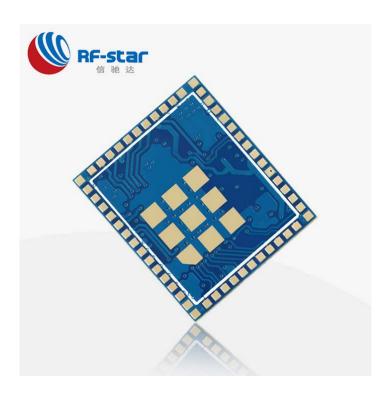


RF-WM-3220B1 User's Hardware Manual



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Module Function





Picture1 RF-WM-3220B3 module

1. Function Introduction

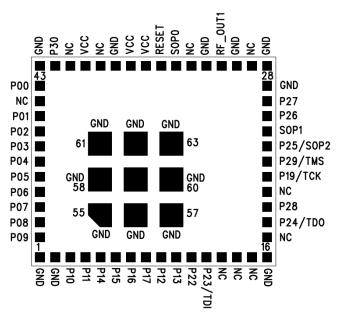
RF-WM-3220B3 module is one of RF-Star's embedded Wi-Fi module which is pin to pin compatible with TI official CC3220MOD. It has the industry's lowest standby power consumption. This module adopts the latest Simple-Link Wi-Fi CC3220R/S/SF chip design embedded with high performance ARM Cortex-M4 MCU, and contain a variety of peripherals, such as parallel camera interface, I2S, SD/MMC, UART, SPI, I2C, ADC and GPIO. This module supports 802.11 b/g/n wireless standards, and can work in Station, AP and Wi-Fi direct connection modes.

RF-WM-3220 module, which is integrated with TCP/IP protocols and applications, can be widely used in IOT applications, such as home automation, home appliance control, security systems, smart energy, internet gateway, industrial control, smart plug, smart metering, wireless audio, wireless doorbell & sensor networking node etc.

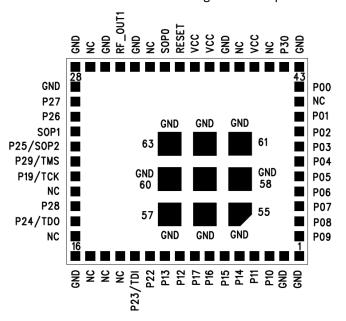
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2. Pin Assignment



Picture 2 RF-WM-3220B3 Pin Assignment (Top View)



Picture 3 RF-WM-3220B3 Pin Assignment (Bottom View)

3. Pin Assignment Multiplex Table

Pin Assignment Form

| MOD | | | IC PIN | |
|-----|--------------|------|--------|-------------|
| PIN | MOD PIN NAME | TYPE | | DESCRIPTION |
| NO. | | | NO. | |

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$\textbf{S} henzhen \ R\textbf{\textit{F-S}} tar \ Tech \textbf{\textit{n}}ology \ Co., \textbf{\textit{L}}t \textbf{\textit{d}}.$

