

Em-ITX Series

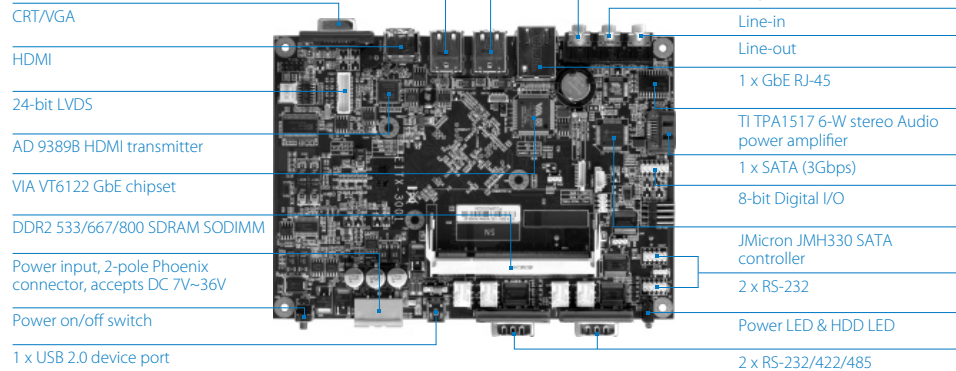
VIA EITX-3001

Low Profile Nano™ E
Processor-based Em-ITX
SBC, with VGA, LVDS, HDMI®,
Gigabit LAN, 4 COM, 6 USB &
Resistive Touch, DC-in 7~36V

Features

- VIA Nano™ E processor (1MB L2 Cache)
- Em-ITX form factor: 17cm (W) x 12 cm (L); low profile design
- Dual-sided multiple I/O connector coastlines
- Integrated VIA Chrome9™ HCM, DX9 3D/2D graphics & video processor with MPEG-2, WMV9, VC1, and H.264 video decoding acceleration
- Display interface: Supports one VGA, one 24-bit single channel LVDS, and one HDMI port
- One Gigabit Ethernet
- Two RS-232 and two RS-232/422/485
- Five USB 2.0 host ports and one USB device port
- Supports 5-wire/4-wire resistive touch interface connector
- Fanless and ultra low power consumption

Board Placement

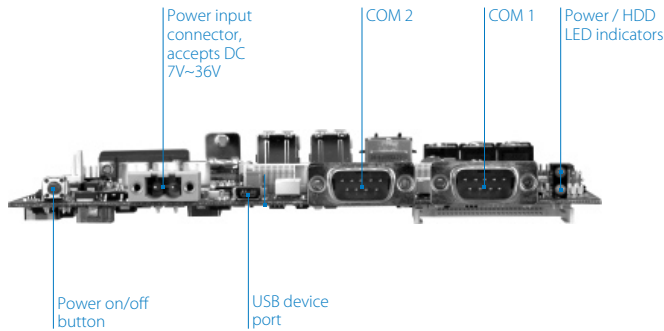


Specifications

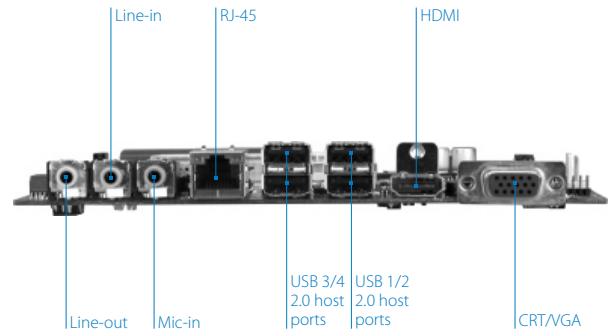
Part Number	EITX-3001-1N13A1	
Processor System	Processor	1.3GHz VIA Nano™ E
	Front Side Bus Speed	800 MHz
	L2 Cache	1 MB
	Chipset	VIA VX855 Unified Digital Media IGP chipset
	BIOS	AMI BIOS, 8MBit SPI Flash BIOS
	System Power Management	Timers Power On ACPI supported
Memory	Technology	1 x DDR2 800/667/533 MHz 200-pin SDRAM SODIMM socket
	Max. Capacity	Up to 2GB memory size
Graphic	Controller	Integrated VIA Chrome 9™ HCM DX9 3D/2D graphics & video processor, built-in Unified Video Decoding Accelerator, supports MPEG-2, WMV9/VC1, and H.264 video decoding acceleration
	Display Memory	Optimized Unified Memory Architecture (UMA), Supports up to 512 MB frame buffer using system memory
	CRT Interface	Onboard 1 x VGA connector as JVGA1 Supports CRT resolution up to 1920 x 1440
	LVDS Interface	Supports 1 x 24-bit single-channel LVDS interface with inverter control signals by an onboard 2x15-pin wafer box connector as LVDS1 Panel resolution support up to WXGA (1366 x 768) Onboard 5V/3.3V LCD power switch (default at 3.3V)
HDMI Interface	HDMI Interface	AD 9389B HDMI transmitter Onboard 1 x dual-link HDMI connector with flange as JHDMI
	Dual Independent Display	Supports CRT + LVDS , CRT + HDMI and LVDS + HDMI at same resolutions, same pixel depths, and same refresh rates
	Ethernet	Controller VIA VT6122 Gigabit Ethernet controller
HD Audio	Interface	Supports 1 x RJ-45 connector Supports Wake On LAN (WOL) Supports Preboot Execution Environment (PXE)
	Controller	VIA VT1708B High Definition Audio Codec Onboard TI TPA1517 6-W stereo Audio power amplifier
Serial	Interface	Supports Line-in, Speaker-out, Mic-in connectors by 3*3.5Ø audio jacks
	USB Host port	Supports 6 x USB 2.0 host ports in: • 4 x USB 2.0 host ports by 2 pairs of double mini-DIN connector as USB1~USB4 • Reserved 1 x USB 2.0 port by a 1 x 6-pin header with support of individual VCC power for connection with VIA EMIO-1530 Wireless LAN as JWLAN1
USB Device Port	Supports 1 x USB device port by a mini-DIN connector	
Serial Ports	Fintek F81865 LPC I/O controller	
	Supports 4 x COM ports in: • 2 x RS-232/422/485 by two DB-9 connectors as COM 1 and COM 2, configurable via BIOS setup. Supports RS-485 AutoFlow control functions of COM1 and COM2	
	• 2 x RS-232 by two 2x5-pin headers as COM 3 and COM 4	



