

VB Series

VIA

VB8004

Mini-ITX Nano™ X2 E/
Nano™ E Board with SATA,
GigaLAN, COM, USB, DVI,
HDMI, LVDS, PCIe

Features

- Integrated VIA Chrome9™ HD DX9 3D/2D graphics with VC1, MPEG-2, WMV9 and H.264 decoding acceleration
- Supports high-bandwidth DDR3 memory, up to 4GB
- Supports two SATA hard drives
- Supports one Gigabit Ethernet
- Supports six USB 2.0 ports (four as pin headers)
- Supports two COM ports (one as pin header)
- Accepts DC power input
- Expansion I/O connector for one 4-lane PCIe, one 1-lane PCIe and one USB
- Supports one DVI-I port, one HDMI port and one single channel 24-bit LVDS panel connector



Board Placement

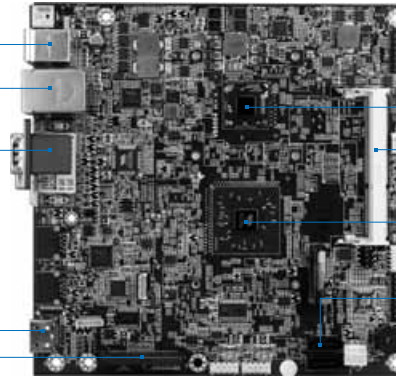
PS2 KB/MS

RJ-45 (upper)/ 2 x USB 2.0 (bottom)

COM (upper)/ DVI (bottom)

HDMI

Proprietary 80 pin I/O connector



VIA Nano™ E processor

DDR3 1066 SDRAM
SO-DIMM

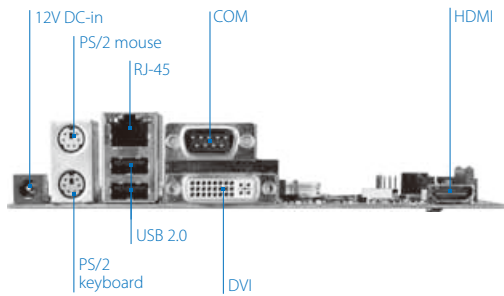
VX900H

2 x SATA

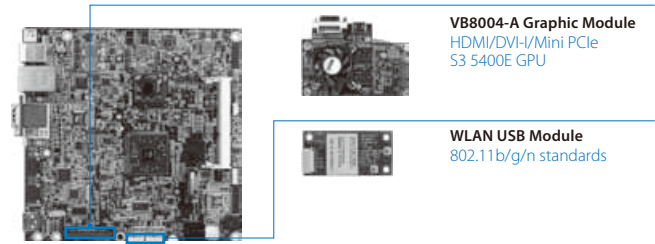
Specifications

Model Name	VB8004-16X	VB8004-16	VB8004-12E
Processor	1.6GHz VIA Nano™ X2 E	1.6GHz VIA Nano™ E	1.2GHz VIA Nano™ E
Chipset	VIA VX900H Media System Processor		
System Memory	1 x DDR3 1066 SODIMM socket. Up to 4GB memory size		
VGA	Integrated VIA Chrome9™ HD DX9 3D/2D graphics with VC1, MPEG-2, WMV9 and H.264 decoding acceleration		
Onboard Storage	2 x SATA		
Onboard LAN	1 x VIA VT6130 PCIe Gigabit Ethernet controller		
Onboard Audio	VIA VT1708S High Definition Audio Codec		
Onboard Super I/O	F81801U-I		
Onboard I/O Connectors	4 x USB 2.0 pin headers 1 x Front-panel audio pin header 1 x Digital I/O pin header (4 x GPI + 4 x GPO) 1 x Front panel pin header 1 x Fan connectors for Sys/CPU 1 x Serial port pin header for COM port 2 x SATA power connectors 1 x Proprietary 80 pin I/O connector. Carries one PCIe x4, one PCIe x1 and one USB 1 x LVDS connector, for 24-bit single channel LVDS panel		
Back Panel I/O	1 x 12V DC-in port 1 x PS2 keyboard port & 1 x PS2 mouse port 1 x Serial port 1 x DVI-I port (by VIA VT1632A DVI) 1 x HDMI port 1 x GigaLAN port + 2 x USB 2.0 ports		
Optional Daughter Card (VB8004-A)	1 x HDMI port 1 x DVI-I port 1 x Mini PCIe slot (PCIe x1 + USB)		
BIOS	AMI BIOS 8Mbit SPI flash memory		
Operating System	Windows 7, Windows Embedded Standard 7, Windows XP, Windows Embedded Standard/Compact, Linux		
Power	DC-in 12V		
System Monitoring & Management	Wake-on LAN, Keyboard Power-on, Timer Power-on System power management, AC power failure recovery Watch Dog Timer		
Operating Temperature	0°C ~ 50°C		
Operating Humidity	0% ~ 95% (relative humidity; non-condensing)		
Form Factor	Mini-ITX, 17 cm x 17 cm		
Compliance	CE/FCC/BSMI/RoHS		

