

Em-ITX Series

VIA EITX-3000

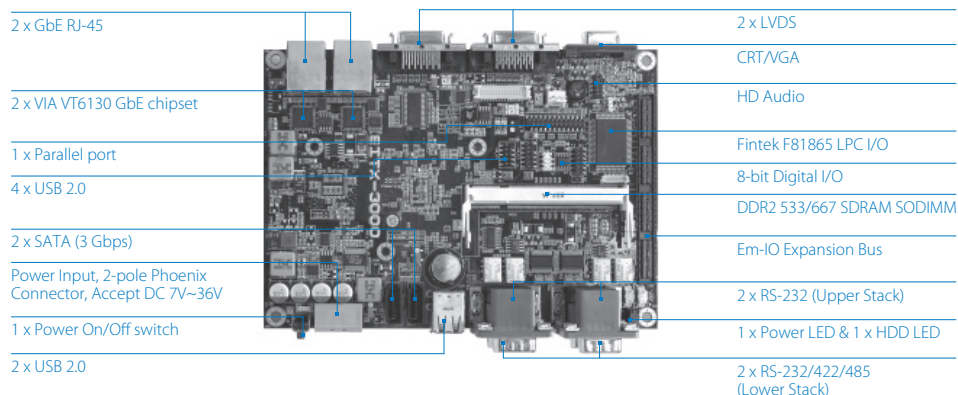
Nano™ E Processor-based
Em-ITX SBC, with VGA,
2 Gigabit LAN, 2 LVDS,
4 COM, 6 USB, with Built-in
DC Power

Features

- VIA Nano™ E processor (1MB L2 Cache)
- Em-ITX form factor: 17 cm (W) x 12 cm (L)
- Dual-sided multiple I/O connector coastlines
- Em-IO expansion bus socket
- Integrated VIA Chrome9™ HC3, DX9 3D/2D graphics with MPEG-2 and WMV9 decoding acceleration
- Two single-channel LVDS display ports
- Two Gigabit Ethernet
- Two RS-232 and two RS-232/422/485
- Six USB ports
- Fanless and ultra low power consumption



