | I<br>/<br>O | Description | DC Characteristics (V) |      |          |
|------------|------------------------------------------------|------------------------------|-------------|-------------|------------------------|------|----------|
|            | Mini PCI<br>Express<br>Standard<br>Description | HUAWEI<br>Pin<br>Description |             |             | Min.                   | Typ. | Max<br>. |
| 52         | 3.3Vaux                                        | VCC_3V3                      | P           | 3.3 V DC 电源 | 3.0                    | 3.3  | 3.6      |

