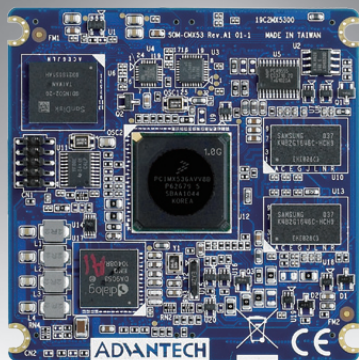


ROM-1210

COM with Freescale
i.MX53 Series Processor



Features

- Freescale ARM Cortex™-A8 i.MX53 1 GHz high performance processor
- Supports OpenGL ES 2.0 and OpenVG™ 1.1 hardware accelerators
- Supports full HD 1080p video decode and HD 720p video encode hardware engine
- Freescale Smart Speed™ Technology supports low power consumption
- Industrial design with 3.3V I/O voltage and wide range working temperature
- Rich I/O for high expansion capability
- Supports SATA storage interface and CAN-bus for vehicle applications
- Supports Android 2.3, Embedded Linux2.6, Windows® Embedded Compact 7

Introduction

Industrial Design, I/O intensive COM

ROM-1210 Computer-on-Module (COM) integrates ARM Cortex-A8 1 GHz Freescale i.MX53 series ultra low power SoC and I/O solution chips to be Windows® Embedded Compact 7, Android 2.3, and Linux solution-ready! Freescale i.MX53 supports 2D, 3D graphics acceleration, full HD 1080P video decoding and 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 the 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 documentation including a white paper for detailed technical know-how.

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

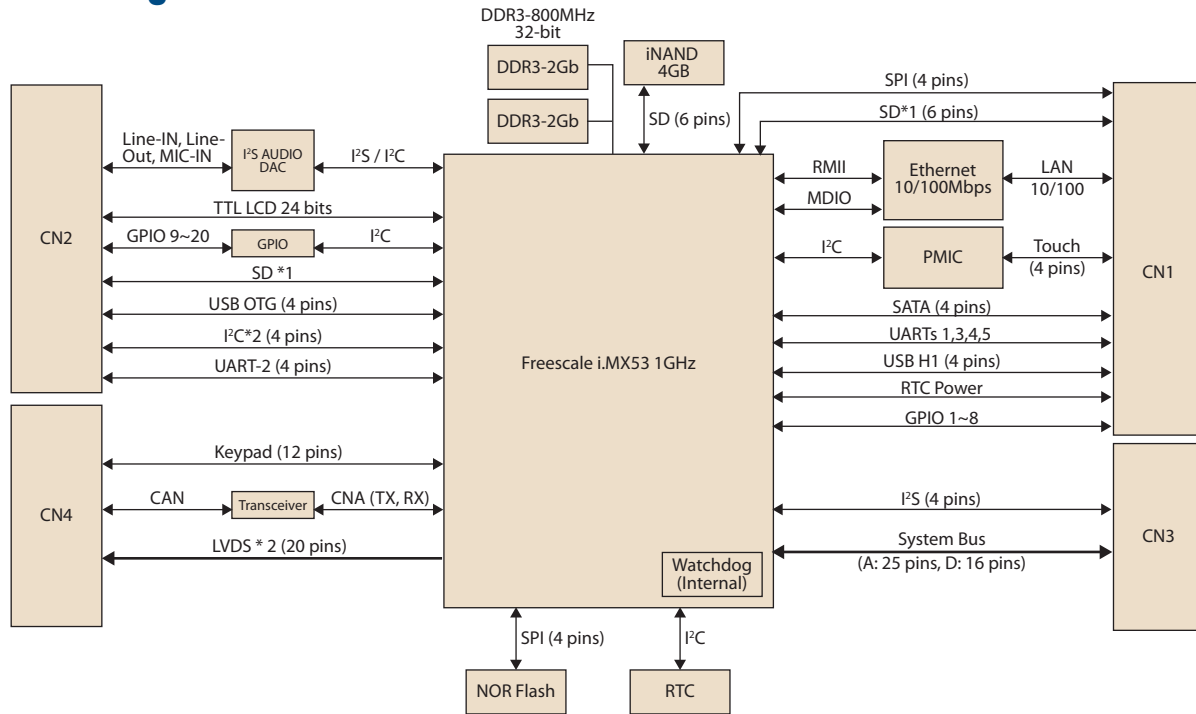
Reference Kit: Includes the Advantech reference Customer Solution Board (CSB) and all documentation relating to CSB design and manufacture (e.g. : Schematics, and pin definition file).

LCD Kit: Includes the LCD, T/S and related cables. All goods are pre-verified and supported in Advantech's reference S/W package.

