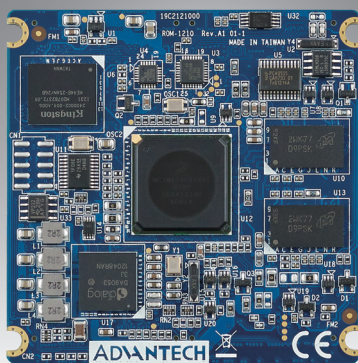


ROM-1210

NXP ARM® Cortex®-A8 i.MX53 RTX 1.6 Module



Introduction

Industrial Design, I/O Intensive COM

ROM-1210 Computer-on-Module (COM) integrates an ARM Cortex-A8 800MHz NXP i.MX53 series ultra low power SoC and I/O solution chips to be Windows® Embedded Compact 7, and Linux solution-ready! NXP i.MX53 supports 2D, 3D graphics acceleration, full HD 1080P video decoding and a HD 720p video encoding hardware engine.

ROM-1210 with 3.3V I/O Voltage current and wide-range temperature support is specially designed for industrial applications.

Design-in Package Ensures Efficient Evaluation and Implementation

The Design-in Package not only includes all necessary H/W boards, fixtures and LCD related cables, but also includes the Advantech-customized API, utility & reference codes. And of course, it includes all design related documentations and a white paper for detailed technical know-how.

Two supporting mechanisms are included in the Design-in Package:

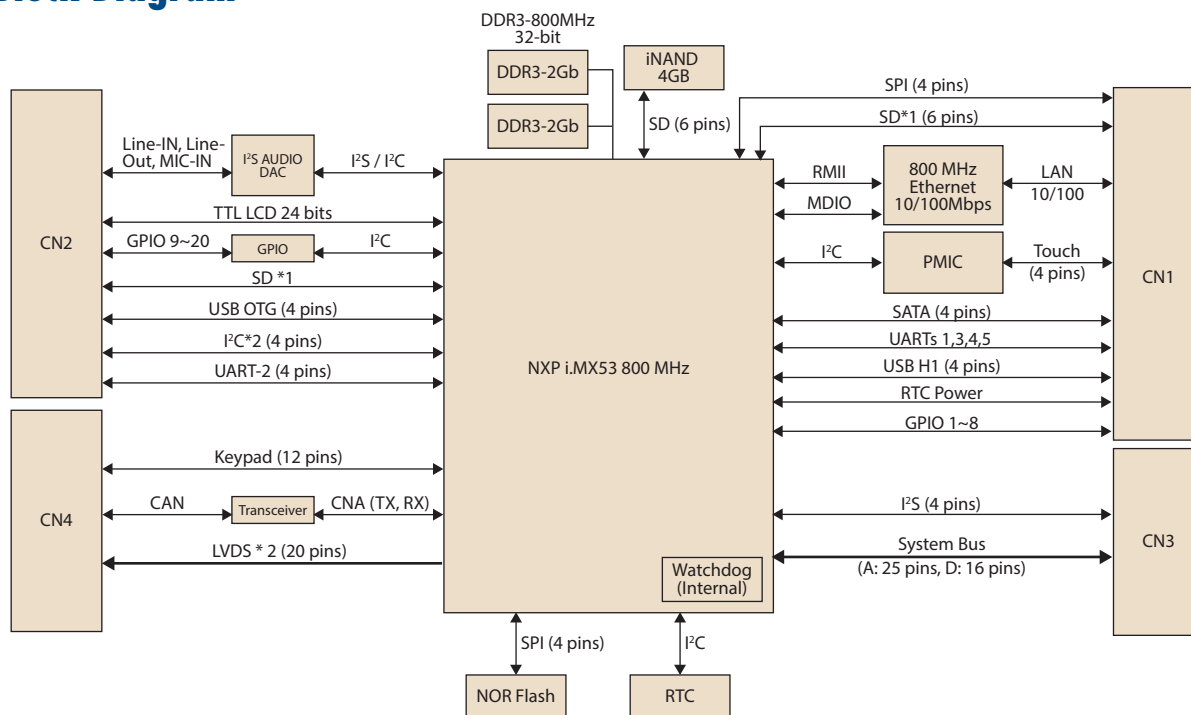
Reference Kit: Including Advantech reference Customer Solution Board (CSB) and all documentation for CSB design and manufacture (e.g. : Schematics, and pin definition file).

LCD Kit: Including a LCD panel with touch screen and related cables. All goods are pre-verified and supported in Advantech's reference S/W package.

Specifications

Form Factor		RTX1.6
Processor System	CPU	NXP ARM Cortex-A8 i.MX53 800 MHz
Memory	Technology	DDR3 800 MHz
	Capacity	On-board DDR3 512 MB
	Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
Graphics	LVDS	2 24-bit LVDS, 1024 x 768
	HDMI	-
	Parallel RGB	1 TTL 24-bit, 1600 x 1200
	VGA	-
	Graphics Engine	1 IPU, OpenGL ES 2.0 for 3D, BitBlit for 2D and OpenVG 1.1
	H/W Video Codec	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP
Ethernet	Chipset	NXP i.MX53 integrated RMII
	Speed	1 x 10/100 Mbps
RTC	RTC	-
WatchDog Timer		256-level timer interval, from 0 ~ 128 sec
I/O	PCIe	-
	SATA	1 SATA I
	USB	1 USB 2.0, 1 USB 2.0 OTG
	Audio	I²S
	SPDIF	-
	SDIO	2
	Serial Port	5 UART (2 x 2 wire, 3 x 4 wire w/ 3.3V)
	SPI	1
	CAN	2 x CAN bus 2.0B
	GPIO	20
	I²C	2
	Camera Input	-
	System Bus	Address:25 bits, Data:16 bits
	Touch	1
	Keypad	6 x 6 Matrix
Power	Power Supply Voltage	3.3 ~ 3.6 V
	Power Consumption	2.2W
Environment	Operating Temperature	0 ~ 60 °C/ -40 ~ 85 °C
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	68 x 68 mm
Operating System		Linux Kernel v2.6 (WEC7 by project support)
Certifications		CE/FCC Class A

Block Diagram



Ordering Information

Part No.	CPU	Memory	Flash Memory	UART	LAN	USB Host	USB OTG	Display	SATA	SD	CANBus	I ² C	SPI	Size	Power Input	Operating Temperature
ROM-1210CF-A78AAE	NXP i.MX536 800 MHz	512 MB	4 GB	5	1	1	1	2 18/24-bit LVDS	Yes	2	1	2	1	68 x 68 x 7.5 mm	3.3 V & 3.6 V +5%	0 ~ 60 °C
ROM-1210WF-A78AAE	NXP i.MX536 800 MHz	512 MB	4 GB	5	1	1	1	2 18/24-bit LVDS	Yes	2	1	2	1	68 x 68 x 7.5 mm	3.3 V & 3.6 V +5%	-40 ~ 85 °C

Development Board

Part No.	Description
96920CSB02E	RTX 1.6 CSB

Optional Accessories

Part No.	Description
1700100250	Debug port cable
EWM-W150H02E	Advantech 802.11bgn/RT5390 1T1R /USB signal
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)

Dimensions