| 2 GND - Ground 3 GPI010 I/O 1 GPI0 4 GPI011 I/O 2 GPI0 5 GPI014 I/O 5 GPI0 6 GPI015 I/O 6 GPI0 7 GPI016 I/O 7 GPI0 8 GPI017 I/O 8 GPI0 9 GPI012 I/O 3 GPI0 10 GPI013 I/O 4 GPI0 11 GPI022 I/O 15 GPI0 11 GPI022 I/O 15 GPI0 12 JTAG_TDI/P23 I/O 16 GPI0 13 NC - 13 Reserved 14 NC - 14 Reserved 15 NC - 11 Reserved 16 GND - Ground 17 NC - 12 Reserved 18 JTAG_TDO/P24 I/O 17 GPI0 19 GPI028 I/O 18 GPI0 20 NC - 23 Unused 21 JTAG_TCK/P19 I/O 19 JTAG TCK input 22 JTAG_TMS/P29 I/O 20 JTAG TCK input 23 SOP2/P25 I/O 21 TAG TCK input 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz Riput/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOP0 - 35 Ground 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | | | | | |
|---|-----|--------------|-----|-------|--|
| 3 GPIO10 | 1 | GND | - | | Ground |
| 4 GPIO11 I/O 2 GPIO 5 GPIO14 I/O 5 GPIO 6 GPIO15 I/O 6 GPIO 7 GPIO16 I/O 7 GPIO 8 GPIO17 I/O 8 GPIO 9 GPIO12 I/O 3 GPIO 10 GPIO13 I/O 4 GPIO 11 GPIO22 I/O 15 GPIO 12 JTAG_TDI/P23 I/O 16 GPIO 13 NC - 13 Reserved 14 NC - 14 Reserved 15 NC - 11 Reserved 16 GND - Ground 17 NC - 12 Reserved 18 JTAG_TDI/P24 I/O 17 GPIO 19 GPIO28 I/O 18 GPIO 20 NC - 23 Unused 21 JTAG_TDI/P29 I/O 19 JTAG TCK input 22 JTAG_TKJ/P19 I/O 19 JTAG TCK input 23 SOP2/P25 I/O 20 JTAG TMS input 24 SOP1 - 34 Reserved. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 GPIO 35 POWEr on the Input of Unity Input of | | | | | |
| 5 GPIO14 I/O 5 GPIO 6 GPIO15 I/O 6 GPIO 7 GPIO16 I/O 7 GPIO 8 GPIO17 I/O 8 GPIO 9 GPIO12 I/O 3 GPIO 10 GPIO13 I/O 4 GPIO 11 GPIO22 I/O 15 GPIO 12 JTAG_TDI/P23 I/O 16 GPIO 13 NC - 13 Reserved 14 NC - 14 Reserved 15 NC - 11 Reserved 16 GND - 12 Reserved 16 GND - 12 Reserved 17 NC - 12 Reserved 18 JTAG_TDO/P24 I/O 17 GPIO 20 NC - 23 Unused 21 <td< td=""><td></td><td></td><td>-</td><td></td><td></td></td<> | | | - | | |
| 6 GPIO15 I/O 6 GPIO 7 GPIO16 I/O 7 GPIO 8 GPIO17 I/O 8 GPIO 9 GPIO12 I/O 3 GPIO 10 GPIO13 I/O 4 GPIO 11 GPIO22 I/O 15 GPIO 11 GPIO22 I/O 15 GPIO 12 JTAG_TDI/P23 I/O 16 GPIO 13 NC - 13 Reserved 14 NC - 14 Reserved 15 NC - 11 Reserved 16 GND - Ground 17 NC - 12 Reserved 18 JTAG_TDO/P24 I/O 17 GPIO 19 GPIO28 I/O 18 GPIO 19 GPIO28 I/O 18 GPIO 20 NC - 23 Unused 21 JTAG_TCK/P19 I/O 19 JTAG TCK input 22 JTAG_TMS/P29 I/O 20 JTAG TMS input Add pull-down resistor to ground needed for functional mode. Add option to pull-up required for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOP0 - 35 Opwer on reset. Does not require external RC circuit. | | GPIO11 | I/O | | GPIO |
| 7 GPIO16 I/O 7 GPIO 8 GPIO17 I/O 8 GPIO 9 GPIO12 I/O 3 GPIO 10 GPIO13 I/O 4 GPIO 11 GPIO22 I/O 15 GPIO 12 JTAG_TDI/P23 I/O 16 GPIO 13 NC - 13 Reserved 14 NC - 14 Reserved 15 NC - 11 Reserved 16 GND - Ground 17 NC - 12 Reserved 18 JTAG_TDO/P24 I/O 17 GPIO 19 GPIO28 I/O 18 GPIO 20 NC - 23 Unused 21 JTAG_TCK/P19 I/O 19 JTAG TCK input 22 JTAG_TMS/P29 I/O 20 JTAG TKS input 23 SOP2/P25 I/O 21 functional mode. Add option to pull-up required for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved 25 ANTSEL2/P27 I/O 30 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GRD - 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | 5 | GPIO14 | I/O | 5 | GPIO |
| 8 | 6 | GPIO15 | I/O | 6 | GPIO |
| 9 | 7 | GPIO16 | I/O | 7 | GPIO |
| 10 | 8 | GPIO17 | I/O | 8 | GPIO |
| 11 | 9 | GPIO12 | I/O | 3 | GPIO |
| 12 | 10 | GPIO13 | I/O | 4 | GPIO |
| 13 | 11 | GPIO22 | I/O | 15 | GPIO |
| 14 NC - 14 Reserved 15 NC - 11 Reserved 16 GND - Ground 17 NC - 12 Reserved 18 JTAG_TDO/P24 I/O 17 GPIO 19 GPIO28 I/O 18 GPIO 20 NC - 23 Unused 21 JTAG_TCK/P19 I/O 19 JTAG TCK input 22 JTAG_TMS/P29 I/O 20 JTAG TMS input Add pull-down resistor to ground needed for functional mode. Add option to pull-up required for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 31 RF_OUT1 I/O | 12 | JTAG_TDI/P23 | I/O | 16 | GPIO |
| 15 | 13 | NC | - | 13 | Reserved |
| 16 | 14 | NC | - | 14 | Reserved |