Specifications

Kernel	M/B	ROM-1210
	CPU	Freescale i.MX535 Cortex-A8 1 GHz (i.MX536 Cortex-A8 800 MHz for wide temp. only)
	System RAM	512 MB DDR3 (256 MB optional)
	Flash	4 GB (up to 64 GB)
	Graphic Chip	24-bit LCD controller by CPU
	RTC	Yes
	Watchdog Timer	Yes
	Power Management	Standard/idle/suspend mode
	Reset	H/W reset & S/W reset (by register setting)
	UART	TTL level x5 (4-wire x3 & 2-wire x2)
I/O (All interfaces with industrial TTL 3.3V Level)	Ethernet LAN	10/100 Mbps
	USB 2.0 Client	1 (OTG supported)
	USB 2.0 Host	1
	SD/MMC	2
	SATA	1
	Touch	4 wire Resistive type
	System Bus	Yes (address: 25-pin, data: 16-pin)
	I ² C Interface	2
	SPI Interface	1
	CAN-bus	Yes (optional)
	Keypad	6 x 6 matrix
	GPIO	20-pin 3.3V TTL level GPIOs
Multimedia	I ² S	1
	Graphic Chip	CPU internal 24-bit LCD controller
	Resolution	Default 800 x 480 WVGA (320 x 240 ~ 1920 x 1080 as optional)
	LCD Interface	2 x 24-bit LVDS connector
Power	Audio	Line-in, Line-out, MIC-in
	Power Input	3.3 V _{oc} (+5%) & 3.6 V _{oc} (+5%)
	Power Consumption	Full run: 2.2 W Normal run: 0.8 W
Mechanical & Environment	Size	68 x 68 x 7.5 mm
	Operating Temperature	0 ~ 60° C (-40 ~85° C by project base)
	Operating Humidity	5 ~ 95 % relative humidity, non-condensing
	RoHS	Yes
Other	Certifications	CE/FCC Class A
	Software Support	Embedded Linux 2.6 (WEC7 and Android 2.3 by project support)

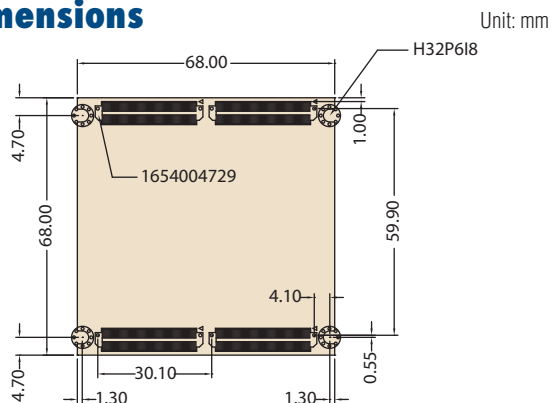
Block Diagram



Ordering Information

Part No.	CPU	RAM	Flash Memory	2D/3D	UART	LAN	USB Host	USB OTG	LCD	Touch	SATA	SD	CANBus	I2C	SPI	Size	Power Input	Operating Temp.
ROM-1210CB-A60AAE	Freescale i.MX535 1 GHz	256 MB	-	Yes	5	1	1	1	24-bit	Yes	Yes	2	N/A	2	1	68 x 68 x 7.5 mm	3.3 V & 3.6 V +5%	0 ~ 60° C
ROM-1210CF-A78AAE	Freescale i.MX536 800 MHz	512 MB	2 GB	Yes	5	1	1	1	24-bit	Yes	Yes	2	1	2	1	68 x 68 x 7.5 mm	3.3 V & 3.6 V +5%	0 ~ 60° C
ROM-1210IF-A78AAE	Freescale i.MX536 800 MHz	512 MB	2 GB	Yes	5	1	1	1	24-bit	Yes	Yes	2	1	2	1	68 x 68 x 7.5 mm	3.3 V & 3.6 V +5%	-20 ~ 70° C
ROM-1210WF-A78AAE	Freescale i.MX536 800 MHz	512 MB	2 GB	Yes	5	1	1	1	24-bit	Yes	Yes	2	1	2	1	68 x 68 x 7.5 mm	3.3 V & 3.6 V +5%	-40 ~ 85° C

Dimensions



Design-in Package

Part No.	Description
ROM-1210DK-B00E	Development board for ROM-1210
Power cord	1700001524 for 3-pin USA standard power cord
	170203183C for 3-pin Europe standard power cord
	170203180A for 3-pin UK standard power cord

Packing List

Bulk packing with 20 pcs in one box

**Sample image and related documentation included with Design-in kit only.