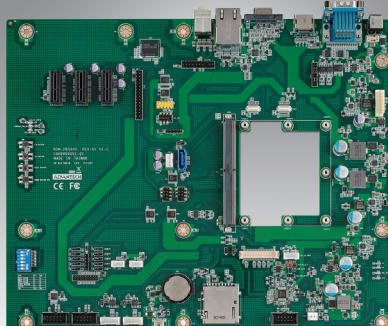


# ROM-DB5900

## Development board for RISC SMARC v1.0 Module

### Preliminary



### Features

- Supports SGeT SMARC CPU Module Board
- 3 display outputs. VGA, HDMI, 24-bit LVDS
- 1 SATA/SATA-DOM, 1 RJ-45, 2 USB 2.0, 2 CAN bus, 4 UART, 12 GPIO
- 1 PCIe x1
- 2 MIPI interfaces for camera module
- Onboard eMMC Flash 4 GB, SD card
- Supports HD Audio codec and SPDIF
- Supports +12V DC and Lithium-ion battery power input

## Introduction

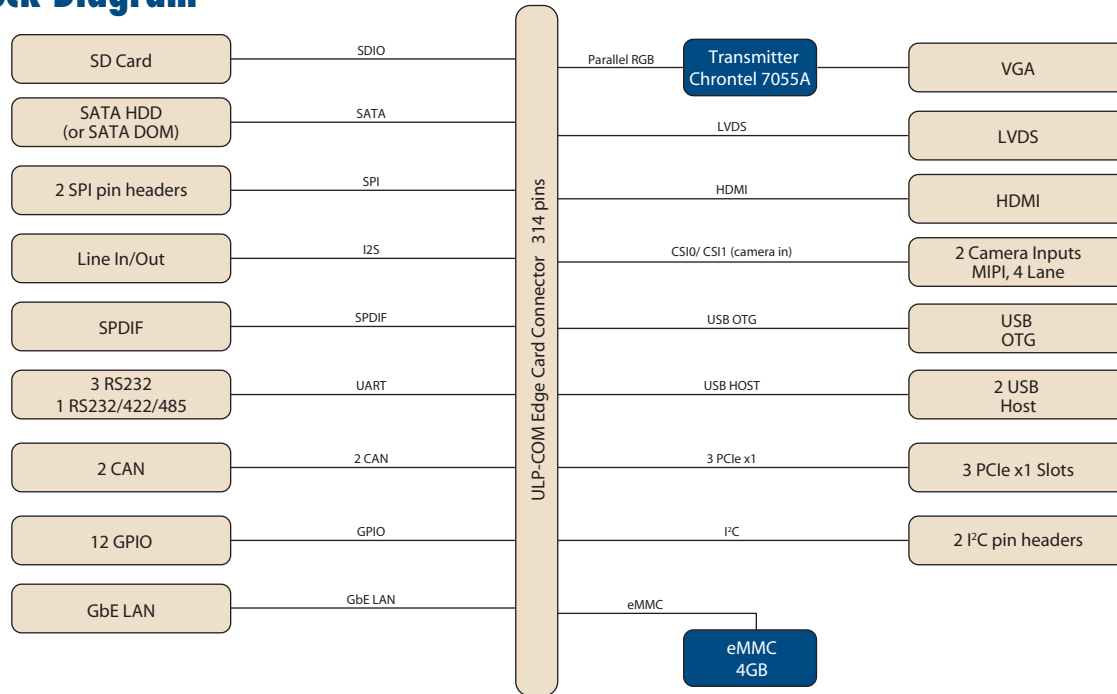
ROM-DB5900 is an evaluation carrier board designed for the Advantech SMARC module. It is compatible with SMARC module ROM-5420 and has rich I/O interface for evaluation and development. It supports wide range operating temperatures, 2 power input interfaces and also supports 2 MIPI connectors for the camera module. ROM-DB5900 is an ideal development board for mobile applications, such as portable device, industrial tablet or HMI systems.

ROM-DB5900 is released along with RISC SMARC carrier board design documents: Carrier Board Design Guide, Layout, Schematic Checklist, and also the reference board schematics ready for you to start your own carrier board design. With ROM-DB5900, you can easily learn the power of Advantech RISC SMARC module.

## Specifications

Compatible Module		Advantech SMARC v1.0 CPU Module Series
Graphics	HDMI	1 HDMI TypeA
	LVDS	1 Dual 18/24-bit LVDS
	VGA	1 D-Sub 15 with female connector
Ethernet	10/100/100 Mbps	1 RJ-45
Storage	Flash	Onboard 4 GB eMMC
	SD	1 SD card slot
	SATA	1 SATAII Connector (with SATA-DOM support)
I/O	USB	2 USB 2.0 Type A (Host), 1 min USB Type AB (OTG)
	UART	4 UART Ports
	Audio	1 1/8 Audio Jack (I <sup>2</sup> S HD Audio), 1 SPDIF Pin header
	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	2 SPI pin header
	Camera Input	2 MIPI connectors
	AFB	1 30pin AFB connector
	Expansion	PCIe Slot
Power input	Power	2 Power Inputs (+12V DC-Jack, Lithium-ion battery)
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140 °F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Physical Characteristics	Dimensions	305 x 244 mm (12" x 9.6")

## Block Diagram



## Ordering Information

Part No.	Description
ROM-DB5900-SWA1E	Development board for RISC SMARC Module series

## Option Accessories

Part No.	Description
EWM-W142F01E	802.11 b/g/n, AR9287, 2T2R, Full size Mini PCIe
1750007050-01	WiFi RP-SMA short SMA Jack(9.5mm) to U.FL_100mm (WiFi Cable)
1750000318	EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384 (WiFi Antenna)
EWM-C106FT01E	Cellular, HSUPA/WCDMA/GPRS, Full Mini PCIe
1750007156-01	Cellular/GPS SMA Short JACK(9.5MM) L=100mm (3G Cable)
1750005865	Antenna L=10.9cm 500hm AN8921F-5701SM (3G Antenna)
9680015491	PCIe to miniPCIe adapter card
96PSA-A36W12R1	Adapter 100-240V 36W 12V 3A
170203183C	Power Cord 3P Europe 183cm
170203180A	Power Cord 3P UK 183cm
1700001524	Power Cord 3P UL 180cm

## Packing List

Part No.	Description
9696ED2000E	debug adapter board
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	F Cable IDE#3 10P-2.54/D-SUB 9P(M) 30cm for UART and CAN
1700022840-01	SPDIF to RCA cable for audio in and out
1700022373-01	Debug port cable for ROM-5420
1700019474	A Cable D-SUB 9P(F)/D-SUB 9P(F) RS232/RS485 100c