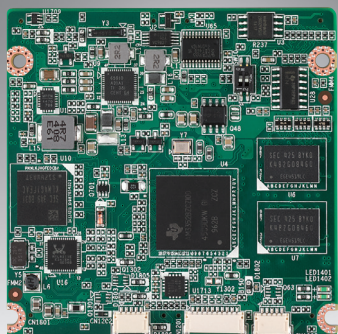


# ROM-3310

## TI Sitara™ ARM® AM3352 Cortex®-A8 1GHz RTX2.0 Module



### Introduction

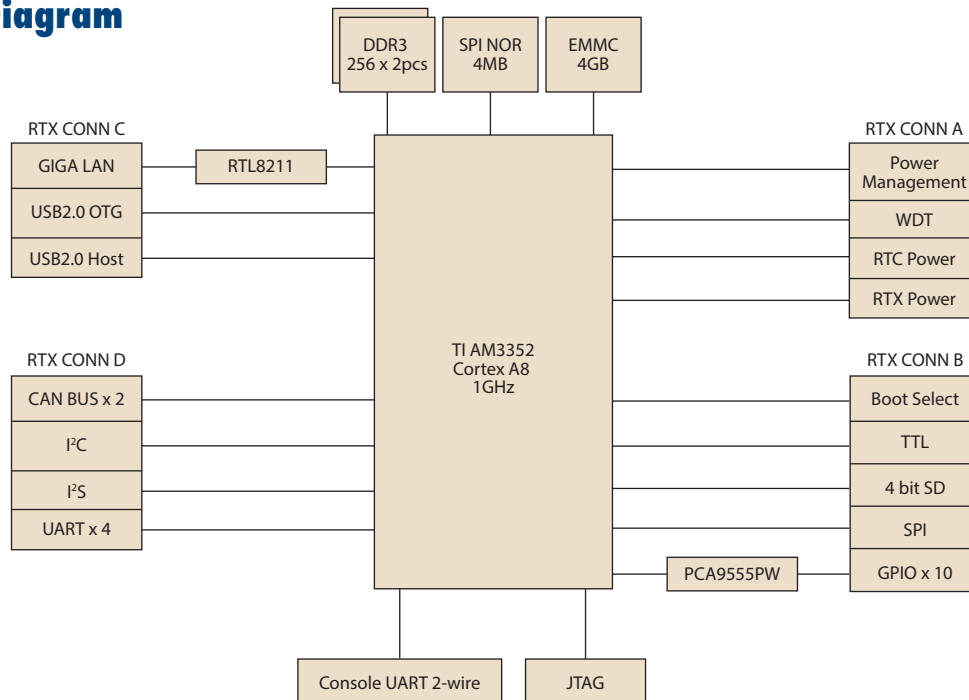
ROM-3310 RTX2.0 module integrates an ARM Cortex A8 single core 1 GHz TI AM3352 series ultra low power SoC and I/O solution with Linux. TI AM3352 supports multiple serial ports, 5V~24V wide range power inputs, and wide temperature -40 ~ 85 °C operation for data collection in industrial applications. Based on a thickness of 2 mm board, it uses an anti-oxidization golden finger design.

ROM-3310 RTX2.0 module offers an Advantech ROM-DB3900 evaluation carrier board for easy integration and hardware design reference, and also provides a Linux BSP utility and reference codes for application development and device integration.

### Specifications

|                  |                       |                                                                |
|------------------|-----------------------|----------------------------------------------------------------|
| Form Factor      |                       | RTX 2.0                                                        |
| Processor System | CPU                   | TI Sitara Cortex A8 AM3352 1Ghz                                |
| Memory           | Technology            | DDR3 on board 800MHz                                           |
|                  | Capacity              | 512MB                                                          |
|                  | Flash                 | 4GB EMMC NAND Flash for O.S & 4MB SPI NOR Flash for ADV loader |
| Graphics         | Parallel RGB          | 1 x 24-bit TTL, 1366 x 768                                     |
| Ethernet         | Chipset               | TI AM3352 Integrated RGMII                                     |
|                  | Speed                 | 1 x 10/100/1000 Mbps                                           |
| RTC              | RTC                   | Yes                                                            |
| WatchDog Timer   |                       | MSP430G2202 (time out : 0.1~6553.5s, power on/off 4s)          |
| I/O              | USB                   | 1 x USB 2.0 host, 1 x USB 2.0 OTG                              |
|                  | I <sup>2</sup> S      | 1                                                              |
|                  | SDIO                  | 1                                                              |
|                  | Serial Port           | 4 x UART (1 x 4 wire, 3 x 2 wire w/ 3.3V)                      |
|                  | SPI                   | 1                                                              |
|                  | CAN                   | 2 x CAN 2.0                                                    |
|                  | GPIO                  | 10                                                             |
| Power            | Power Supply Voltage  | 5 ~ 24 V                                                       |
|                  | Power Consumption     | 2.11W (Max)                                                    |
| Environment      | Operating Temperature | 0 ~ 60 °C/ -40 ~ 85 °C                                         |
|                  | Operating Humidity    | 0% ~ 90% relative humidity, non-condensing                     |
| Mechanical       | Dimensions (W x D)    | 68 x 68 mm                                                     |
| Operating System |                       | Linux Kernel v3.2.0                                            |
| Certifications   |                       | CE/FCC Class B                                                 |