| 17 | 15 | NC | - | 11 | Reserved |
| 18 | 16 | GND | - | | Ground |
| 19 | 17 | NC | - | 12 | Reserved |
| NC - 23 | 18 | JTAG_TDO/P24 | 1/0 | 17 | GPIO |
| 21 JTAG_TCK/P19 I/O 19 JTAG TCK input 22 JTAG_TMS/P29 I/O 20 JTAG TMS input 23 SOP2/P25 I/O 21 Add pull-down resistor to ground needed for functional mode. Add option to pull-up required for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. <td>19</td> <td>GPIO28</td> <td>1/0</td> <td>18</td> <td>GPIO</td> | 19 | GPIO28 | 1/0 | 18 | GPIO |
| 22 JTAG_TMS/P29 I/O 20 JTAG TMS input | 20 | NC | - | 23 | Unused |
| SOP2/P25 I/O 21 Add pull-down resistor to ground needed for functional mode. Add option to pull-up required for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOP0 - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. Power supply for the device, can be connected to | 21 | JTAG_TCK/P19 | 1/0 | 19 | JTAG TCK input |
| SOP2/P25 I/O 21 functional mode. Add option to pull-up required for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOP0 - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. | 22 | JTAG_TMS/P29 | 1/0 | 20 | JTAG TMS input |
| for entering the UART load mode for flashing. 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 36 VCC - 37 Power supply for the device, can be connected to | | | | | Add pull-down resistor to ground needed for |
| 24 SOP1 - 34 Reserved. Do not connect. 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 | 23 | SOP2/P25 | I/O | 21 | functional mode. Add option to pull-up required |
| 25 ANTSEL1/P26 I/O 29 Antenna selection control. 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | | | | | for entering the UART load mode for flashing. |
| 26 ANTSEL2/P27 I/O 30 Antenna selection control. 27 GND - Ground 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | 24 | SOP1 | - | 34 | Reserved. Do not connect. |
| GND - Ground RESET I 32 GROD - Ground 1. Age of the properties o | 25 | ANTSEL1/P26 | I/O | 29 | Antenna selection control. |
| 28 GND - Ground 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | 26 | ANTSEL2/P27 | I/O | 30 | Antenna selection control. |
| 29 NC - 27,28 Reserved 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | 27 | GND | - | | Ground |
| 30 GND - Ground 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 Power supply for the device, can be connected to | 28 | GND | - | | Ground |
| 31 RF_OUT1 I/O 31 2.4GHz RF input/output. 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 | 29 | NC | - | 27,28 | Reserved |
| 32 GND - Ground 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 | 30 | GND | - | | Ground |
| 33 NC - 38 Reserved 34 SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 | 31 | RF_OUT1 | 1/0 | 31 | 2.4GHz RF input/output. |
| SOPO - 35 Optional 1-k Ω pull-up if user chooses to use SWD debug mode instead of 4-wire JTAG. RESET I 32 Power on reset. Does not require external RC circuit. Power supply for the device, can be connected to | 32 | GND | - | | Ground |
| 34 SOPO - 35 debug mode instead of 4-wire JTAG. 35 RESET I 32 Power on reset. Does not require external RC circuit. 36 VCC - 37 | 33 | NC | - | 38 | Reserved |
| debug mode instead of 4-wire JTAG. Power on reset. Does not require external RC circuit. Power supply for the device, can be connected to | 2.4 | 5000 | | 25 | Optional 1-k Ω pull-up if user chooses to use SWD |
| 35 RESET I 32 circuit. 36 VCC - 37 Power supply for the device, can be connected to | 34 | SOPU | - | 35 | debug mode instead of 4-wire JTAG. |
| circuit. Power supply for the device, can be connected to | 25 | DECET | , | 22 | Power on reset. Does not require external RC |
| 36 VCC - 37 | 35 | KESEI | | 32 | circuit. |
| 30 vcc - 37 hattery (2.3V to 3.6V) | 26 | VCC | | 27 | Power supply for the device, can be connected to |
| Sattery (2.5% to 5.6%). | 36 | VCC | _ | 3/ | battery (2.3V to 3.6V). |

