V466 Series

x86-based computers with 4 serial ports, quad LANs, VGA, CompactFlash, built-in 8-port Ethernet switch, USB

-40°C 75°C

> AMD Geode LX 800@0.9W CPU, 500 MHz
> Built-in 256 MB (CE) or 512 MB (XPe) DDR SDRAM
> Built-in 256 MB (CE) or 1 GB (XPe) industrial DOM to store the operating system
> 256 KB battery backup SRAM
> 2 RS-232 and 2 RS-232/422/485 serial ports, supporting non-standard baudrates
> Quad 10/100 Mbps Ethernet ports for network redundancy
> Built-in 8-port Ethernet switch for connecting network devices
> CompactFlash socket for storage expansion
> 4 USB 2.0 hosts supporting system boot up
> LED indicators for power, battery, storage
> Ready-to-run WinCE 6.0 or Windows XP Embedded platform
> DIN-rail and wall-mount installation
> Robust, fan-less design
> -40 to 75°C wide temperature model available

The certification logos shown here apply to some or all of the products in this section. For details, see "Regulatory Approvals" under "Specifications" below.

Microsoft® Windows® Embedded   CCC   e   RoHS   CE   FC   c(UL)us LISTED

: Overview

The V466 embedded computers are based on the AMD x86 processor, and feature 4 serial ports, quad LAN ports, 4 USB 2.0 hosts, and CompactFlash. A VGA interface is included to make the V466 computers particularly well-suited for industrial applications, such as SCADA and factory automation.
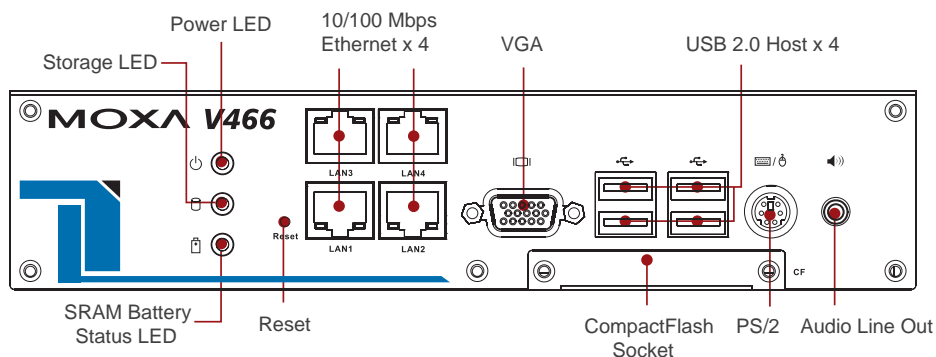
The V466 computers' 4 serial ports make them ideal for connecting a wide range of serial devices, and the quad 10/100 Mbps Ethernet ports offer a reliable solution for network redundancy, promising continuous operation for data communication and management. As an

added convenience, the V466 computers have 8 built-in 10/100 Mbps Ethernet switch ports for connecting network devices. In addition, the CompactFlash and USB sockets provide the V466 computers with the reliability needed for industrial applications that require data buffering and storage expansion.
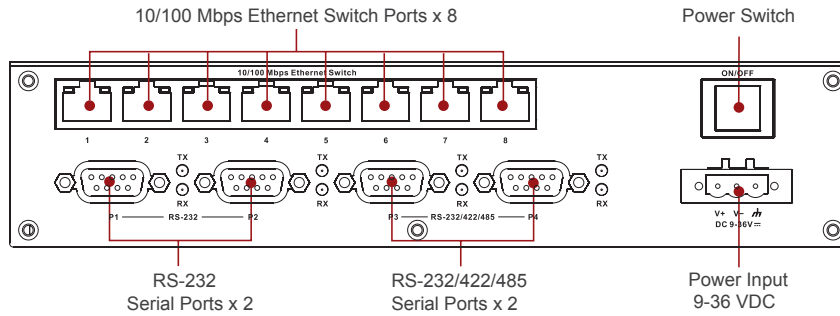
The V466 computers comes with the WinCE 6.0 or WinXP Embedded operating system already installed. WinCE 6.0 or WinXP Embedded provides programmers with a friendly environment for developing sophisticated, bug-free application software at a lower cost.

