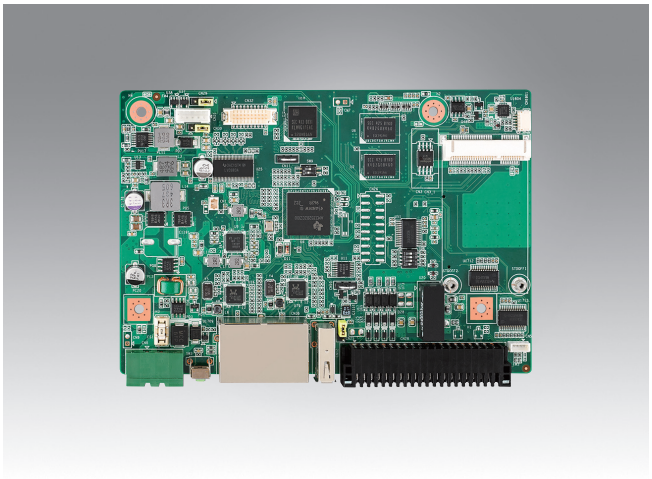
RSB-4220

TI Sitara™ ARM® AM3352 Cortex®-A8 3.5" SBC



Features

- TI Sitara™ ARM® AM3352 Cortex®-A8 1.0GHz
- On-board DDR3 800MHz 512MB & 4MB SPI NOR Flash & 4GB eMMC NAND Flash
- Supports 4GPI / 4GPO w/isolation
- 5x serial port w/ESD protection (Contact 4KV / Air 8KV)
- Supports 2x Gigabit Ethernet ports and 1x Mini PCIe socket
- Supports 18-bit LVDS with up to 1366 x 768 resolution
- HW WTD for system protection
- Operating temperature 0 ~ 60 °C / -40 ~ 85 °C
- Lower power consumption, fanless design
- Supports Linux BSP

Introduction

The RSB-4220 series comprises RISC SBCs with integrated TI Sitara AM3352 Cortex-A8 processors. Units offer 2x gigabit Ethernet, 5x serial ports, 4x GPI and 4x GPO. For industrial applications, the serial port & GPIO feature rugged ESD and isolation that protect the system from unstable power damage. Also, RSB-4220 has multiple power inputs and operating temperature support, and even supports a single channel 18-bit LVDS with up to 1366 x 768 resolution. It is an ideal solution for automation control such as smart grid, and machinery automation applications.

Specifications

Form Factor		3.5" SBC
Processor System	CPU	TI Sitara AM3352 Cortex A8 1.0GHz
	Capacity	On-board DDR3 800MHz 512MB
	Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for ADV loader
Graphics	LVDS	Supports 18-bit LVDS with up to 1366 x 768 resolution
Ethernet	Chipset	TI AM3352 integrated RGMII
	Speed	2 x 10/100/1000 Mbps
WatchDog Timer		MSP430G2202 (time out:1~6553s,default 60s/power on/off 1s)
I/O	USB	1x USB2.0 HOST /OTG (By jumper selection)
	Serial Port	5 (1x 4 wires RS-232/422/485, 4x 2 wires RS-232) The 5 serial port w/ ESD protection (Contact 4KV/ Air 8KV)
	CAN	1x CAN bus version 2.0 A and B
	GPIO	4x GPI/4x GPO (w/isolation) **GPI:** Isolation: 0 ~ 50Voc input and 10KHz speed **GPO:** Isolation: 5 ~ 40Voc output and 10KHz speed (200mA max/chanel sink current)
	I²C	1
	Button	1x Reset
Expansion	Mini PCIe	1x mini-PCIe socket (USB signal only)
	SD Socket	1x SD slot
Power	Power Supply Voltage	+ 12/19/24 VDC-In
	Power Type	Two poles lockable DC-in
	Power Consumption	3.3W (Max)
Environment	Operating Temperature	0 ~ 60 °C/ -40 ~ 85 °C
	Operating Humidity	5%~95% Relative Humidity, non-condensing
Mechanical	Dimensions (W x D x H)	146 x 102 x 1.6 mm
Operating System		Linux
Certifications		CE/FCC Class B