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Shenzhen RF-Star Technology Co., Ltd.

| 37 VCC - 39 Power supply for the device, can be connected to battery (2.3V to 3.6V). 38 GND - Ground 39 NC - 47 Not connected 40 VCC - 10,44, 54 Power supply for the device, can be connected to battery (2.3V to 3.6V). 41 NC - 25,36, 48 Reserved 42 GPI030 I/O 53 GPIO 43 GND - Ground 44 GPI00 I/O 50 GPIO 45 NC - 51 Reserved 46 GPI01 I/O 55 GPIO 47 GPI02 I/O 57 GPIO 48 GPI03 I/O 58 GPIO 49 GPI04 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPI06 I/O 61 GPIO 52 GPI07 I/O< | | | | | |
|---|----|--------|-----|--------|--|
| Battery (2.3V to 3.6V). | 37 | VCC | _ | 39 | |
| NC | | | | | battery (2.3V to 3.6V). |
| 40 VCC - 10,44, 54 Power supply for the device, can be connected to battery (2.3V to 3.6V). 41 NC - 25,36, 48 Reserved 42 GPIO30 I/O 53 GPIO 43 GND - Ground 44 GPIO0 I/O 50 GPIO 45 NC - 51 Reserved 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground | 38 | GND | - | | Ground |
| 40 VCC - 54 battery (2.3V to 3.6V). 41 NC - 25,36, 48 Reserved 42 GPIO30 I/O 53 GPIO 43 GND - Ground 44 GPIO0 I/O 50 GPIO 45 NC - 51 Reserved 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND< | 39 | NC | - | 47 | Not connected |
| S4 battery (2.3V to 3.6V). | 40 | VCC | | 10,44, | Power supply for the device, can be connected to |
| 41 NC - 48 Reserved 42 GPIO30 I/O 53 GPIO 43 GND - Ground 44 GPIO0 I/O 50 GPIO 45 NC - 51 Reserved 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 40 | VCC | _ | 54 | battery (2.3V to 3.6V). |
| 43 GND - Ground 44 GPIO0 I/O 50 GPIO 45 NC - 51 Reserved 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 51 GPIO6 I/O 62 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground <td>41</td> <td>NC</td> <td>-</td> <td></td> <td>Reserved</td> | 41 | NC | - | | Reserved |
| 44 GPIOO I/O 50 GPIO 45 NC - 51 Reserved 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground | 42 | GPIO30 | I/O | 53 | GPIO |
| 45 NC - 51 Reserved 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 57 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 43 | GND | - | | Ground |
| 46 GPIO1 I/O 55 GPIO 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 44 | GPIO0 | I/O | 50 | GPIO |
| 47 GPIO2 I/O 57 GPIO 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 45 | NC | - | 51 | Reserved |
| 48 GPIO3 I/O 58 GPIO 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 46 | GPIO1 | I/O | 55 | GPIO |
| 49 GPIO4 I/O 59 GPIO 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 47 | GPIO2 | 1/0 | 57 | GPIO |
| 50 GPIO5 I/O 60 GPIO 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 48 | GPIO3 | I/O | 58 | GPIO |
| 51 GPIO6 I/O 61 GPIO 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 49 | GPIO4 | I/O | 59 | GPIO |
| 52 GPIO7 I/O 62 GPIO 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 50 | GPIO5 | I/O | 60 | GPIO |
| 53 GPIO8 I/O 63 GPIO 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 51 | GPIO6 | I/O | 61 | GPIO |
| 54 GPIO9 I/O 64 GPIO 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 52 | GPIO7 | I/O | 62 | GPIO |
| 55 GND - Thermal Ground 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 53 | GPIO8 | I/O | 63 | GPIO |
| 56 GND - Thermal Ground 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 54 | GPIO9 | I/O | 64 | GPIO |
| 57 GND - Thermal Ground 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 55 | GND | - | | Thermal Ground |
| 58 GND - Thermal Ground 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 56 | GND | - | | Thermal Ground |
| 59 GND - Thermal Ground 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 57 | GND | - | | Thermal Ground |
| 60 GND - Thermal Ground 61 GND - Thermal Ground 62 GND - Thermal Ground | 58 | GND | - | | Thermal Ground |
| 61 GND - Thermal Ground 62 GND - Thermal Ground | 59 | GND | - | | Thermal Ground |
| 62 GND - Thermal Ground | 60 | GND | - | | Thermal Ground |
| | 61 | GND | - | | Thermal Ground |
| 63 GND - Thermal Ground | 62 | GND | - | | Thermal Ground |
| | 63 | GND | - | | Thermal Ground |

