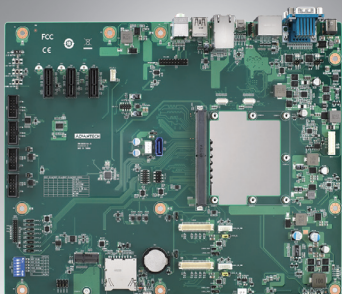


# ROM-DB5901

## Development Board for SMARC v2.0 RISC Module

NEW



### Features

- Supports SGeT SMARC v2.0 CPU module board
- 4 kinds of display outputs. 18/24-bit LVDS or MIPI DSI, HDMI, DP
- 1 x SATA/SATA-DOM, 2 x RJ-45, 1 x USB 3.0 Type C, 1 x USB 2.0 OTG, 1 x USB 3.0, 1 x USB 2.0, 2 x USB 2.0 Pin Headers, 2 x CAN bus, 4 x UART, 12 x GPIO
- 3 x PCIe by 1
- 2 x MIPI DSI interfaces for camera module
- Supports HD audio codec
- Supports +12V DC and lithium-ion battery power input

### Introduction

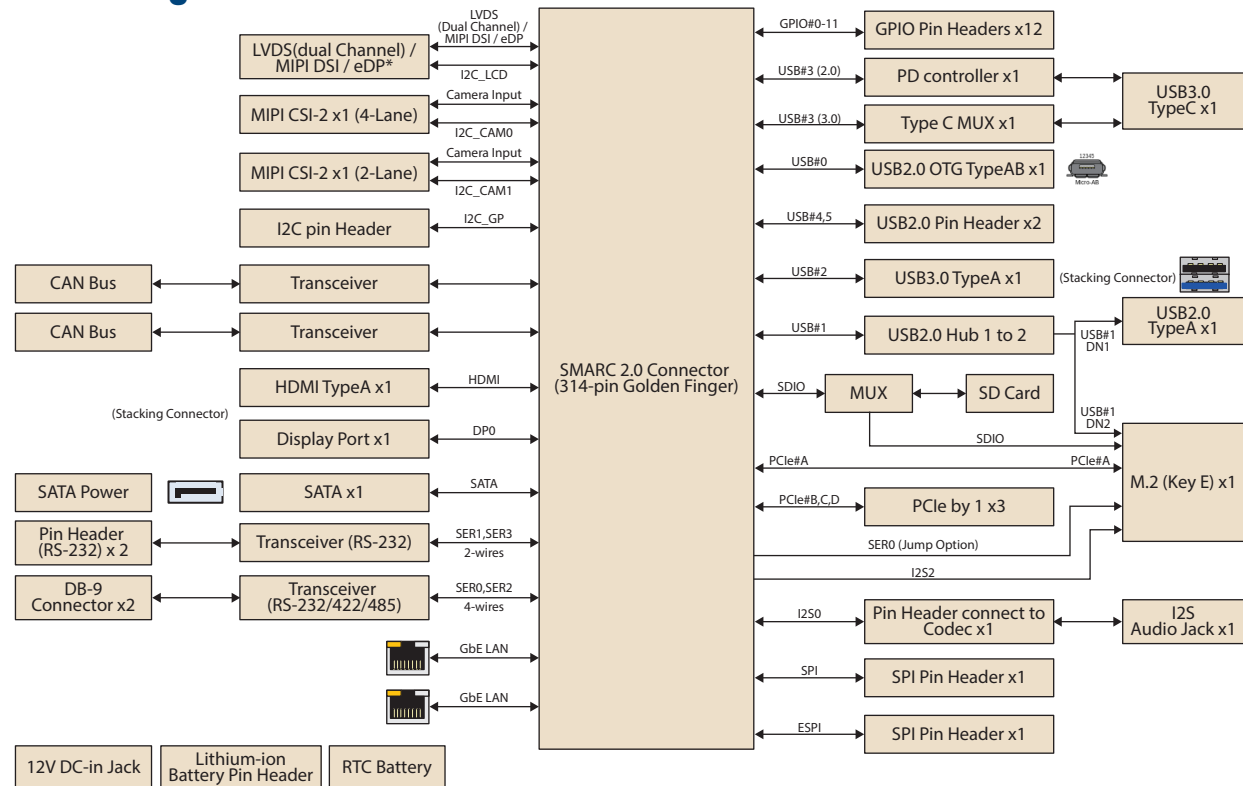
ROM-DB5901 is an evaluation carrier board designed for the Advantech SMARC v2.0 module. It is compatible with the ROM-5720, ROM-5620 and ROM-5721 SMARC modules and has a multiple I/O interface for evaluation and development. It supports wide range operating temperatures, two power input interfaces, and two MIPI connectors for the camera module. ROM-DB5901 is an ideal development board for mobile applications, such as portable devices, industrial tablets or HMI systems.