## Block Diagram



## Ordering Information

| Part Number      | CPU                              | Memory | Flash | Parallel RGB | LAN | GPIO | USB Host | USB OTG | I <sup>2</sup> C | I <sup>2</sup> S | SD | SPI | UART | CAN | Operating Temperature |
|------------------|----------------------------------|--------|-------|--------------|-----|------|----------|---------|------------------|------------------|----|-----|------|-----|-----------------------|
| ROM-3310WS-MCA1E | TI Sitara AM 3352 Cortex A8 1GHz | 512MB  | 4GB   | 1            | 1   | 10   | 1        | 1       | 1                | 1                | 1  | 1   | 4    | 2   | -40 ~ 85 °C           |
| ROM-3310CS-MCA1E | TI Sitara AM 3352 Cortex A8 1GHz | 512MB  | 4GB   | 1            | 1   | 10   | 1        | 1       | 1                | 1                | 1  | 1   | 4    | 2   | 0 ~ 60 °C             |

## Development Board

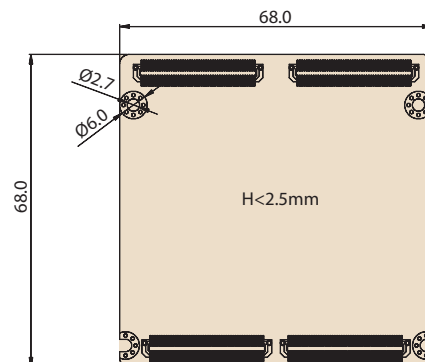
| Part No.         | Description                         |
|------------------|-------------------------------------|
| ROM-DB3900-SWA1E | Development board for RTX2.0 module |
| ROM-DK3310-F0A1E | ROM-3310 EVK Kit (RTX v2.0)         |

## Optional Accessories

| Part Number    | Description                             |
|----------------|-----------------------------------------|
| 9696ED2000E    | Debug adapter board                     |
| 1700022373-01  | Debug port cable for ROM-3420/5420/3310 |
| 1960070578T001 | Heatsink_Black for ROM-3310             |
| 1930002234     | Screws M2.5x12.5L, for Heatsink         |