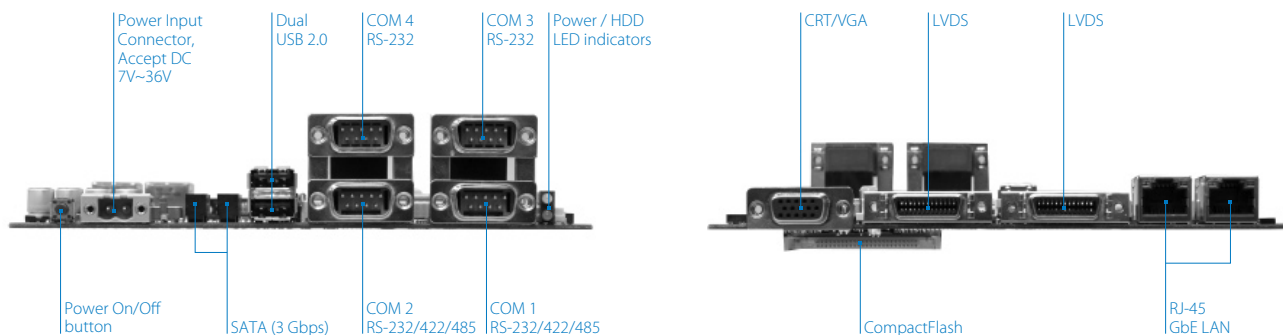
Board Placement



Specifications

Part Number		EITX-3000-1N13A3	EITX-3000-1N10A3
Processor System	Processor	1.3 GHz VIA Nano™ E	1.0 GHz VIA Nano™ E
	Front Side Bus Speed	800 MHz	800 MHz
	L2 Cache	1 MB	1 MB
	Chipset	VIA VX800 Unified Digital Media IGP chipset	
	BIOS	Award BIOS, 8 MBit SPI Flash BIOS	
	System Power Management	Timers Power On ACPI supported	
Memory	Technology	1 x DDR2 533/667 200-pin SDRAM SODIMM socket	
	Max. Capacity	Up to 2GB memory size	
Graphic	Controller	Integrated VIA Chrome9™ HC3 DX9 3D/2D graphics with MPEG-2 WMV9 decoding acceleration	
	Display Memory	Optimized Unified Memory Architecture (UMA), supports up to 256 MB frame buffer using system memory	
	CRT Interface	Onboard 1 x VGA connector Pixel Resolution support up to 1920 x 1200	
	LVDS Interface	Supports two 24-bit single-channel LVDS interface connectors Up to 1280 x 1024 panel resolution for single channel LVDS LCD Built-in Inverter control signals into the DB-26 connectors Onboard 5 V/3.3 V LCD power switch (default at 3.3 V)	
	Dual Independent Display	Supports CRT + LVDS2, and LVDS1 + LVDS2 at same resolutions, same pixel depths, and same refresh rates	
Ethernet	Controller	2 x Onboard VIA VT6130 Gigabit Ethernet controllers	
	Interface	Supports two RJ-45 connectors. Supports Wake On LAN (WOL) Supports Preboot Execution Environment (PXE)	
HD Audio	Controller	VIA VT1708B High Definition Audio Codec	
	Interface	Supports Line-in, Line-out, Mic-in by onboard 2x7-pin headers	
Serial	USB	Six onboard USB ports • 2 x USB ports (mini-DIN connector) • 4 x USB ports (pin headers with individual VCC power)	
	Serial Ports	Onboard Fintek F81865 LPC I/O controller Supports 4 COM ports of • 2 x RS-232/422/485 by 2 x DB-9 connectors as COM 1 and COM 2, configurable via BIOS setup • 2 x RS-232 by 2 x DB-9 connectors of COM 3 ~ 4 Supports RS-485 AutoFlow Control functions of COM1 ~ COM2	
	Printer Ports	1 x PS/2 compatible bi-directional parallel port by onboard 2 x 13-pin headers	
DIO	Digital I/O	Onboard 2 x 6-pin headers support 8-bit Digital I/O, and 5V/12V power source	
Storage interface	Serial ATA	2 x Onboard SATA II (3 Gbps) ports, Maximum data transfer rate up to 300MB/s Only support 2.5" of SATA Hard Disk (no support to 3.5" SATA HDD)	
	Compact Flash	1 x Onboard socket support type I/II CompactFlash disk	

Back Panel I/O



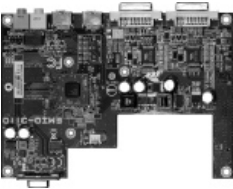
Specifications

Part Number		EITX-3000-1N13A3/EITX-3000-1N10A3
H/W Monitoring	Temperature Sensor	Built-in one Thermal Sensor by onboard 1 x 3-pin headers
System Indicator	Power Status LED	One green color LED
	HDD Activity LED	One red color LED
Watchdog Timer	Output	System reset
	Interval	Programmable 1 ~ 255 sec
System Expansion	Em-IO Bus Expansion Interface	Onboard 160-pin Em-IO Bus Expansion interface socket
Onboard I/O Connectors	Front I/O Coastline	1 x HDD & PWR LED 2 x RS-232/422/485 COM port connectors as COM 1 and COM2 2 x RS-232 COM port connectors as COM3 and COM4 2 x USB mini-DIN connectors 1 x 2-pole of Phoenix power input connector 1 x ATX power On/Off switch
	Rear I/O Coastline	1 x VGA connector 2 x DB-26 connectors for dual 24-bit single channel LVDS interface, as LVDS1 and LVDS2 2 x RJ45 connectors for dual Gigabit Ethernet connection
Onboard I/O Pin-headers	Onboard I/O Pin-headers	1 of 2 x 15-pin box headers for LVDS1 (co-lay with LVDS1) 2 of 1 x 3-pin headers for LCD Power 3.3V/5V selection 1 of 2 x 5-pin headers; plus a 2 x 6-pin headers, with individual VCC power support for 4 x USB 2.0 ports 1 of 2 x 13-pin headers for LPT port 1 of 2 x 5-pin headers for Line-out, Line-in and Mic-in 1 of 2 x 5-pin headers for thermal sensor 2 of SATA data connectors, only support connection with 2.5" HDD 2 of SATA power connectors, only support 5V power 1 of 1 x 3-pin headers for selecting the AT or ATX mode
Onboard DC to DC Power Supply	Input Voltage	Built-in onboard DC-to-DC converter Accept wide range of Power Input of DC 7V ~ 36V Supports AT and ATX mode
	Power Input Connector	1 x 2-pole Phoenix connector
	AT/ATX Selector	Onboard AT/ATX switch by a 1 x 3-pin headers
	Fuse Rating	7 A / 125 V
Heatsink	Construction	Aluminum Alloy
	Dimensions (WxHxD)	232.6 mm x 53 mm x 124.8 mm
Physical Characteristics	Form Factor	Em-ITX
	Board Dimension	17 cm (W) x 12 cm (L)
	Weight	0.98 Kg (net weight of board plus heatsink only)
Environmental Specification	Operating Temperature	From -10°C up to 70°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)