Front I/O Coastline



Rear I/O Coastline



Specifications

Part Number		EITX-3001-1N13A1
Resistive Touch	Controller	EETI ETP-CP-S5XU resistive touch panel controller
	Interface	1 x 5-wire/4-wire resistive touch sensor interface by a 1 x 5pin header as TOUCH_R1
DIO	Digital I/O	1 x 2 x6-pin header. Supports 8-bit GPIO, with 5VDC and 12VDC power source
PS2	Keyboard & Mouse	1 x 2x5-pin header. Supports PS2 keyboard/mouse interface
Storage interface	Serial ATA	JMicron JMH330 SATA controller 1 x SATA II port, maximum data transfer rate up to 300MB/s Onboard power connector output 5V support 2.5" SATA hard disk drive
	Compact Flash	1 x Onboard socket. Supports type I/II CompactFlash disk
H/W Monitoring	Temperature Sensor	Built-in one Thermal Sensor by onboard 1x3-pin headers
System Indicator	Power Status LED	1 x Green color LED
	HDD Activity LED	1 x Red color LED
Watchdog Timer	Output	System reset
	Interval	Programmable 1~255 sec
Onboard I/O Connectors	Front I/O Coastline	1 x HDD & PWR LED 2 x RS-232 / 422 / 485 as COM 1 and COM2 1 x USB device port by a mini-DIN connector 1 x 2-pole of Phoenix power input connector 1 x ATX power on/off switch
	Rear I/O Coastline	1 x VGA connector 1 x Dual-Link HDMI connector with flange as JHDMI 4 x USB 2.0 host port by 2 pairs of double mini-DIN connector as USB1~USB4 1 x RJ45 connector for Gigabit Ethernet connection as J1 3 x 3.5Ø audio jacks as Mic-in Line-in, and Speaker-out
Onboard I/O Pin-headers	Onboard I/O Pin-headers	2 of 2 x 5-pin headers for 2 x RS-232 as COM 3 and COM 4 2 of 1 x 3-pin headers for 5V/12V selection of COM3 and COM4 1 of SATA data connector 1 of SATA power connector support of 5V for 2.5" HDD 1 of 2 x 6-pin header support 8-bit GPIO, with 5VDC and 12VDC power source 1 of 1 x 3-pin header for thermal sensor as SEN1 1 of 1 x 6-pin header for connection with VIA EMIO-1530 wireless LAN card 1 of 2 x 15-pin header for signal channel LVDS interface as LVDS1 1 of 1 x 3-pin header for LCD Power 3.3v/5V selection 1 of 2 x 5-pin header support PS2 keyboard/mouse interface 1 of 1 x 3-pin header for selecting the AT or ATX mode
	Onboard DC to DC Power Supply	Input Voltage
Heatsink	Power Input Connector	1 x 2-pole Phoenix connector
	AT/ATX Selector	Onboard AT/ATX switch by a 3-pin headers
	Fuse Rating	7 A / 125 V
Heatsink	Construction	Aluminum modeling
	Dimensions (WxHxD)	230.45 mm x 34 mm x 124.8 mm