Form 1 Pin Assignment Form

Pin Multiplex Table

| PIN NAME | I/O | Select as Wakeup Source | Function | Description |
|-------------|-----|-------------------------------|------------|---------------------------|
| | | | GPIO10 | General-Purpose I/O |
| | | | I2C_SCL | I2C Clock |
| GPIO10 | 1/0 | NO | GT_PWM06 | Pulse-Width Modulated O/P |
| | | | UART1_TX | UART TX Data |
| | | | SDCARD_CLK | SD Card Clock |

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| | | | GT_CCP01 | Timer Capture Port |
|------------|------------|---------|-----------------|---------------------------------|
| | | | GPIO11 | General-Purpose I/O |
| | | | I2C_SDA | I2C Data |
| | | | GT_PWM07 | Pulse-Width Modulated O/P |
| CDIO11 | 1/0 | Wake-Up | pXCLK(XVCLK) | Free Clock To Parallel Camera |
| GPIO11 | I/O | Source | SDCARD_CMD | SD Card Command Line |
| | | | UART1_RX | UART RX Data |
| | | | GT_CCP02 | Timer Capture Port |
| | | | McAFSX | I2S Audio Port Frame Sync |
| | | | GPIO12 | General-Purpose I/O |
| | | | McACLK | I2S Audio Port Clock |
| 001040 | | | pVS(VSYNC) | Parallel Camera Vertical Sync |
| GPIO12 | I/O | NO | I2C_SCL | I2C Clock |
| | | | UARTO_TX | UARTO TX Data |
| | | | GT_CCP03 | Timer Capture Port |
| | | | GPIO13 | General-Purpose I/O |
| | | | I2C_SDA | I2C Data |
| GPIO13 | I/O | Wake-Up | pHS(HSYNC) | Parallel Camera Horizontal Sync |
| | | Source | UARTO_RX | UARTO RX Data |
| | | | GT_CCP04 | Timer Capture Port |
| | | | GPIO14 | General-Purpose I/O |
| | | | I2C_SCL | I2C Clock |
| GPIO14 | GPIO14 I/O | NO | GSPI_CLK | General SPI Clock |
| 311014 1/0 | | | pDATA8(CAM_D4) | Parallel Camera Data Bit 4 |
| | | | GT_CCP05 | Timer Capture Port |
| | | | GPIO15 | General-Purpose I/O |
| | | | I2C_SDA | I2C Data |
| | I/O NO | | GSPI_MISO | General SPI MISO |
| GPIO15 | I/O NO | | pDATA9(CAM_D5) | Parallel Camera Data Bit 5 |
| | | | GT_CCP06 | Timer Capture Port |
| | | | SDCARD_DATA0 | SD Card Data |
| | | | GPIO16 | General-Purpose I/O |
| | | | GSPI_MOSI | General SPI MOSI |
| | _ | | pDATA10(CAM_D6) | Parallel Camera Data Bit 6 |
| GPIO16 | I/O | NO | UART1_TX | UART1 TX Data |
| | | | GT_CCP07 | Timer Capture Port |
| | | | SDCARD_CLK | SD Card Clock |
| | | | GPIO17 | General-Purpose I/O |
| | | Wake-Up | UART1_RX | UART1 RX Data |
| GPIO17 | I/O | Source | GSPI_CS | General SPI Chip Select |
| | | Jource | pDATA11(CAM_D7) | Parallel Camera Data Bit 7 |
| | | | | . a.aa. aaaa baaa bic / |