Em-ITX I/O Cards

EMIO-3110

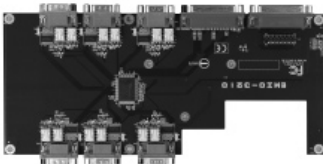
Multi Display Em-IO Card with 2 HDMI, 2 DVI, VGA, TV-Out, Audio



■ Applications: Digital signage, POI, gaming

EMIO-3210

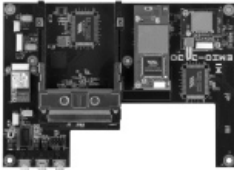
Em-IO Card with 6 COM Ports and 2 Parallel Ports



■ Applications: Kiosk, factory automation

EMIO-3430

Em-IO Card with 1 PC Card slot, Audio
Optional GPS, Bluetooth, Wireless LAN



■ Applications: Vehicle, fleet management, logistic control

Ordering Information

Part Number	CPU Frequency	Description
EITX-3000-1N13A3	1.3GHz Nano™ E	1.3GHz VIA Nano™ E CPU based Fanless Em-ITX board, with 1xVGA, 2xLVDS, 2xRS-232/422/485, and 2xRS-232, 6xUSB, 2xGbE, 2xSATA, DC-in 7~36V, Em-IO expansion socket
EITX-3000-1N10A3	1.0GHz Nano™ E	1.0GHz VIA Nano™ E CPU based Fanless Em-ITX board, with 1xVGA, 2xLVDS, 2xRS-232/422/485, and 2xRS-232, 6xUSB, 2xGbE, 2xSATA, DC-in 7~36V, Em-IO expansion socket
EITX-3000-2N13A3	1.3GHz Nano™ E	EITX-3000-1N13A3, with full cable kit
EITX-3000-2N10A3	1.0GHz Nano™ E	EITX-3000-1N10A3, with full cable kit

Optional Accessories

External AC-to-DC Adapter and Power Cord	
Part Number	Description
99G63-020186	AC to DC power adapter, DC 19V/90W with 2-pole Phoenix Power Plug
99G33-02058C	Power Cord, 2-pin 180cm, USA
99G33-02057C	Power Cord, 2-pin 180cm, Europe

Functional I/O Cable	
Part Number	Description
99G33-290010	Thermal Sensor cable
99G33-100119	Dual USB ports cable
99G33-100266	Cable of 1 USB port, plus pin-headers for EMIO-1530 802.11b/g WLAN
99G33-050033	LPT Printer Port cable
99G33-090328	Line-In, Line-Out, Mic-In Audio cable
99G33-06021E	SATA DATA cable
99G33-020505	SATA PWR cable, Only Support 5V for 2.5" HDD
99G33-250073	Power cable, 2-pole Phoenix plug to DC-Jack
99G33-080185	Digital I/O cable

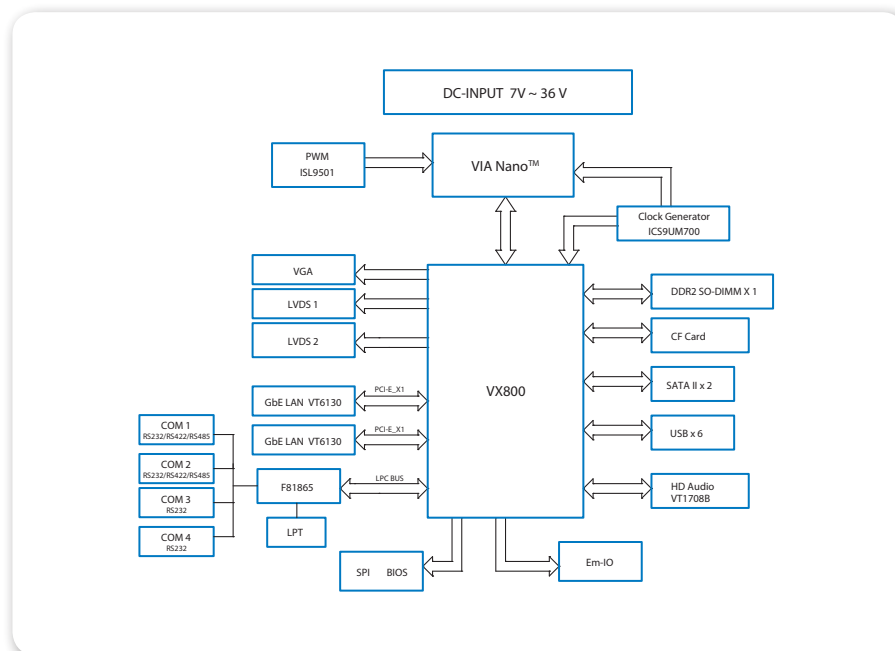
WLAN USB Module	
Part Number	Description
EMIO-1530-00A1	802.11 b/g Wireless LAN USB module for USA
EMIO-1530-10A1	802.11 b/g Wireless LAN USB module for Europe

