



Products

SBC-X255 Board

Computer-On-Module's

- CM-X270
- CM-X255
- CM-iGLX
- CM-F82
- CM-i686M
- CM-i686B
- CM-iVCF
- CM-i886 (NFND)
- CM-i586 (NFND)

PC/104+ & ATX boards

- SBC-X270
- SBC-X255
- SBC-i686
- SBC-iVCF
- SBC-i886 (NFND)

ATX

Related Topics:

- CoM Comparison
- PC/104 Comparison
- Linux Support
- Evaluation Kits
- Industrial Temperature
- RoHS Compliance



Top view



Bottom view



View with interface cable

SB-X255 Highlights

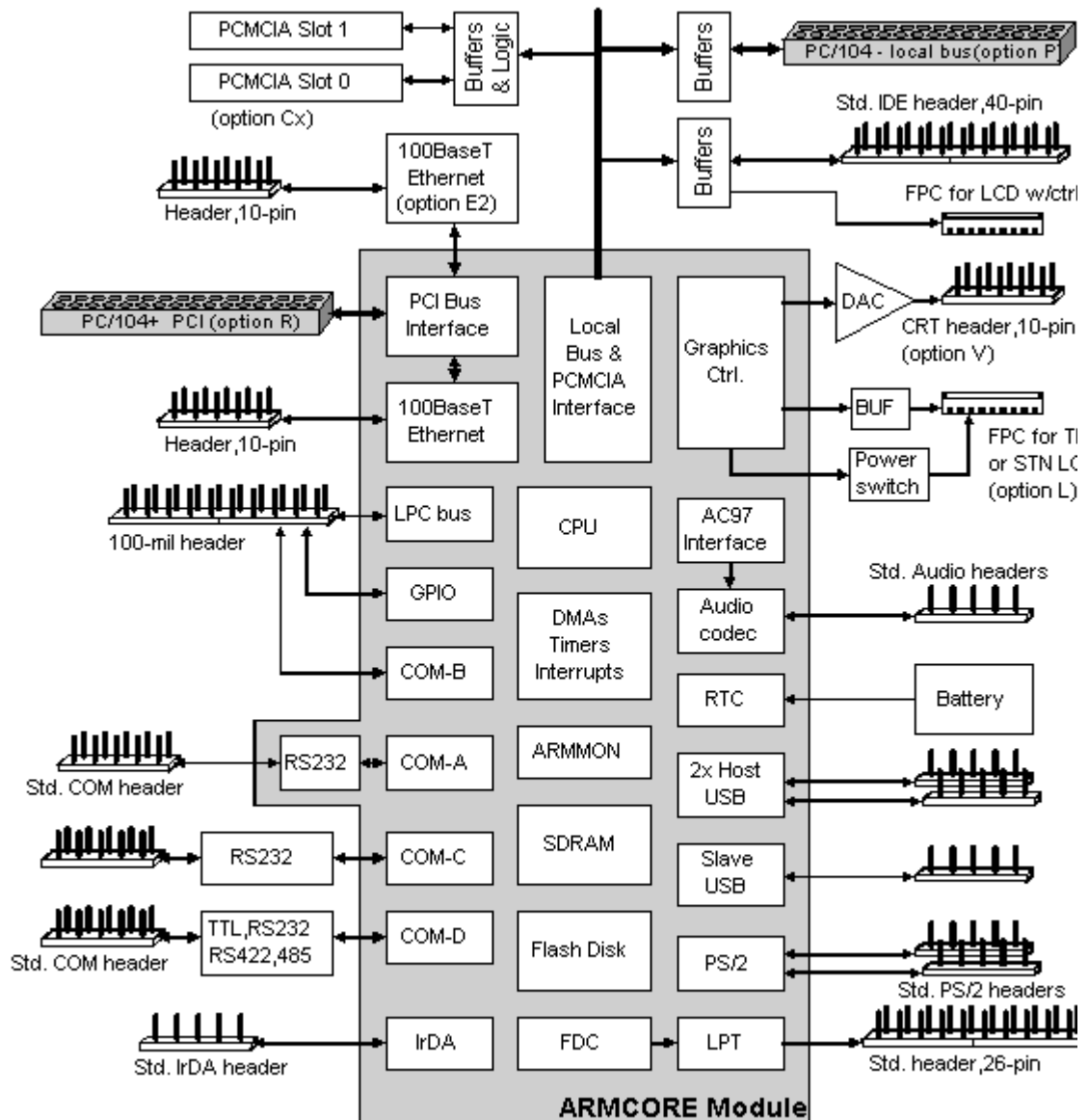
- **PC/104+ Single Board Computer implemented by combination of the [CM-X255](#) module and SB-X255 baseboard.**
- **Intel's XScale PXA255 CPU, up to 400 MHz**
- **16 - 64 MB SDRAM**
- **1 - 512 MB Flash Disk**
- **PCI and Local Bus expansions in PC/104+ format**
- **COM1 - 4 with RS232 / RS485 / RS422 / TTL driver options**
- **IrDA, LPT, GPIO, PS/2 keyboard and mouse interfaces**
- **Host and slave USB ports**
- **Hard disk interface**
- **Sound I/O (optional)**
- **VGA graphics controller. Connectors for LCD panel and CRT monitor (optional)**
- **Single or dual 10/100BaseT Ethernet ports (optional)**
- **Single or Dual PCMCIA slots (optional)**
- **RTC with Lithium battery (optional)**
- **Small size - 96 mm x 91 mm**

