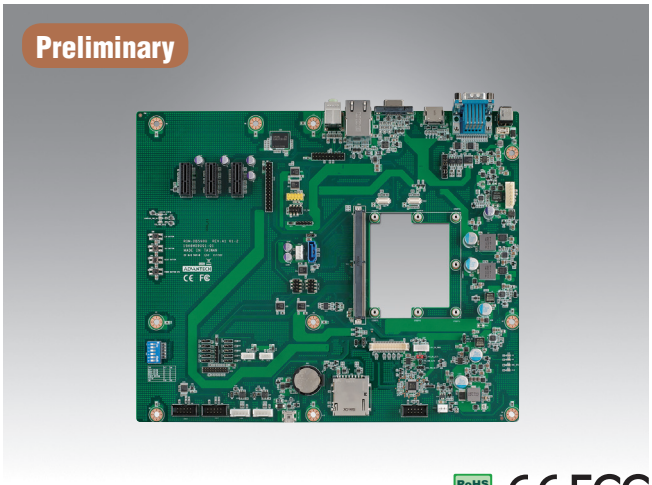
ROM-DB5900

Development board for RISC SMARC v1.0 Module



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 a 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.

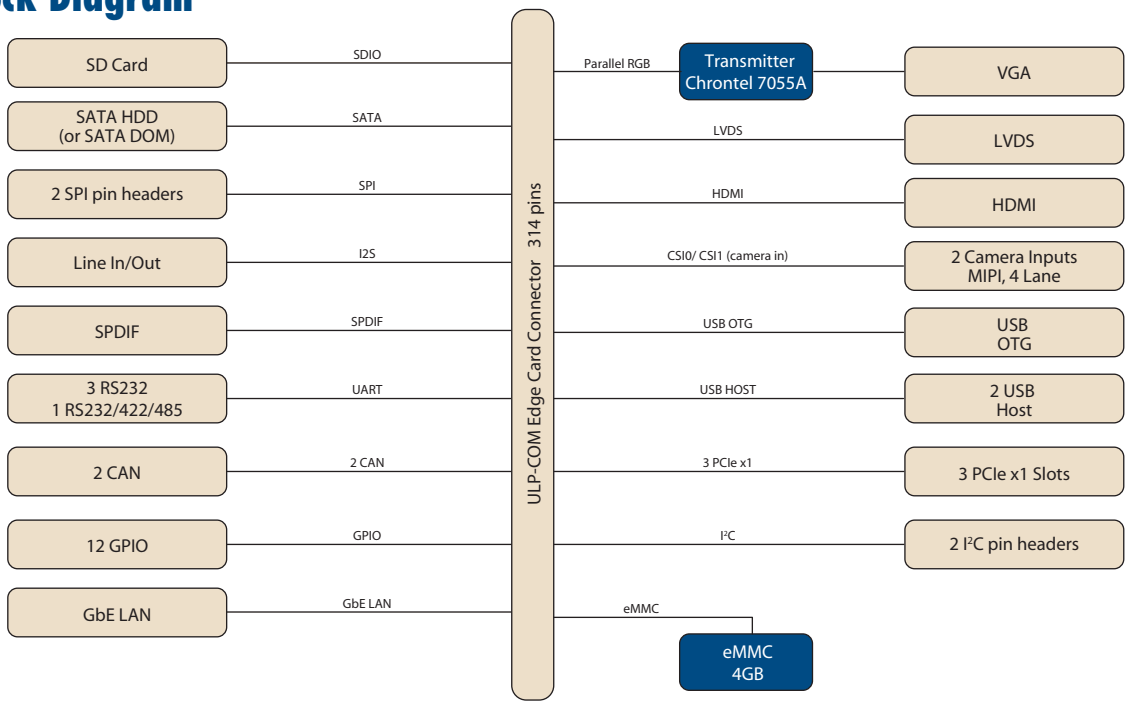
ROM-DB5900 is released along with RISC SMARC carrier board design documents: Carrier Board Design Guide, Layout, Schedmatic Checklist, and also the reference board schematics ready for you to start your own carrier board design. With ROM-DB5900, you can easily learn the power of Advantech RISC SMARC 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^2S HD Audio), 1 SPDIF Pin header
	CAN	2 CAN 2.0B ports, Differential mode +5V
	GPIO	12 GPIO Ports
	I^2C	1 I^2C pin header
	SPI	2 SPI pin header
	Camera Input	2 MIPI connectors
	AFB	1 30pin AFB connector
Expansion	PCIe Slot	3 PCIe x1
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")

All product specifications are subject to change without notice

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 50Ohm AN8921F-5701SM (3G Antenna)
9680015491	PCIe to miniPCIe adapter card
96PSA-A36W12R1	Adapter 100-240V 36W 12V 3A
170203183C	Power Code 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