Portwell's PEM-E205VLA, an ETX® 3.02 computer-on-module based on the Vortex86DX3 processor, delivers optimized value and service levels by running multiple applications securely and reliably on virtualization-optimized platforms. The PEM-E205VLA is designed with powerful 32-bit multi-core processor technology and programmable graphics processing unit (GPU), and supports up to 2GB DDR3 memory, 32KB write through 8-way L1 cache, 512KB write through/write back 4-way L2 cache, PCIE bus at 2.5 GHz, ROM controller, ISA, I2C, SPI, IPC (Internal Peripheral Controllers), Fast Ethernet, UART FIFO, USB 2.0 Host and IDE/SATA. The PEM-E205VLA supports a wide -40ºC to 85ºC industrial temperature range, and operates under 5W for fanless applications.

FEATURES

- Vortex86DX3 energy-efficient 32-bit x86 processor
- Support under 5W TDP solutions for fanless applications
- Support a wide -40ºC to 85ºC industrial temperature range
- SATA and IDE interface provide cost-effective functions
- Support up to 2GB DDR3 memory
- Architecture of module and carrier board speeds up time-to-market

ORDERING GUIDE

AB1-3D65Z	(R).PEM-E205VLA-SIM. ETX Module. Vortex86DX3/DDR3/24bit LVDS/LAN/Audio/ISA/IDE/SATA/USB

GENERAL

Processor	– Vortex86DX3 system-on-a-chip (SoC) – Dual-core, 1GHz; L1 32KB/L2 512KB
Chipset	Integrated
BIOS	System Management BIOS (SMBIOS)
Memory	Onboard DDR3 memory, up to 2GB
Storage Devices	– 1x IDE – 1x SATA II
Watchdog Timer	Programmable via software from 1 sec. to 255 mins.
Hardware Monitoring	CPU temperature and voltage
Expansion Interface	– 1x ISA – 1x PCI – 2x COM ports – 1x LPT – SMBus interface – I2C interface – UART interface

I/O INTERFACE

MIO	N/A
IrDA	N/A
Ethernet	Fast Ethernet
Audio	Tempo Semiconductor 92HD73C HD Audio
USB	4x USB 2.0
Keyboard & Mouse	PS/2 keyboard and mouse

DISPLAY

Graphics Controller	– GPU integrated in CPU – UMA architecture – VGA controller – 2D graphics engine support
Display Interface	– Dual display via VGA and LVDS – One display interface supporting up to 1920x1440@60Hz with 234MHz video clock, and the other, 1920x1200

Mechanical & Environment

Dimension	114(L) x 95(W) mm; 4.5"(L) x 3.7"(W)
Power Requirement	V_{CC} = 4.75 V to 5.25 V
Environment	– Operating Temperature: -40ºC to 85ºC – Storage Temperature: -40ºC to 85ºC – Relative Humidity: 5~90%, non-condensing