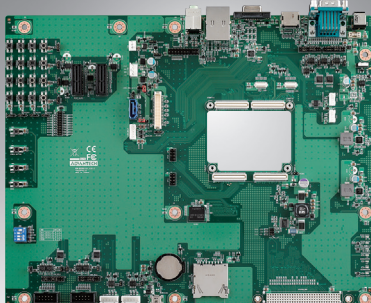


# ROM-DB3900

## Development Board for RTX v2.0 RISC Module



### Features

- Supports RTX v2.0 module form factor
- ATX form factor
- 3 display outputs. VGA, HDMI, 24-bit LVDS
- 1 x SATA/SATA-DOM, 1 x RJ-45, 1 x USB 3.0, 1 x USB 2.0 OTG, 2 x CAN bus, 4 x UART, 10 x GPIO
- 2 PCIe slots, 1 system bus PC104 connector
- Onboard eMMC Flash 4 GB, SD card, SIM card slot
- Supports HD Audio codec, camera input daughter boards
- Support ATX mode, Input Power Range is +12V
- Cable pack included

### Introduction

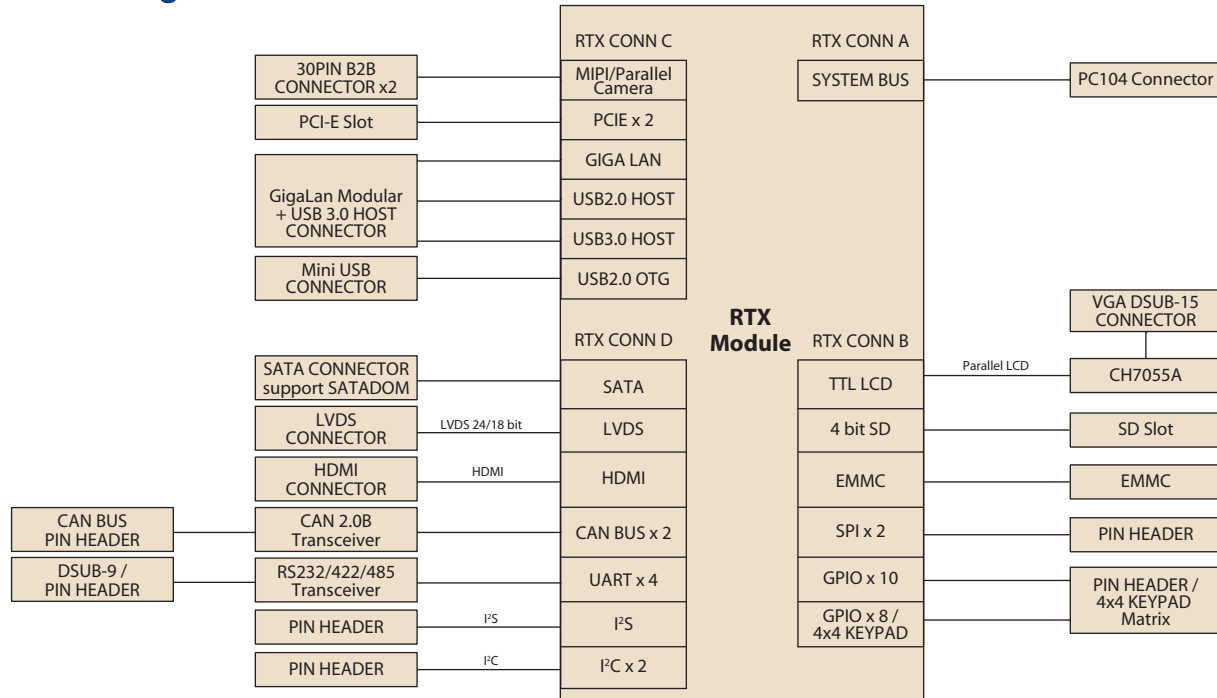
ROM-DB3900 is an evaluation carrier board designed for the Advantech RTX2.0 module. It is compatible with the RTX2.0 module ROM-3420 and has a rich I/O interface for evaluation and development. It supports wide range operating temperature, and also supports two MIPI connectors for a camera module. ROM-DB3900 is an ideal development board for ruggedized applications, such as industrial control, automation control and HDMI systems.

ROM-DB3900 is offered along with RISC RTX2.0 carrier board design documents: Carrier Board Design Guide, layout, and schematic checklist, all ready for you to start your own carrier board design. With ROM-DB3900, you can easily learn the power of Advantech's RISC RTX2.0 module.

### Specifications

Compatible Module		RTX v2.0 CPU Module
Graphics	HDMI	1 HDMI TypeA
	LVDS	1 Single 18/24-bit LVDS
	VGA	1 D-Sub 15 with female connector
Ethernet	LAN	1 GbE with RJ45 connector
Storage	Flash	Onboard 4 GB eMMC
	SD	1 SD card slot
	SATA	1 SATAII Connector (with SATA-DOM support)
I/O	USB	1 USB mini Type B (OTG), 1 USB 2.0/3.0 Type A
	UART	4 4wires UART all support RS-232/422/485(2x DB9 connector and 2x box header)
	Audio	1 2 port phone jack, support Line-in , Line-out
	CAN	2 CAN 2.0B ports, Differential mode +5V
	GPIO	1 2x10 pin header
	I <sup>2</sup> C	2 I <sup>2</sup> C pin header
	SPI	2 SPI pin header
	Camera Input	2 MIPI/Parallel B2B connectors
	Keypad	18 pin headers (share with GPIO)
	I <sup>S</sup>	1 pin header
Expansion	PCIe Slot	2 PCIe x1
	System bus	1 PC104 connector (Address : 31 bits , Data : 16 bits)
Power input	Power	19V DC Jack
Environment	Operating Temperature	0 ~ 60 °C
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Physical Characteristics	Dimensions	305 x 244 mm

## Block Diagram



## Ordering Information

Part No.	Description
ROM-DB3900-SWA1E	Development board for RISC RTX2.0 Module series

## Packing List

Part No.	Description
9696ED2000E	Debug adapter board
1700022373-01	Debug port cable for ROM-3420
1700021882-01	LVDS backlight cable
1700021883-01	LVDS cable
1700021941-01	SATA power
1700004711	SATA signal
1700006911	USB OTG to Type A female
1700019077	USB OTG to Type A male
1701100300	D-SUB 9P(M) for UART and CAN 30cm
1700022840-01	SPDIF to RCA cable for audio in and out
1700019474	D-SUB 9P(F) RS232/RS485 100cm cable

## Optional Accessories

Part No.	Description
96PSA-A36W12R1	Adapter 100-240V 36W 12V 3A
1700001524	Power cord 3P UL 180cm
170203183C	Power cord 3P EU 183cm
170203180A	Power cord 3P UK 183cm
1700008921	Power Cord 3P PSE 183cm
EWM-W142F01E	802.11 b/g/n, AR9287, 2T2R, Full size Mini PCIe
EWM-C106FT01E	Cellular, HSUPA/WCDMA/GPRS, Full Mini PCIe
1750007156-01	Cellular/GPS SMA Short JACK(9.5MM) L=100mm (3G Cable)
1750007050-01	WiFi RP-SMA short SMA Jack(9.5mm) to U.FL_100mm (WiFi Cable)
1750000318	EMI Antenna 2DBI 2.4GHz SMA (WiFi Antenna)
1750005865	Antenna L=10.9cm 500hm AN8921F-5701SM (3G Antenna)
9680015491	PCIe to miniPCIe adapter card