

COM Express Modules

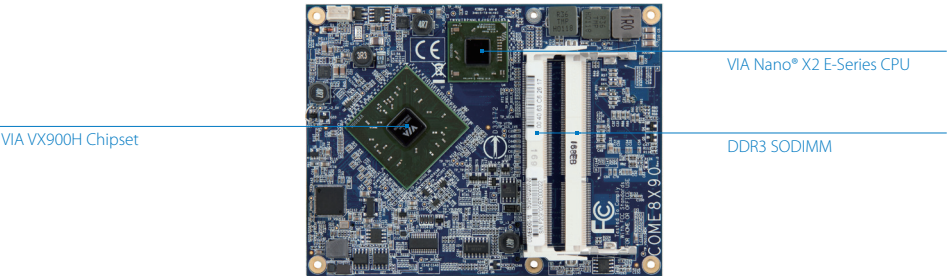
VIA
COMe-8X90

COM Express Module with
Type 6 pin-outs and Basic
Form Factor

Features

- 1.2GHz VIA Nano™ X2 E-Series processor
- Supports up to 8GB 1066 DDR3 SDRAM
- DX9 graphics with MPEG-2/WMV9/VC1/H.264 decoding acceleration
- Display interface for VGA, 18/24-bit single-channel LVDS panel, one DisplayPort, and one HDMI port
- Supports four USB 3.0 and four USB 2.0 ports

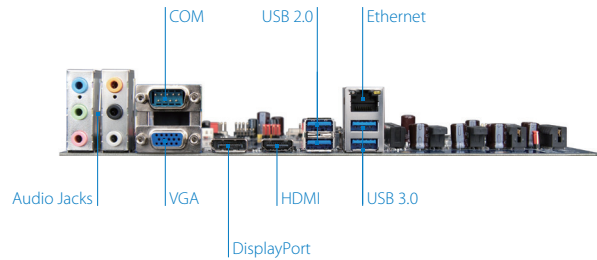
Board Placement



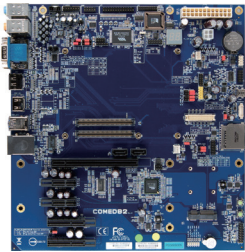
Specifications

Model Name	COMe-8X90
Processor	1.2GHz VIA Nano® X2 E-Series
Chipset	VIA VX900H Media System Processor
BIOS	AMI BIOS, 4/8Mbit Flash memory
System Memory	2 DDR3 1066 SODIMM slots Up to 4GB memory size per slot
Storage	2 SATA
Graphics	Integrated VIA Chrome®9 HD DX9 3D/2D graphics with MPEG-2, WMV9, VC1 and H.264 video decoding acceleration
LAN	VIA VT6130 Gigabit Ethernet controller or Realtek RTL8111G PCIe Gigabit Ethernet controller
Audio	1 HD audio digital interface
Supported Expansion I/O	1 PCIe x4 1 PCIe x1
Supported I/O	4 USB 3.0 4 USB 2.0 1 HDMI 1 DisplayPort 1 VGA 1 Single-channel 18/24-bit LVDS panel 2 COM (TX/RX) 1 Gigabit Ethernet 1 Digital video output for external HDMI/LVDS/DVI transmitter or TV encoder 1 LPC 1 SMBus 1 SPI 1 SDIO/GPIO 1 I²C
Operating System	Windows 7, WES 7, Windows CE, Linux
System Monitoring & Management	CPU temperature reading, CPU fan speed reading, System voltage monitoring, Watch Dog Timer, Wake-on-LAN, System power management, AC power failure recovery
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (relative humidity; non-condensing)
Form Factor	12.5cm x 9.5cm (4.92" x 3.73")
Compliance	COM Express® type 6, basic module

Carrier Board Back Panel I/O



Carrier Board (COMEDB2)



* The carrier board is only for evaluation purposes.