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| SDCARD_CMD SD Card Command Line | 0/ / | | | | | |
|--|-------------|-------|--|--|---------------------------------------|--|
| Figure F | | | | SDCARD_CMD | SD Card Command Line | |
| TDI | | | | GPIO22 | General-Purpose I/O | |
| TDI | GPIO22 | 1/0 | NO | McAFSX | I2S Audio Port Frame Sync | |
| TDI | | | | GT_CCP04 | Timer Capture Port | |
| TDI | | | | TDI | JTAG TDI. Reset Default PinOut. | |
| TDO | TDI | 1/0 | NO | GPIO23 General-Purpose I/O | | |
| TDO | וטו | 1/0 | INO | UART1_TX | UART1 TX Data | |
| TDO | | | | I2C_SCL | I2C Clock | |
| PWM0 | | | | TDO | JTAG TDO. Reset Default Pinout. | |
| TDO | | | | GPIO24 | General-Purpose I/O | |
| TDO | | | \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | PWM0 | Pulse Width Modulated O/P | |
| 12C_SDA 12C Data | TDO | 1/0 | | UART1_RX | UART1 RX Data | |
| McAFSX 12S Audio Port Frame Sync | | | Source | I2C_SDA | I2C Data | |
| Figure 2015 Figure 3 | | | | GT_CCP06 | Timer Capture Port | |
| TCK I/O NO TCK JTAG/SWD TCK Reset Default Pinout TMS I/O NO TMS Pulse Width Modulated O/P TMS JTAG/SWD TMS Reset Default Pinout GPI029 General-Purpose I/O GPI029 General-Purpose I/O GPI025 General-Purpose I/O GPI025 General-Purpose I/O Pulse Width Modulated O/P BOP2 Pulse Width Modulated O/P Pulse Width Modulated O/P MCAFSX I2S Audio Port Frame Sync TCXO_EN Enable to Optional External 40MHz TCXO SOP2 Sense-On-Power 2 ANTSEL1 O NO ANTSEL1 Antenna Selection Control ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Sense On Power 1 Sense On Power 1 SOP0 Sense On Power 0 General-Purpose I/O UART0_CTS UART0 Clear To Send Input(Active Low) MCAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GRICO General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low)< | | | | McAFSX | I2S Audio Port Frame Sync | |
| TCK | GPIO28 | 1/0 | NO | GPIO28 | General-Purpose I/O | |
| TMS | 014 | . / 0 | | TCK | JTAG/SWD TCK Reset Default Pinout | |
| TMS | TCK | 1/0 | NO | GT_PWM03 | Pulse Width Modulated O/P | |
| GPIO29 General-Purpose I/O GPIO25 General-Purpose I/O GT_PWM02 Pulse Width Modulated O/P Pulse Width Modulated O/P McAFSX I2S Audio Port Frame Sync TCXO_EN Enable to Optional External 40MHz TCXO SOP2 Sense-On-Power 2 ANTSEL1 O NO ANTSEL1 Antenna Selection Control ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Sonse N/A SOP1 Sense On Power 1 SOP0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | . / 0 | | | | |
| SOP2 O NO McAFSX 12S Audio Port Frame Sync TCXO_EN Enable to Optional External 40MHz TCXO SOP2 Sense-On-Power 2 ANTSEL1 O NO ANTSEL1 Antenna Selection Control ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Config Sense N/A SOP1 Sense On Power 1 SOP0 Config Sense N/A SOP0 Sense On Power 0 GPIO0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 12S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | TMS | 1/0 | NO | GPIO29 | General-Purpose I/O | |
| SOP2 O NO McAFSX I2S Audio Port Frame Sync TCXO_EN Enable to Optional External 40MHz TCXO SOP2 Sense-On-Power 2 ANTSEL1 O NO ANTSEL1 Antenna Selection Control ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Sense N/A SOP1 Sense On Power 1 SOP0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | | | GPIO25 | General-Purpose I/O | |
| TCXO_EN Enable to Optional External 40MHz TCXO SOP2 Sense-On-Power 2 ANTSEL1 O NO ANTSEL1 Antenna Selection Control ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Config Sense N/A SOP1 Sense On Power 1 SOP0 Config Sense N/A SOP0 Sense On Power 0 GPIO0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | | | GT_PWM02 | Pulse Width Modulated O/P | |
| SOP2 Sense-On-Power 2 | SOP2 | О | NO | McAFSX | I2S Audio Port Frame Sync | |
| ANTSEL1 O NO ANTSEL1 Antenna Selection Control ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Config Sense N/A SOP1 Sense On Power 1 SOP0 Config Sense N/A SOP0 Sense On Power 0 GPIOO General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) MCAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | | | TCXO_EN Enable to Optional External 40MHz TC | | |
| ANTSEL2 O NO ANTSEL2 Antenna Selection Control SOP1 Config Sense N/A SOP1 Sense On Power 1 SOP0 Config Sense N/A SOP0 Sense On Power 0 GPIO0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) MCAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | | | SOP2 | Sense-On-Power 2 | |
| SOP1 Config Sense N/A SOP1 Sense On Power 1 SOP0 Config Sense N/A SOP0 Sense On Power 0 GPIO0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | ANTSEL1 | 0 | NO | ANTSEL1 | Antenna Selection Control | |
| SOP1 Sense N/A SOP1 Sense On Power 1 Sopo Sense On Power 1 Sopo Sense On Power 0 GPIOO General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | ANTSEL2 | 0 | NO | ANTSEL2 | Antenna Selection Control | |
| SOPO Sense On Power 0 GPIO0 General-Purpose I/O UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | SOP1 | | N/A | SOP1 | Sense On Power 1 | |
| GPIO0 I/O I/O NO UARTO_CTS UARTO Clear To Send Input(Active Low) McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | SOP0 | _ | N/A | SOP0 | Sense On Power 0 | |
| GPIO0 I/O NO McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | | | GPIO0 | General-Purpose I/O | |
| GPIO0 I/O NO GT_CCP00 Timer Capture Port GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | | | UARTO_CTS | UARTO Clear To Send Input(Active Low) | |
| GPIO0 I/O NO GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | | I/O | NO - | McAXR1 | I2S Audio Port Data 1(RX/TX) | |
| GSPI_CS General SPI Chip Select UART1_RTS UART1 Request To Send O(Active Low) | CDIOO | | | GT_CCP00 | Timer Capture Port | |
| | GPIUU | | | GSPI_CS | General SPI Chip Select | |
| UARTO_RTS UARTO Request To Send O(Active Low) | | | | UART1_RTS | UART1 Request To Send O(Active Low) | |
| | | | | UARTO_RTS | | |
| McAXRO I2S Audio Port Data 0(RX/TX) | | | | McAXR0 | I2S Audio Port Data O(RX/TX) | |
| GPIO30 General-Purpose I/O | 001555 | | | GPIO30 | | |
| GPIO30 I/O NO UARTO_TX UARTO_TX Data | GPIO30 | 1/0 | NO | UARTO_TX | | |