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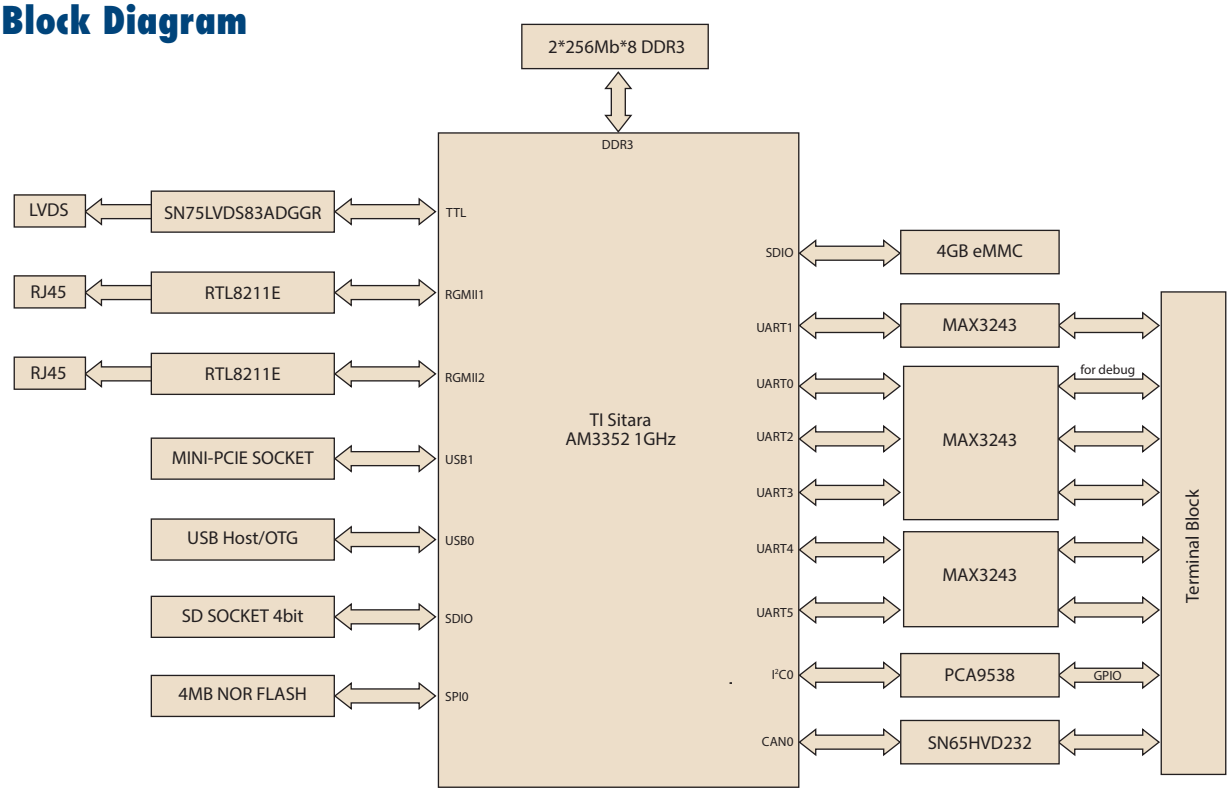
Block Diagram



Ordering Information

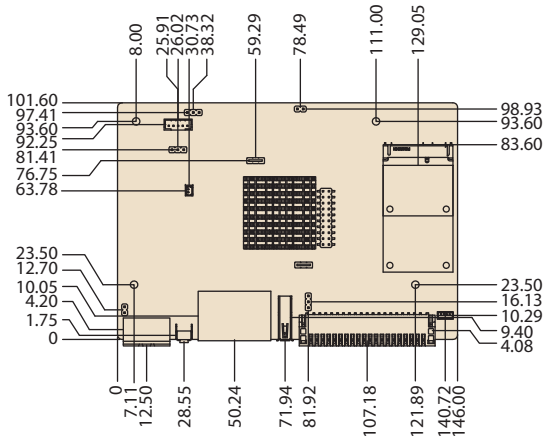
Part Number	CPU	Memory	eMMC	LCD	SD	CAN	Serial	GPIO	Isolation	ESD	USB host/ OGT	LAN	Heatsink	mini-PCIe	Operation Temperature
RSB-4220CS-MCA1E	TI AM3352 1.0GHz	512MB	4GB	1	1	1	5	8	Serial: No GPIO: Yes	Serial: Yes GPIO: Yes	1	2	N/A	1	0 ~ 60 °C
RSB-4220WS-MCA1E	TI AM3352 1.0GHz	512MB	4GB	1	1	1	5	8	Serial: No GPIO: Yes	Serial: Yes GPIO: Yes	1	2	1	1	-40 ~ 85 °C

Packing List

Part Number	Description	Quantity
1652006830-01	TERMINAL BLOCK 20x2P 2.54mm 180D 0156-1A40	1
RSB-4220CS-MCA1E	RSB-4220 1GHz for 0 ~ 60 °C	Choose Any One
RSB-4220WS-MCA1E	RSB-4220 1GHz for -40 ~ 85 °C	

Optional Accessories

Part Number	Description
96PSA-A36W12R1	ADP A/D 100-240V 36W 12V
1700023307-01	DC JACK to Plug-in cable
1700001524	Power Cord 3P UL 10A 125V 180cm
170203180A	Power Cord 3P UK 2.5A/3A 250V 1.83M
170203183C	Power Cord 3P Europe (WS-010+WS-083)183cm
SQF-ISDS1-4G-82C	SQFlash SD card 4G
96LEDK-A070WV40NB1	7" LED PANEL 350N 800X480(G) G070VW01 V1
1700023366-01	LCD blacklight cable
1700024543-01	LVDS cable
1700021565-11	D-SUB 9P cable for debug

Dimensions

Unit: mm