ROM-DB5901 is offered along with RISC SMARC 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-DB5901, you will benefit from the power of Advantech's RISC SMARC modules.

### Specifications

Compatible Module		SMARC v2.0 CPU Module
Graphics	HDMI	1 HDMI 2.0 TypeA
	LVDS/MIPI DSI	2 Single 18/24-bit LVDS/ 2 MIPI DSI
	DP	1 DP
Ethernet	10/100/100 Mbps	2 RJ-45
Storage	SD	1 SD Card Slot
	SATA	1 SATAIII Connector (with SATA-DOM Support)
I/O	USB	1 USB Type C Connector (USB 3.0, Output: 5V/9V/12V@3A, Input: 12V/15V/20V@3A)
		1 Micro USB Type AB (USB 2.0 OTG), 1 USB Type A Stacking Connector (USB 3.0 & USB 2.0 Host), 2 USB 2.0 Pin Header
	UART	2 4-wires RS-232/422/485, 2 RS-232 Pin Headers
	Audio	1 1/8 Audio Jack (I <sup>S</sup> HD Audio)
	CAN	2 CAN 2.0B Ports, Differential Mode +5V
	GPIO	12 GPIO Ports
	I <sup>2</sup> C	1 I <sup>2</sup> C Pin Header
	SPI	1 SPI Pin Header, 1 ESPI Pin Header
	Camera Input	1 2-Lane MIPI-CSI2, 1 4-Lane MIPI-CSI2
	M.2	1 M.2 Key E Connector (USB, SDIO, PCIe, I2S and UART)
Expansion	PCIe Slot	3 PCIe by 1
Power Input	Power	2 Power Inputs (+12V DC-Jack, Lithium-ion battery)
Environment	Operating Temperature	-40 ~ 85 °C
	Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing
Physical Characteristics	Dimensions	305 x 244 mm

## Block Diagram



## Ordering Information

Part No.	Description
ROM-DB5901-SWA1	Development board for SMARC v2.0 RISC Module series

## Packing List

Part No.	Description
1700023619-01	Micro USB (M) to USB-A (M) 1m cable
1700021882-01	LVDS backlight cable for IDK-1107WR-40WVA1E
1700021883-01	LVDS cable for IDK-1107WR-40WVA1E
1700021941-01	SATA power cable
1700004711-01	SATA signal cable
1701100300	D-SUB 9P(M) for UART and CAN 30cm cable
1700019474	D-SUB 9P(F) RS232/RS485 100cm cable
1700023138-01	Micro USB (M) to USB-A (F) 40cm cable

## Option Accessories

Part No.	Description
96PSA-A60W12R1-1	Adapter 100-240V 60W 12V 5A PLUG 90°
1702002605	Power cord 3P EU 183cm
1702031801	Power cord 3P UK 183cm
1700000237	Power cord 3P PSE 183cm
EWM-W163M201E	AW-CB260NF, Wireless LAN and BT module
1750008717-01	WiFi/BT 2.4+5G, RSMA F (WiFi Antenna)
1750008653-01	RSMA F to MHF4 20cm (WiFi Cable)
EWM-C117FL06E	mini-PCle LTE/HSPA+/GPRS module, w/ SIM Slot, TOBY-L280H, for Taiwan
1750007990-01	LTE (700 ~ 960MHz, 1710 ~ 2700MHz), SMA M (4G Antenna)
1750006009	SMA F to U.F.L 25cm (4G Cable)
9680015491	PCle to miniPCle adapter card
IDK-1107WR-40WVA1E	7" Color TFT-LCD Panel, 800 x 480