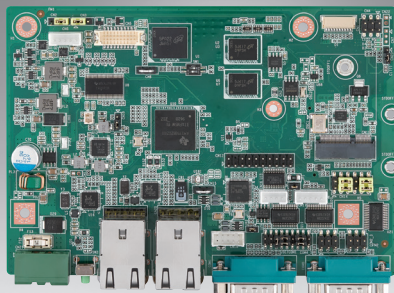


# RSB-4221

## TI Sitara™ ARM® AM3358 Cortex®-A8 3.5" SBC



### Features

- TI Sitara AM3358 Cortex A8 1.0GHz
- On board DDR3 800MHz 1GB memory and 4GB NAND flash EMMC
- Supports 18-bit LVDS with up to 1366 x 768 resolution
- Hardware watchdog timer for system protection
- M.2 E-key slot for Wi-Fi/Bluetooth module
- Operating temperature 0~60°C
- Lower power consumption, fanless design
- Supports Linux and Android BSP



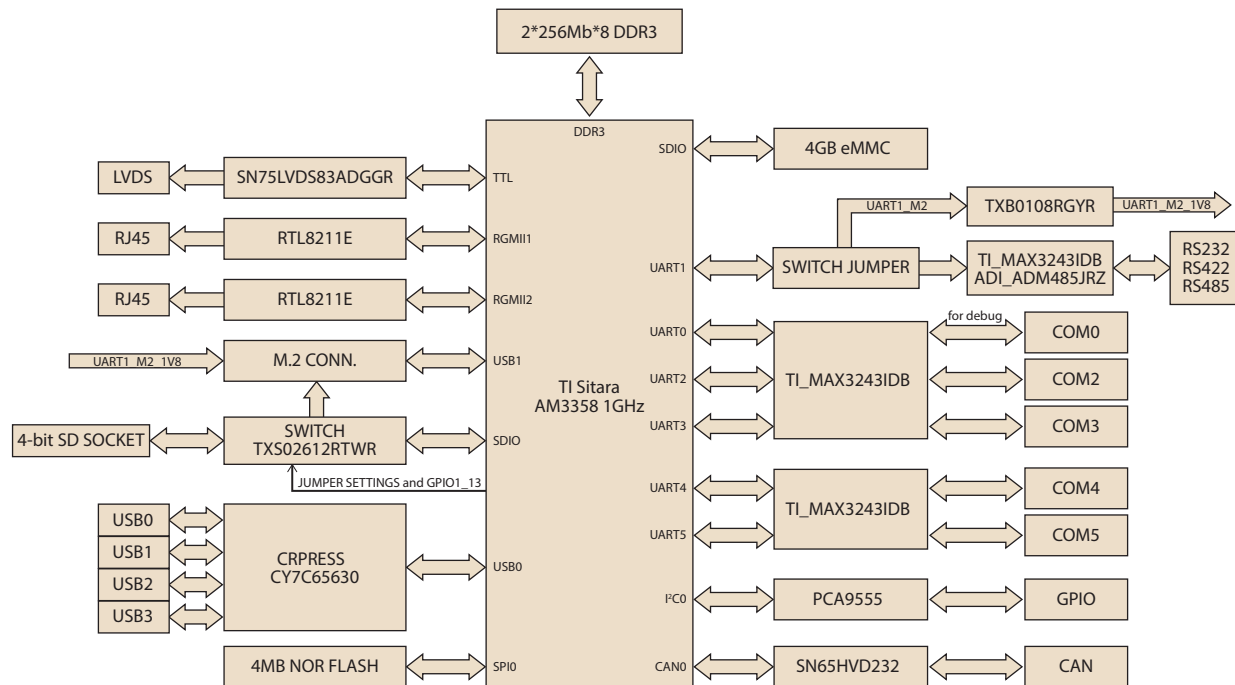
### Introduction

RSB-4221 is a RISC single board computer (SBC) integrated with a TI Sitara AM3358 Cortex-A8 processor. This system features two gigabit Ethernet ports, five serial ports, four USB host ports, a hardware watchdog timer, as well as M.2/SD to enable Wi-Fi and Bluetooth. RSB-4221 also supports touch panel control via USB and single-channel 18-bit LVDS with up to 1366 x 768 resolution, providing the ideal automation control solution for smart grid, industrial, and machine automation applications.