Back Panel I/O



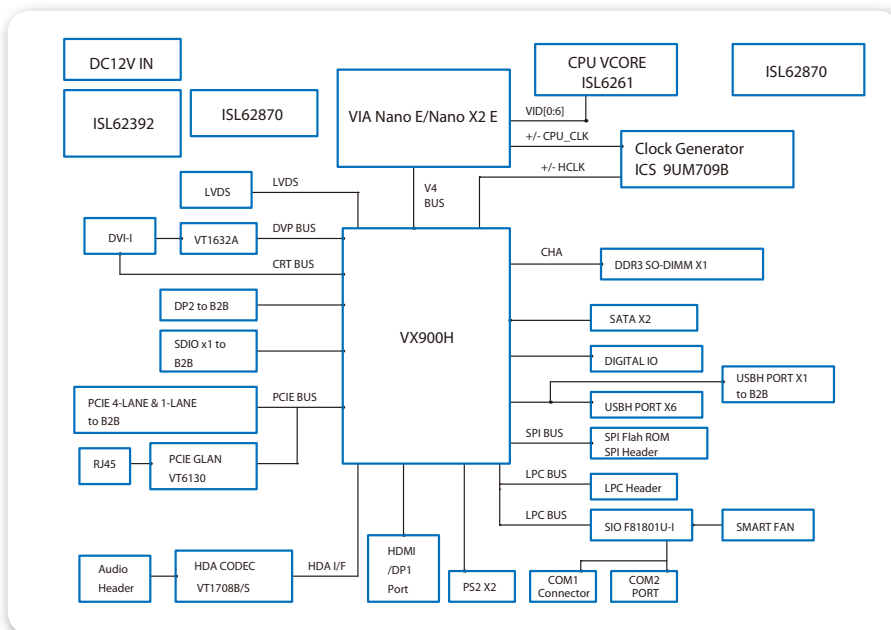
Accessories



Ordering Information

Model Name	CPU Frequency	Description
VB8004-16	1.6GHz Nano™ E	Mini-ITX Board with 1.6GHz Nano™ E CPU, 2 SATA, 1 GigaLAN, 2 COM, 6 USB 2.0, 1 DVI-I, 1 HDMI, 1 LVDS, 12V DC-in
VB8004-12E	1.2GHz Nano™ E	Mini-ITX Board with 1.2GHz Nano™ E CPU, 2 SATA, 1 GigaLAN, 2 COM, 6 USB 2.0, 1 DVI-I, 1 HDMI, 1 LVDS, 12V DC-in
VB8004-16X	1.6GHz Nano™ X2 E	Mini-ITX Board with 1.6GHz Nano™ X2 E CPU, 2 SATA, 1 GigaLAN, 2 COM, 6 USB 2.0, 1 DVI-I, 1 HDMI, 1 LVDS, 12V DC-in
VB8004-16S	1.6GHz Nano™ E	VB8004-16 board with VB8004-A graphic module
VB8004-16XS	1.6GHz Nano™ X2 E	VB8004-16X board with VB8004-A graphic module

Block Diagram



Packing List

Items
1 x SATA cable
1 x SATA power cable