Specifications

Part Number	EITX-3001-1N13A1	
Physical Characteristics	Form Factor	Em-ITX
	Board Dimension	17 cm (W) x 12 cm (L)
	Weight	1 Kg (net weight of board plus heatsink only)
Environmental Specification	Operating Temperature	-10°C ~ 60 °C
	Storage Temperature	-20°C ~ 70 °C
	Operating Humidity	10% ~ 90%, relative humidity, non-condensing
Software Compatibility	Operation System	Microsoft Windows XP, Windows 7, Microsoft Windows XP Embedded Standard, Windows Embedded Standard 7, Linux Debian 5.0.3 (Kernel 2.6.32)

Ordering Information

Part Number	System Built-in CPU	Description
EITX-3001-1N13A1	1.3GHz Nano™ E (FSB 800MHz)	1.3GHz Nano™ E CPU Based Fanless Em-ITX board, with 1 x VGA, 1 x LVDS, 2 x RS-232/422/485, 2 x RS-232, 5 x USB 2.0 Host, 1 x USB Device, 1 x Resistive Touch, 1 x GbE, 1 x SATA, DC-in 7~36V
EITX-3001-2N13A1	1.3GHz Nano™ E (FSB 800MHz)	EITX-3001-1N13A1, with full cable kit

Optional Accessories

External AC-to-DC Adapter and Power Cable	
Part Number	Description
99G63-020246	AC-to-DC adapter, DC 19V/90W with 2-pole Phoenix Power Plug
99G33-02032C	Power cable, 180cm, USA type
99G33-02033C	Power cable, 2-pin 180cm, Europe type
99G33-02034C	Power cable with PSE mark, 180 cm for Japan

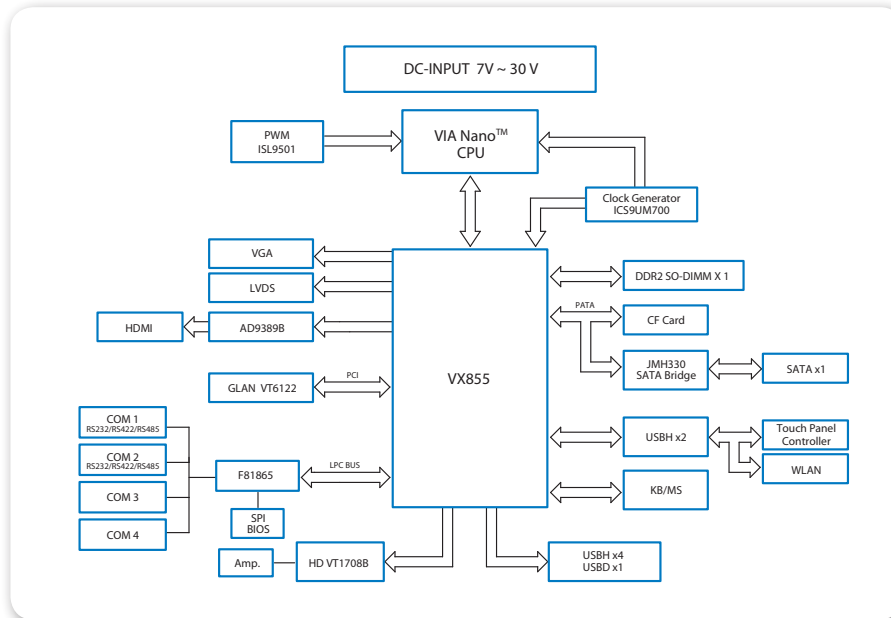
Functional I/O Cable	
Part Number	Description
99G33-06021E	SATA DATA cable
99G33-020505	SATA Power cable, Only Support 5V for 2.5" HDD
99G33-250074	Power cable, 2-pole Phoenix plug to DC-Jack
99G33-10048C	USB to Mini USB cable
99G33-130012	PS/2 Keyboard and Mouse Y-Cable
99G33-080185	Digital I/O cable
99G33-290010	Thermal Sensor cable
99G33-080127	COM port ribbon cable
99G33-02096K	DC Power extension cable, AVT-VIA-044, 20 cm
99G33-02097K	DC Power extension cable, AVT-VIA-045, 20 cm
99G33-300011	HDMI to DVI-D adapter cable

WLAN USB Module	
Part Number	Description
EMIO-1530-A0A1	802.11b/g Wireless LAN USB module for USA
EMIO-1530-A1A1	802.11b/g Wireless LAN USB module for Europe