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| MCACLK 12S Audio Port Clock O MCAFSX 12S Audio Port Clock O MCAFSX 12S Audio Port Frame Sync GT_CCP05 Timer Capture Port GSPI_MISO General SPI MISO General SPI MISO General SPI MISO UARTO TX Data DELEVIRO DELEVIR | | | | | |
|--|-------|-----|---------|----------------|---|
| GT_CCP05 Timer Capture Port | | | | McACLK | I2S Audio Port Clock O |
| GSP_MISO General SPI MISO General SPI MISO GPIO1 General-Purpose I/O UARTO_TX UARTO TX Data DCLK(PIXCLK) Pixel Clock From Parallel Camera Sensor UART1_TX UART1 TX Data GT_CCP01 Timer Capture Port ADC_CH0 ADC Channel 0 input(1.5V max) GPIO2 General-Purpose I/O UART1_RX UART1 RX Data GT_CCP02 Timer Capture Port ADC_CH1 ADC Channel 1 input(1.5V max) GPIO3 General-Purpose I/O UART1_TX UART1 RX Data GT_CCP02 Timer Capture Port ADC_CH1 ADC Channel 1 input(1.5V max) GPIO3 General-Purpose I/O UART1_TX UART1 TX Data GPIO3 General-Purpose I/O UART1_TX UART1 TX Data GPIO3 General-Purpose I/O UART1_TX UART1 TX Data GPIO3 General-Purpose I/O UART1_RX UART1 TX Data GPIO3 General-Purpose I/O UART1_RX UART1 TX Data GPIO3 General-Purpose I/O UART1_RX UART1 RX Data GPIO3 General-Purpose I/O UART1_RX UART1 RX Data GPIO3 General-Purpose I/O UART1_RX UART1 RX Data GPIO3 General-Purpose I/O DATAG(CAM_D2) Parallel Camera Data Bit 2 ADC_CH3 ADC Channel 3 input(1.5V max) GPIO5 General-Purpose I/O DATAG(CAM_D1) Parallel Camera Data Bit 1 MCAXR1 I2S Audio Port Data 1(RX/TX) GT_CCPO5 Timer Capture Port GPIO6 General-Purpose I/O UART1_CTS UART0 Request To Send O(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) UART0_CTS UART1 Clear To Send Input(Active Low) UART1_CTS UART1 Clear To Send Input(Active Low) UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART0_ | | | | McAFSX | I2S Audio Port Frame Sync |
| GPI01 | | | | GT_CCP05 | Timer Capture Port |
| Part | | | | GSPI_MISO | General SPI MISO |
| PCHK[PIXCLK] Pixel Clock From Parallel Camera Sensor | | | | GPIO1 | General-Purpose I/O |
| Barrian | | | | UARTO_TX | UARTO TX Data |
| GT_CCP01 Timer Capture Port | GPIO1 | 1/0 | NO | pCLK(PIXCLK) | Pixel Clock From Parallel Camera Sensor |
| Form | | | | UART1_TX | UART1 TX Data |
| GPIO2 | | | | GT_CCP01 | Timer Capture Port |
| Form | | | | ADC_CH0 | ADC Channel 0 Input(1.5V max) |
| Form | | | | GPIO2 | General-Purpose I/O |
| WART1_RX | GPIO2 | 1/0 | 1 | UARTO_RX | UARTO RX Data |
| ADC_CH1 | | | Source | UART1_RX | UART1 RX Data |
| Formation | | | | GT_CCP02 | Timer Capture Port |
| O | | | | ADC_CH1 | ADC Channel 1 Input(1.5V max) |
| BODATA CAMPU CAM | 00100 | | | GPIO3 | General-Purpose I/O |
| ADC_CH2 | GPIO3 | 1/0 | NO | UART1_TX | UART1 TX Data |
| FPIO4 | | | | pDATA7(CAM_D3) | Parallel Camera Data Bit 3 |
| Source | | | | ADC_CH2 | ADC Channel 2 Input(1.5V max) |
| Source | 00104 | | Wake-Up | GPIO4 | General-Purpose I/O |
| ADC_CH3 | GPIO4 | 1/0 | Source | UART1_RX | UART1 RX Data |
| GPIO5 I/O NO PDATA5(CAM_D1) Parallel Camera Data Bit 1 McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP05 Timer Capture Port GPIO6 General-Purpose I/O UARTO_RTS UARTO Request To Send O(Active Low) PDATA4(CAM_D0) Parallel Camera Data Bit 0 UART1_CTS UART1 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 General-Purpose I/O I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | pDATA6(CAM_D2) | Parallel Camera Data Bit 2 |
| GPIO5 I/O NO pDATA5(CAM_D1) Parallel Camera Data Bit 1 McAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP05 Timer Capture Port GPIO6 General-Purpose I/O UARTO_RTS UARTO Request To Send O(Active Low) pDATA4(CAM_D0) Parallel Camera Data Bit 0 UART1_CTS UART1 Clear To Send Input(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 General-Purpose I/O I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | ADC_CH3 | ADC Channel 3 Input(1.5V max) |
| MCAXR1 I2S Audio Port Data 1(RX/TX) GT_CCP05 Timer Capture Port GPIO6 General-Purpose I/O UARTO_RTS UARTO Request To Send O(Active Low) pDATA4(CAM_D0) Parallel Camera Data Bit 0 UART1_CTS UART1 Clear To Send Input(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O MCACLKX I2S Audio Port Clock O WART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 General-Purpose I/O I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | GPIO5 | General-Purpose I/O |
| GT_CCP05 Timer Capture Port GPI06 General-Purpose I/O UART0_RTS UART0 Request To Send O(Active Low) pDATA4(CAM_D0) Parallel Camera Data Bit 0 UART1_CTS UART1 Clear To Send Input(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPI07 General-Purpose I/O McACLKX I2S Audio Port Clock O WART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPI08 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | GPIO5 | 1/0 | NO | pDATA5(CAM_D1) | Parallel Camera Data Bit 1 |
| GPIO6 General-Purpose I/O UARTO_RTS UARTO Request To Send O(Active Low) pDATA4(CAM_D0) Parallel Camera Data Bit 0 UART1_CTS UART1 Clear To Send Input(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 GPIO8 GPIO8 General-Purpose I/O I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | McAXR1 | I2S Audio Port Data 1(RX/TX) |
| Boundary Color | | | | GT_CCP05 | Timer Capture Port |
| PDATA4(CAM_D0) Parallel Camera Data Bit 0 | | | | GPIO6 | General-Purpose I/O |
| GPIO6 I/O NO UART1_CTS UART1 Clear To Send Input(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 GPIO8 I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | UARTO_RTS | UARTO Request To Send O(Active Low) |
| UART1_CTS UART1 Clear To Send Input(Active Low) UART0_CTS UART0 Clear To Send Input(Active Low) GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | CDIOC | | | pDATA4(CAM_D0) | Parallel Camera Data Bit 0 |
| GT_CCP06 Timer Capture Port GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 GPIO8 I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | GPI06 | 1/0 | NO | UART1_CTS | UART1 Clear To Send Input(Active Low) |
| GPIO7 General-Purpose I/O McACLKX I2S Audio Port Clock O UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | | | | UARTO_CTS | UARTO Clear To Send Input(Active Low) |
| GPIO7 I/O NO UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | GT_CCP06 | Timer Capture Port |
| GPIO7 I/O NO UART1_RTS UART1 Request To Send O(Active Low) UART0_RTS UART0 Request To Send O(Active Low) UART0_TX UART0 TX Data GPIO8 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | | | | GPIO7 | General-Purpose I/O |
| UARTO_RTS UARTO Request To Send O(Active Low) UARTO_TX UARTO TX Data GPIO8 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | | | | McACLKX | I2S Audio Port Clock O |
| UARTO_RTS UARTO Request To Send O(Active Low) UARTO_TX UARTO TX Data GPIO8 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | GPIO7 | 1/0 | NO | UART1_RTS | UART1 Request To Send O(Active Low) |
| UARTO_TX UARTO TX Data GPIO8 General-Purpose I/O SDCARD_IRQ Interrupt from SD Card(Future support) | | | | _ | |
| GPIO8 I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | | |
| GPIO8 I/O NO SDCARD_IRQ Interrupt from SD Card(Future support) | | | | | General-Purpose I/O |
| | GPIO8 | 1/0 | NO | | · |
| INICAL SA 123 Addit For France Sylic | | ' | | McAFSX | I2S Audio Port Frame Sync |