### Specifications

|                  |                        |                                                                   |
|------------------|------------------------|-------------------------------------------------------------------|
| Form Factor      |                        | 3.5" SBC                                                          |
| Processor System | CPU                    | TI Sitara AM3358 Cortex A8 1.0 GHz                                |
|                  | Capacity               | Onboard DDR3 800 MHz 1GB                                          |
|                  | Flash                  | 4 GB eMMC NAND Flash for OS and 4 MB SPI NOR Flash for ADV loader |
| Graphics         | LVDS                   | Supports 18-bit LVDS with up to 1366 x 768 resolution             |
|                  | Touch                  | Yes, via USB signal                                               |
| Ethernet         | Chipset                | TI AM3358 integrated RGMII                                        |
|                  | Speed                  | 2 x 10/100/1000 Mbps                                              |
| WatchDog Timer   |                        | MSP430G2202 (time out: 1 ~ 6553 s, default 60 s/power on/off 1 s) |
| I/O              | USB                    | 4 x USB 2.0 hosts (2 x USB ports and 2 x pin headers)             |
|                  | Serial                 | 1 x 4-wire RS232/422/485 and 4 x 2-wire RS232 ports               |
|                  | CAN                    | 1                                                                 |
|                  | GPIO                   | 12                                                                |
|                  | I <sup>2</sup> C       | 1                                                                 |
|                  | Recovery               | 1 x recovery button (for Android)                                 |
| Expansion        | M.2                    | 1 x M.2 for Wi-Fi and Bluetooth                                   |
|                  | SD Socket              | 1 x SD (optional w/ M.2)                                          |
| Power            | Power Supply Voltage   | +12V DC-in                                                        |
|                  | Power Type             | 2-pole lockable DC-in                                             |
|                  | Power Consumption      | TBC                                                               |
| Environment      | Operating Temperature  | 0 ~ 60 °C                                                         |
|                  | Operating Humidity     | 5 ~ 95% relative humidity, non-condensing                         |
| Mechanical       | Dimensions (W x D x H) | 146 x 102 x 1.6 mm                                                |
| Operating System | Android                | 4.1.6                                                             |
|                  | Linux                  | Kernel 3.2.0                                                      |
| Certifications   |                        | CE/FCC Class B                                                    |

## Block Diagram



## Ordering Information

| Part Number      | CPU             | Memory | eMMC | SPI  | LCD | SD | CAN | UART | GPIO | Touch | USB Host | LAN | M.2 | Operating Temperature |
|------------------|-----------------|--------|------|------|-----|----|-----|------|------|-------|----------|-----|-----|-----------------------|
| RSB-4221CS-MDA1E | TI AM3358 1 GHz | 1GB    | 4 GB | 4 MB | 1   | 1  | 1   | 5    | 12   | 1     | 4        | 2   | 1   | 0 ~ 60 °C             |

## Packing List

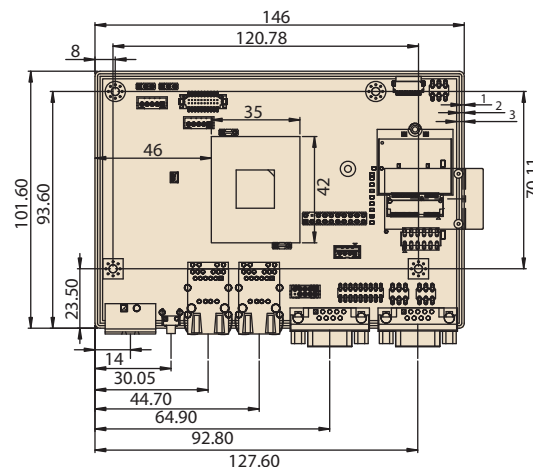
| Part Number      | Description                      | Quantity |
|------------------|----------------------------------|----------|
| RSB-4221CS-MDA1E | RSB-4221 TI AM3358 1 GHz 1GB DDR | 1        |

## Optional Accessories

| Part Number        | Description                                     |
|--------------------|-------------------------------------------------|
| 1700022161-01      | A cable D-SUB 9P(F) 1-to-2 UART cable           |
| 96PSA-A36W12R1     | A/D 100 ~ 240 V, 36 W, 12 V                     |
| 1700023575-01      | CAN cable                                       |
| 1700023576-01      | A cable USB-A 1-to-2 cable                      |
| 1700019474         | D-SUB 9P(F)/D-SUB 9P(F) Debug/RS232/RS485 cable |
| SQF-ISDS1-4G-82C   | SQF SD C6 SLC 4G, 1CH                           |
| 170203183C         | Power cord 3P Europe (WS-010 + WS-083)183 cm    |
| 1700023307-01      | DC jack/plug-in 1*2P-5.0 10 cm RSB-4220 cable   |
| 1700023366-01      | Backlight cable                                 |
| 1700024543-01      | LVDS cable                                      |
| 170203180A         | Power cord 3P UK 2.5A/3A 250 V 1.83 M           |
| 1700001524         | Power cord 3P UL 10A 125 V 180 cm               |
| IDK-1107WR-40WVA1E | 7-inch LCD w/ touch control                     |

## Dimensions

Unit: mm



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