Embedded OS (Only available for OEM service)	
Part Number	Description
POS-MXPELI-ENS04	Windows XP Embedded SP3 Image & License for EITX-3000 English Version
VOS-UMELXI-ENS04	Linux, MID Edition, OS Image Only for EITX-3000 English Version

Embedded OS (Only available for OEM service)	
Part Number	Description
POS-MEXSLI-ENS04	Windows XP Embedded Standard Image & License for EITX-3000 English Version
POS-ME7SLI-ENS04	Windows Embedded Standard 7 Image & License for EITX-3000 English Version (Require minimum 4G Compact Flash)
POS-ME7CLI-ENS05 (available soon)	Windows Embedded Standard 7 Compact size Image & License for EITX-3000 English Version (Require minimum 2G Compact Flash)
POS-DLNCLI-ENS04 (available soon)	Debian Linux Image & License for EITX-3000 English Version (Require minimum 2G Compact Flash)

Certificated RAM Module, Flash Disk, and 2.5" Hard Disk Drive	
Part Number	Description
99G06-010408	2GB DDR2 667MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, for using at environmental temperature up to 50°C
99G06-010398	1GB DDR2 667MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, for using at environmental temperature up to 50°C
99G06-010338	1GB DDR2 667MHz, 64Mx8 SDRAM SODIMM, Industrial Grade, 0 ~ 85°C
99G06-010178	1GB DDR2 667MHz, 64Mx8 SDRAM SODIMM, Industrial Grade, -40°C ~ 85°C
99G61-060011	1GB Compact Flash Disk, Industrial Grade, -40°C ~ 85°C
99G61-060021	2GB Compact Flash Disk, Industrial Grade, -40°C ~ 85°C
99G61-060031	4GB Compact Flash Disk, Innodisk, Industrial Grade, -40°C ~ 85°C
99G61-020146	250GB, TOSHIBA 2.5" SATA HDD 5400RPM
99G61-020156	320GB, TOSHIBA 2.5" SATA HDD 5400RPM

Block Diagram



Packing List

Items for EITX-3000-1N13A3/1N10A3

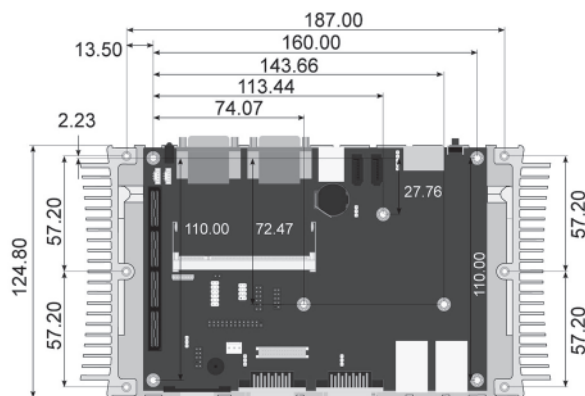
- 1 x EITX-3000 SBC
- 1 x Software driver and utility CD
- 1 x Mini-jumper pack
- 2 x Screw pack
- 1 x Power cable, 2-pole Phoenix plug to DC-Jack
- 1 x SATA data cable
- 1 x SATA power cable
- 1 x Dual USB cable

Items for EITX-3000-2N13A3/2N10A3

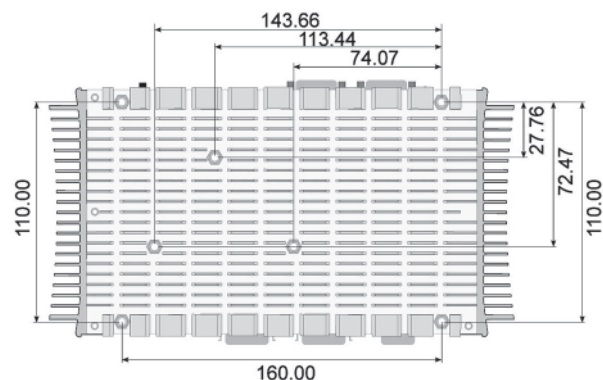
- 1 x EITX-3000 SBC
- 1 x Software driver and utility CD
- 1 x Mini-jumper pack
- 2 x Screw pack
- 1 x Power cable, 2-pole Phoenix plug to DC-Jack
- 2 x SATA data cable
- 2 x SATA power cable
- 2 x Dual USB cable
- 1 x Audio Cable
- 1 x Digitl I/O cable
- 1 x Thermal Sensor cable
- 1 x LPT cable

Dimensions

Top Layer with heatsink



Bottom Layer with heatsink



Unit: mm