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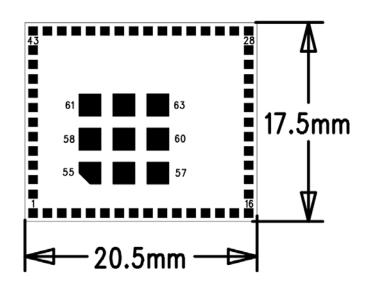


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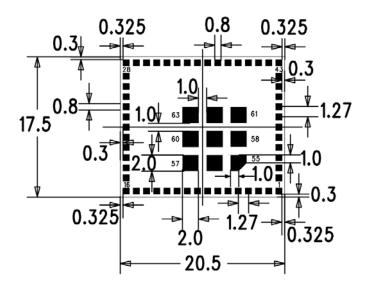
| | | | GT_CCP06 | Timer Capture Port |
|-------|-----|----|--------------|----------------------------|
| | | | GPIO9 | General-Purpose I/O |
| | | | GT_PWM05 | Pulse Width Modulated O/P |
| GPIO9 | I/O | NO | SDCARD_DATA0 | SD Card Data |
| | | | McAXR0 | I2S Audio Port Data(RX/TX) |
| | | | GT_CCP00 | Timer Capture Port |

Form2 Pin Multiplex Table

4. Package Size Picture



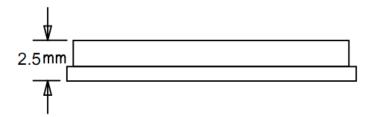
Picture 4 RF-WM-3220B3 Package Size Picture (Top View)



Picture 5 RF-WM-3220B3 Package Size Picture (unit: mm) (Bottom View)

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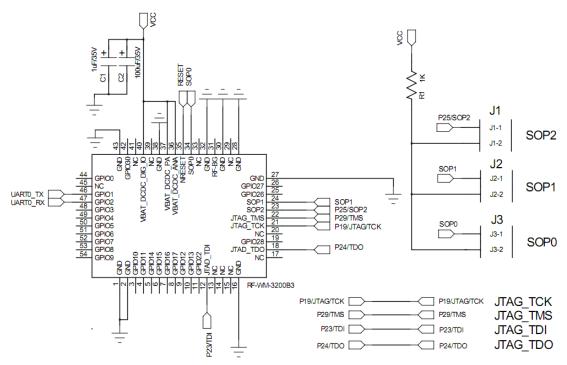




Picture 6 RF-WM-3220B3 Package Size Picture (Side View)

Module Operations

1. SOP Assignment



Picture 7 RF-WM-3220B3 Connection Picture

Remarks:

- a. When J2 of SOP1 is short connected, J1 of SOP2 & J3 of SOP0 are disconnected(SOP[2,1,0]=010), the module is in flash programming mode. Firmware could be burned into flash via UARTO_TX and UARTO_RX.
- b. When J1 of SOP2,J2 of SOP1 and J3 of SOP0 are disconnected (SOP [2,1,0]=000), the module is in the functional module+ 4 Wire JTAG mode.
- c. When J3 of SOP0 is short connected, J2 of SOP1 and J1 of SOP2 are disconnected (SOP [2,1,0]=001), the module is in the functional module+ 2 Wire JTAG mode.

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2. Pin Assignment

Configure the module IO function and generate the corresponding configuration code by using the online PinMux tool (https://dev.ti.com/).

Technical Parameters

1. Voltage Range

| | Minimum | Typical Value | Maximum |
|---------------|---------|---------------|---------|
| Voltage range | 2.3V | 3.3V | 3.6V |

2. Temperature Range

| Condition | Temperature Range | |
|-----------------------|-------------------|--|
| Storage temperature | -55 ~ +125 ℃ | |
| Operating temperature | -20∼+70 ℃ | |

Remark 1: The operating temperature range of CC3220 chip is -40 $^{\sim}$ +85 $^{\circ}$ C, but the current crystal temperature range is -20 $^{\sim}$ +70 $^{\circ}$ C. Kindly advise us if higher temperature range is needed,we'll change crystal to improve storage and operating temperature of module accordingly.

3. RF Performance

| Wireless mode | Communication rate (modulation) | Transmit power | Receiving sensitivity |
|---------------|---------------------------------|----------------|-----------------------|
| IEEE802.11 B | 11Mbps@CCK | 17.0dBm | -83dBm |
| IEEE802.11 G | 54Mbps@OFDM | 13.5dBm | -72dBm |
| IEEE802.11 N | HT20@MCS7 | 12.0dBm | -69dBm |

Appendix: Version History

| version | time | announcer | instructions |
|---------|------------|-----------|-------------------|
| 1.0.0 | 2017-10-22 | Eaton | First Pre-Release |
| | | | |

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FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If the FCC identification number is not visible when the module is installed inside the host, then the outside of the device into which the module is installed must also display a label referring to the enclosed module.

This exterior label can use wording such as the following:

"Contains Transmitter Module Contains FCC ID:2ABN2-RS3220B1" or

"Contains FCC ID: 2ABN2-RS3220B1 Any similar wording that expresses the same meaning may be used.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement.

The device can be used in public exposure condition without restriction.

This device should be installled and operated with minimum distance 20cm between the radiator and your body.