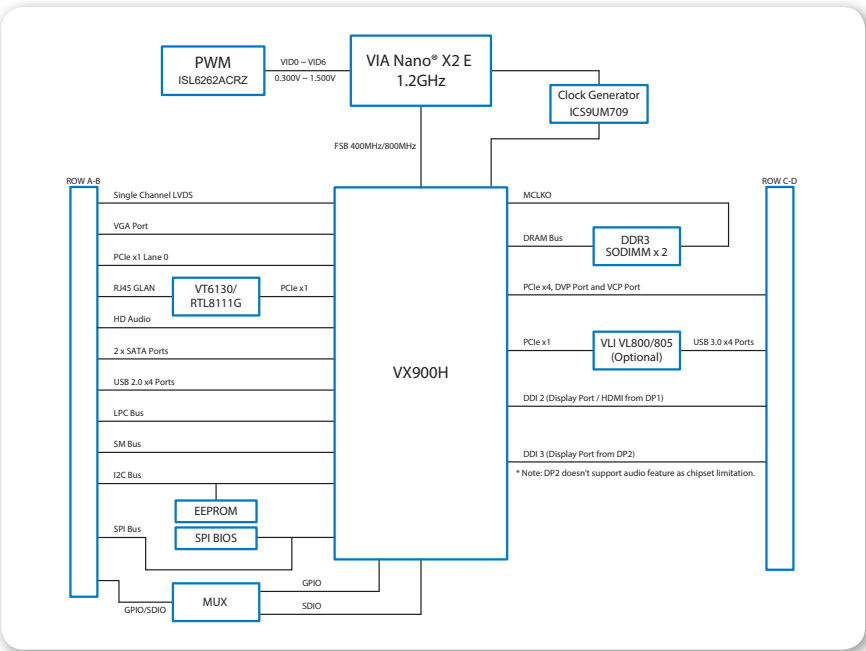
Specifications

Model Name	COMEDB2
Audio	VIA VT2021High Definition Audio Codec
Super I/O	VIA VT1211 LPC super I/O
Onboard I/O	2 SATA connectors 2 USB 2.0 pin headers for 4 ports 1 Single-channel 18/24-bit LVDS panel connector 1 COM port pin header (powered by selectable 5V/12V) 1 LPT pin header 1 LPC pin header 1 SMBus pin header 1 S/PDIF-out connector 1 Digital I/O (4 GPI + 4 GPO) pin header 1 Front Audio pin header for Line-out, Mic-in 2 Smart Fan connectors for CPU fan and system 1 I ² C pin header 1 FIR pin header 2 BIOS type select pin headers for select LPC/SPI BIOS 2 BIOS select pin headers for select module/carrier board BIOS 1 ATX power connector and 1 AUX power connector 1 PCIe x16 (supports 4-lane) slot for PEG 2 PCIe x1 1 MiniPCIe slot 1 Reversed PCIe x4 slot for DVP 1 Reserved PCIe x4 slot for VCP 1 Reset switch 1 Power button
Front Panel I/O	1 SD card slot
Rear Panel I/O	4 USB 3.0 ports 1 HDMI port 1 DisplayPort 1 VGA port 1 COM port 1 Gigabit Ethernet port 6 Audio jacks (supports multi-channel audio outputs)
Power Supply	ATX power connector
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% relative humidity
Form Factor	Micro-ATX (24.4cm x 24.4cm, 9.6" x 9.6")
COM Express Module Type	Supports COM Express™ type 6

Ordering Information

Model Name	CPU Frequency	Description
COMe-8X90	VIA Nano® X2 E-Series @ 1.2GHz	COM Express module with 1.2GHz VIA Nano® X2 E-Series CPU with HDMI, DisplayPort, VGA, LVDS, 4 USB 3.0, 4 USB 2.0, Gigabit Ethernet, 2 SATA, 2 PCIe, ATX power connector
COMEDB2	N/A	COMe-8X90 evaluation carrier board
99G42-013056	N/A	Fansink for COMe-8X90
99G42-013876	N/A	Heat spreader for COMe-8X90
STK-C8X90-00A0	VIA Nano® X2 E-Series @ 1.2GHz	COMe-8X90 starter kit
STK-C8X90-01A0	VIA Nano® X2 E-Series @ 1.2GHz	COMe-8X90 starter kit with Panel

Block Diagram



Packing List (Starter Kit)

Items for STK-C8X90-00A0
COMe-8X90 module
COMEDB2 carrier board
SATA cable
USB cable
COM cable
LPT cable

Items for STK-C8X90-01A0
COMe-8X90 module
COMEDB2 carrier board
SATA cable
USB cable
COM cable
LPT cable
LVDS cable
Inverter cable
12.1" LCM