: Appearance

Front View

Rear view

10/100 Mbps Ethernet Switch Ports x 8   Power Switch

RS-232
Serial Ports x 2

RS-232/422/485
Serial Ports x 2

Power Input
9-36 VDC

: Hardware Specifications

Computer

CPU: AMD Geode LX 800@0.9W processor with 128K L2 Cache, 500 MHz

OS (pre-installed): Windows CE 6.0 or Windows XP Embedded

System Chipset: AMD CS5536

BIOS: 4 mega-bit Flash BIOS, supporting Plug & Play, APM 1.2, ACPI 1.0

SRAM: 256 KB, battery backup

FSB: 400 MHz

System Memory: 200-pin SO-DIMM socket with built-in 256 MB (CE) or 512 MB (XPe) DDR, supporting DDR400 up to 1 GB

Expansion Bus: PC/104-Plus onboard

USB: USB 2.0 compliant hosts x 4, type A connector, supports system boot up

Storage

Built-in: 256 MB (CE) or 1 GB (XPe) industrial DOM for OS

Storage Expansion: CompactFlash socket

Other Peripherals

KB/MS: 1 PS/2 interface supporting standard PS/2 keyboard and mouse through Y-type cable

Audio: AC97 audio, with speaker-out interface

Display

Graphics Controller: CPU integrated 2D graphics

Display Interface: CRT interface for VGA output

Ethernet Interface

LAN: 4 auto-sensing 10/100 Mbps ports (RJ45)

Switch Ports: Built-in 8-port Ethernet switch (10/100 Mbps, unmanaged)

Controller: Realtek RTL8100CL

Magnetic Isolation Protection: 1.5 KV built-in

Serial Interface

Serial Standards:
• 2 RS-232 ports (DB9 male)
• 2 RS-232/422/485 ports, software selectable (DB9 male)

ESD protection: 15 KV for all signals

Serial Communication Parameters

Data Bits: 5, 6, 7, 8

Stop Bits: 1, 1.5, 2

Parity: None, Even, Odd, Space, Mark

Flow Control: RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485

Baudrate: 50 bps to 921.6 Kbps (non-standard baudrates supported; see user's manuals for details)

Serial Signals

RS-232: TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND

RS-422: TxD+, TxD-, RxD+, RxD-, GND

RS-485-4w: TxD+, TxD-, RxD+, RxD-, GND

RS-485-2w: Data+, Data-, GND

LEDs

System: Power, Battery, Storage

LAN: 10M/Link x 4, 100M/Link x 4 (on connector), Switch x 8

Switches and Buttons

Power Switch: on/off

Reset Button: For warm reboot

Physical Characteristics

Housing: Aluminum, EPIC form factor

Weight: 1.32 kg

Dimensions:
Without ears: 223 x 120.5 x 57 mm (8.78 x 4.74 x 2.24 in)
With ears: 253 x 120.5 x 57 (9.96 x 4.74 x 2.24 in)

Mounting: DIN-Rail, wall

Environmental Limits

Operating Temperature:
Standard Models: -10 to 60°C (14 to 140°F)
Wide Temp. Models: -40 to 75°C (-40 to 167°F)

Operating Humidity: 5 to 95% RH

Storage Temperature:
Standard Models: -20 to 80°C (-4 to 176°F)
Wide Temp. Models: -40 to 85°C (-40 to 185°F)

Power Requirements

Input Voltage: 9 to 36 VDC (3-pin terminal block for V+, V-, SG)

Power Consumption: 26 W
• 730 mA @ 36 VDC
• 1080 mA @ 24 VDC
• 2820 mA @ 9 VDC)

Regulatory Approvals

EMC: CE (EN55022 Class A, EN61000-3-2 Class A, EN61000-3-3, EN55024), FCC (Part 15 Subpart B, CISPR 22 Class A), CCC (GB9254, GB 17625.1)

Safety: UL/cUL (UL60950-1, CSA C22.2 No. 60950-1-03), LVD, CCC (GB4943)

Green Product: RoHS, WEEE

Reliability

Alert Tools: Built-in buzzer and RTC (real-time clock) with battery backup

Automatic Reboot Trigger: Built-in WDT (watchdog timer) supporting 1-255 level time interval system reset, software programmable

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Note: The Hardware Specifications apply to the embedded computer unit itself, but not to accessories. In particular, the wide temperature specification does not apply to accessories such as the power adaptor and cables.