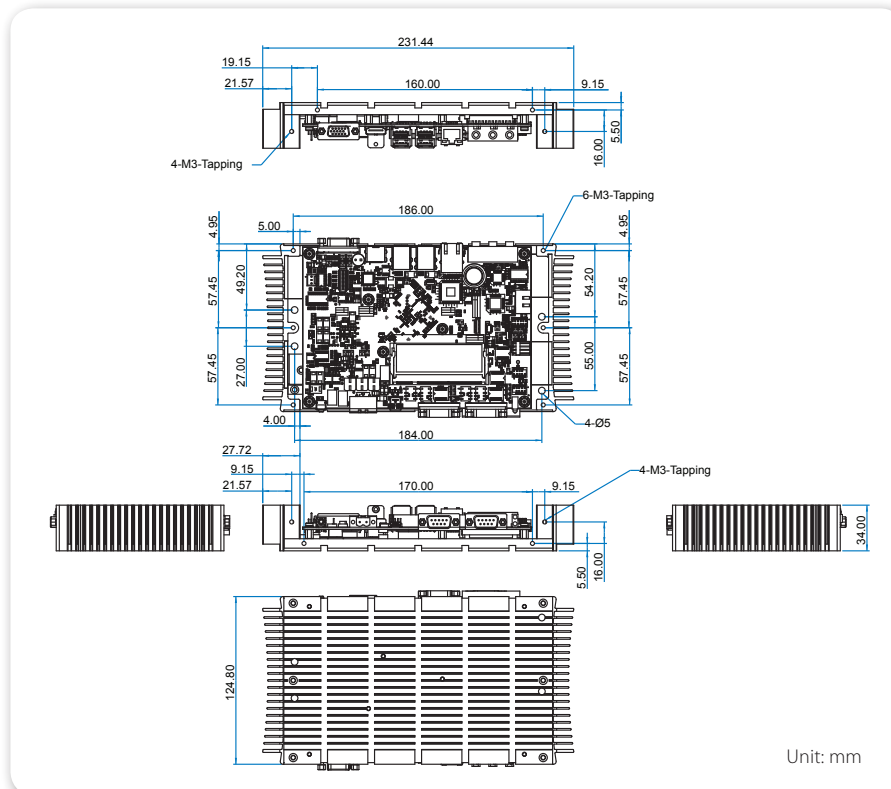
Embedded OS (only available for OEM service)	
Part Number	Description
POS-MEXSLI-ENS00	Windows XP Embedded Standard Image & License for EITX-3001 English Version
POS-ME7SLI-ENS00	Windows Embedded Standard 7 Image & License for EITX-3001 English Version (Require minimum 4G Compact Flash)
POS-ME7CLI-ENS00 (available soon)	Windows Embedded Standard 7 Compact size Image & License for EITX-3001 English Version (Require minimum 2G Compact Flash)
POS-DLNCLI-ENS03	Debian Linux Image & License for EITX-3001 English Version (Require minimum 2G Compact Flash)

Certificated RAM Module, Flash Disk, and 2.5" Hard Disk Drive	
Part Number	Description
99G06-010598	2GB DDR2 800MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, 0°C ~ 60°C
99G06-010588	1GB DDR2 800MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, 0°C ~ 60°C
99G06-010578	2GB DDR2 667MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, -40°C ~ 85°C
99G06-010648	1GB DDR2 667MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, -40°C ~ 85°C
99G61-060011	1GB Compact Flash Disk, Industrial Grade, -40°C ~ 85°C
99G61-060041	1GB Compact Flash Disk, Standard Grade, 0°C ~ 70°C
99G61-060021	2GB Compact Flash Disk, Industrial Grade, -40°C ~ 85°C
99G61-060051	2GB Compact Flash Disk, Standard Grade, 0°C ~ 70°C
99G61-060031	4GB Compact Flash Disk, Industrial Grade, -40°C ~ 85°C
99G61-060061	4GB Compact Flash Disk, Standard Grade, 0°C ~ 70°C
99G61-020146	250GB, Toshiba 2.5" SATA HDD 5400RPM
99G61-020156	320GB, Toshiba 2.5" SATA HDD 5400RPM

Block Diagram



Dimensions



Packing List

Items for EITX-3001-1N13A1

- 1 x EITX-3001 board
- 1 x Driver & Utility CD disk
- 1 x Mini-jumper pack
- 1 x SATA data cable
- 1 x SATA power cable (Supports 2.5" HDD only)
- 1 x Power cable, 2-pole Phoenix plug to DC-Plug
- 1 x USB to Mini USB cable

Items for EITX-3001-2N13A1

- 1 x EITX-3001 board
- 1 x Driver & Utility CD disk
- 1 x Mini-jumper pack
- 1 x SATA data cable
- 1 x SATA power cable (Supports 2.5" HDD only)
- 1 x Power cable, 2-pole Phoenix plug to DC-Plug
- 1 x USB to Mini USB cable
- 1 x PS/2 Keyboard and Mouse Y-Cable
- 1 x Digital cable
- 1 x Thermal Sensor cable
- 2 x COM port ribbon cable
- 1 x DC Power extension cable, AVT-VIA-044, 20 cm
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