## Dimensions

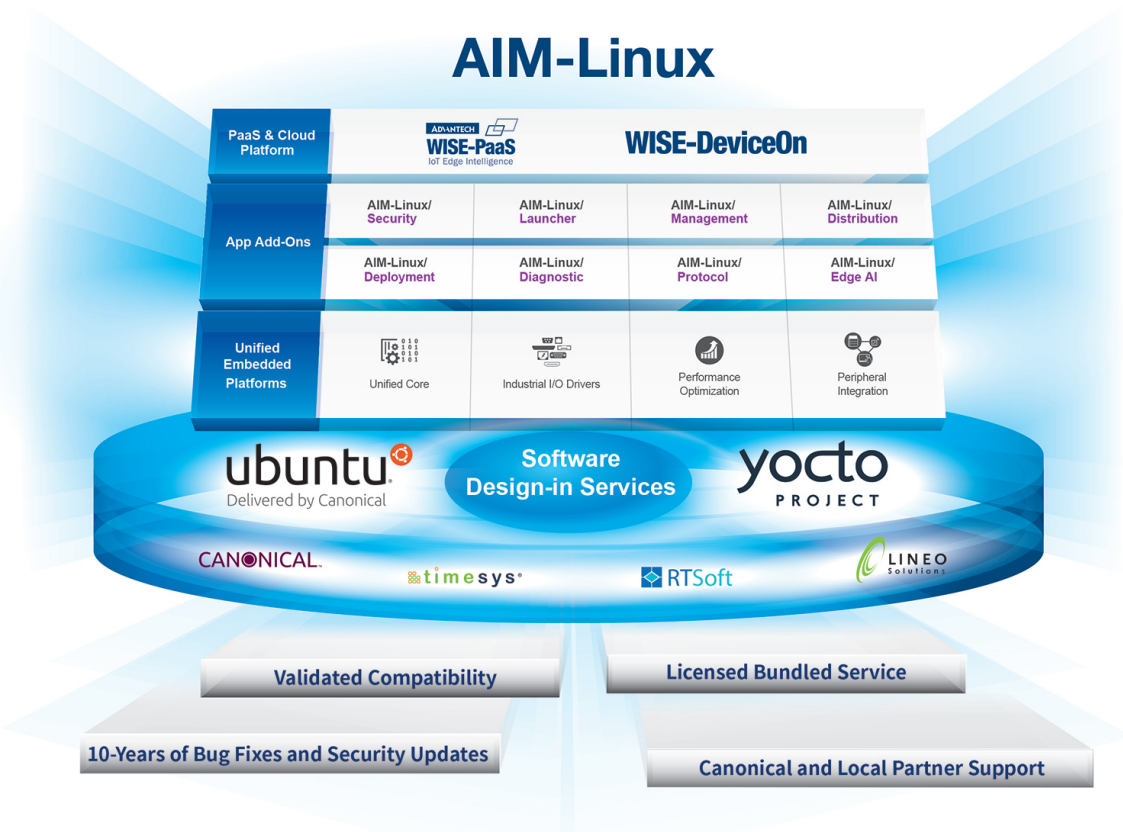
Unit: mm



# Embedded Linux Support and Design-in Services

## Hardware Certified Ubuntu and Yocto with Eco Partner Services

Linux is the most popular embedded OS for transportation, outdoor services, factory automation, and mission critical applications. Its open source and kernel reliability features ease security updates, and make it particularly adaptable to new AI and Edge computing technology. Advantech has cooperated with Canonical and other software partners to provide hardware certified Ubuntu image and Yocto BSP as Linux offerings. The Advantech, Embedded Linux, and Android Alliance (ELAA) delivers local software services and consultation.



### Features

| Certified OS and BSP                                                                                                                 | Licensed Services                                                                                                                                                 | Numerous AI and Edge Resources                                                                                                                                       | Local Partner Alliance                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>Platform compatibility tests</li><li>Preloaded functional driver and software stacks</li></ul> | <ul style="list-style-type: none"><li>License authorized Canonical delivers 10-years of bug fixes and security updates</li><li>In-house bundled service</li></ul> | <ul style="list-style-type: none"><li>Containerized technology for service provision and deployment</li><li>AI resources from Caffe, TensorFlow, and mxnet</li></ul> | <ul style="list-style-type: none"><li>Embedded Linux and Android Alliance (ELAA)</li></ul> |

# WISE-DeviceOn

## Massive IoT Device Management Utility

IoT deployment and management typically involves numerous disparate devices installed on multiple sites. These devices require effective monitoring, managing, and tracking. Advantech's easy-to-use WISE-DeviceOn interface enables users to remotely monitor device health, troubleshoot problems, and send software/firmware updates over-the-air (OTA). In sum, DeviceOn empowers quick real-time responsiveness to emerging problems.



### Features

| Comprehensive Management                                                                                                     | Remote Access                                                                                                              | Efficient Operations                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Devices status</li><li>• Peripherals/firmware</li><li>• Open for extension</li></ul> | <ul style="list-style-type: none"><li>• Real-time monitoring</li><li>• Remote controls</li><li>• Troubleshooting</li></ul> | <ul style="list-style-type: none"><li>• Zero-touch on-boarding</li><li>• OTA updates</li><li>• Batch control</li></ul> |

### Product Highlights



**SOM-6883**

High-performance 11<sup>th</sup> Gen Intel®  
COMe Type 6 Module



**MIO-5375**

Compact 11<sup>th</sup> Gen Intel® Outdoor  
Focused 3.5" SBC



**EPC-B5587**

10<sup>th</sup> Gen Intel® Xeon® based Edge  
server



**EPC-R3220**

Arm based IoT Edge Gateway