The **SBC-X255** is a standard PC/104+ compliant, single board computer. It is implemented by [CM-X255](#) module providing most of the functions, and SB-X255 carrier board providing connectors and several additional functions. The rich features set the SBC-X255 is customizable according to the price / performance targets of the use application.

The SBC-X255 contains PC/104+ expansion connectors which open it to the wide range of standard peripheral cards. Furthermore, the SBC-X255 contains a PCMCIA controller and slots. A PCMCIA card may be inserted and secured in the slot, with no additional mechanical means. Off-the-shelf PCMCIA modules can extend the system with capabilities such as a larger solid state disk, modem, and wireless LAN.

For more information, see [Developer Resources](#) page.

Block Diagram



SBC-X255 Features

The "SB Option" column specifies the P/N code of SB-X255 required to have the particular feature. "CM Option" column specifies the P/N code of CM-X255 required to have the particular feature. X255 content is the combination of features provided by the attached CM-X255 and the feature implemented on the SB-X255. To have the particular feature, both the CM and SB options of the feature must be implemented.

"+" means that the feature is always available, regardless of P/N code.

Feature	Specification	SB Option	O
CPU SDRAM Flash Disk	See Features List of CM-X255 module		
COM-A	Rx/Tx or full modem, RS-232 levels, standard 10-pin header	+	

COM-B	Rx/Tx only, TTL levels, on common 100-mil header	+	
COM-C	Full modem, RS-232 levels, standard 10-pin header	+	
COM-D	Full modem, RS-232 / RS-485 / RS-422 / TTL level options, standard 10-pin header	X	
IrDA	SIR and FIR modes. Standard header for IrDA module	+	
LPT (Parallel Port)	Standard 26-pin header for DB-25 cable/connector. Shared with FDC	+	
IDE	PIO mode. Derived from local bus. Standard 40-pin header for HDD cable	+	
FDC	Routed through LPT header	+	
Ethernet	One or two 10/100BaseT Ethernet ports: 1. Module's port - DM9000, local bus interface 2. Baseboard port Realtek RTL8139 controller PCI interface 10-pin header per port. Optional interface module with transformer, RJ-45 connector and activity LED's.	+ E2	
LCD Panel	STN and TFT panels support. 51-pos FPC connector for direct interface to certain TFT panels	L	
CRT Monitor	RGB signals are derived from TFT interface by using DAC's. 10-pin header. Optional interface module with standard HD-15 VGA connector.	V	
PS/2	Standard headers for PS/2 cable/connector	+	
GPIO	9 to 14 lines, on common 100-mil header.	+	
PCMCIA	Support for 16-bit PCMCIA only. The 32-bit CardBus standard is not supported. Single or dual PCMCIA slot with card guides, for card types I, II and III.	Cx	
Host USB	Two Host ports, 12 Mbps. Header for Type-A cable/ connector.	+	
Slave USB	One Slave port, 12 Mbps. Header for Type-A cable/ connector.	+	
Sound I/O	Header for standard cable/connectors for Microphone (mono), Line input and Speakers (stereo)	+	
PC104	Derived from CPU's local bus through buffers. 20 bit address. Few interrupts. No DMA Support. Standard PC/104 connector	P	
PC104+	PCI bus through standard PC/104+ connector	R	
RTC Battery	The battery for Real Time Clock	+	
LPC bus	LPC bus on common 100-mil header	+	

Electrical, Mechanical and Environmental Specifications

Supply Voltage	5.0V or 3.3V or both. (The 3.3V option is only for cards without Audio and Super-I/O chips)
Power Consumption	Up to 3.0 W if powered from 3.3V source Up to 4.5 W if powered from 5.0V source
Dimensions	96 mm x 91 mm x [10-22] mm. Height ranges from 10 mm to 22 mm, depending on the connectors assembled. Height specified includes the CM-X255 module.
Operation temp (case)	Commercial: 0° to 70° C Extended: -20° to 70° C Industrial: -40° to 85° C. Click for availability note

Storage temperature	-40° to 85° C
Relative humidity	10% to 90% (operation) 05% to 95% (storage)
Shock	50G / 20 ms
Vibration	20G / 0 - 600 Hz
MTBF	> 100,000 hours

For more information see:

- [SB-X255 Reference Guide](#)
- [Developer Resources](#)

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