: Software Specifications

Windows Embedded CE 6.0

System Utilities: Windows command shell, telnet, ftp, web-based administration manager

File System: FAT (on-board flash)

Protocol Stack: TCP, UDP, IPv4, SNMP V2, ICMP, IGMP, ARP, HTTP, CHAP, PAP, SSL, DHCP, SNTP, SMTP, Telnet, FTP, PPP

Telnet Server: Allows remote administration through a standard telnet client.

FTP Server: Used for transferring files to and from remote computer systems over a network.

File Server: Enables clients to access files and other resources over the network (Microsoft® Wincows® CE)

Web Server (httpd): Includes ASP, ISAPI Secure Socket Layer support, SSL 2, SSL 3, and Transport Layer Security (TLS/SSL 3.1) public key-based protocols, and Web Administration ISAPI Extensions.
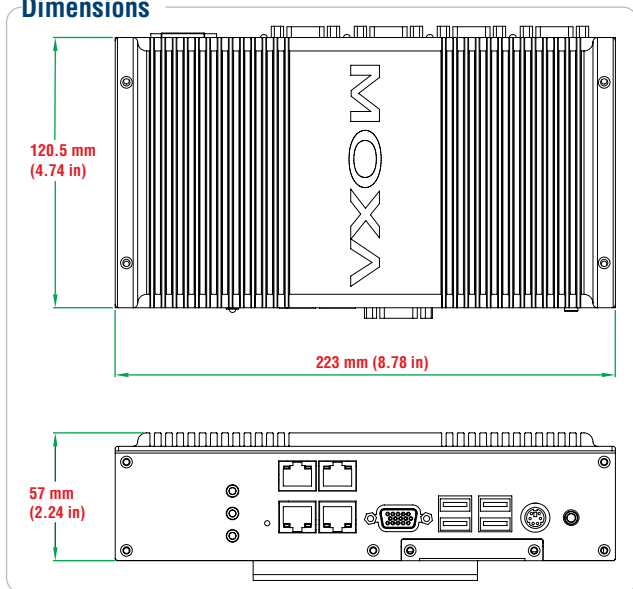
Dial-up Networking Service: RAS client API and PPP, supporting Extensible Authentication Protocol (EAP) and RAS scripting.

Watchdog Service: CPU Hardware function to reset CPU in a user specified time interval (triggered by calling a MOXA library function)

Application Development Software:
• Moxa WinCE 6.0 SDK
• C Libraries and Run-times
• Component Services (COM and DCOM)
• Microsoft® .NET Compact Framework 2.0 SP2
• XML, including DOM, XQL, XPATH, XSLT, SAX, SAX2
• SOAP Toolkit Client
• Winsock 2.2

Dimensions

120.5 mm
(4.74 in)

223 mm (8.78 in)

57 mm
(2.24 in)

Windows XP Embedded

System Utilities: Windows command shell, Telnet, ftp, web-based administration manager, Wireless Zero Configuration

File System: NTFS

Protocol Stack: DHCP, IPv4, DNS, IPsec, HTTP, TCP, UDP, ICMP, IGMP, ARP, TAPI, TSP, SNMP V2, NTP, ICS, PPP, CHAP, EAP, SNTP, Telnet, SNTP, FTP, SMTP, PPPoE, PPTP, NetBIOS

Telnet Server: Allows users to connect to Telnet servers from remote computers.

IIS Web Server: Allows you to create and manage Web sites.

Terminal Server: Microsoft Terminal Server client application (mstsc.exe).

COM+ Services: The next evolution of Microsoft Component Object Model (COM) and Microsoft Transaction Server (MTS).

Computer Browser Service: Computer browsing functionality exposed by Windows through Microsoft Networking. It allows a client machine to browse its network neighborhood for available computers exposing file and print sharing services.

Disk Management Services: Support for disk and volume management operations. The component implements a Component Object Model (COM) interface that can be used to query and configure disks and volumes, both basic and dynamic. The component also monitors disk arrivals and removals and other changes in the storage subsystem.

Remote Registry Service: Enables remote users to modify registry settings on this computer.

Application Development Software:
• Microsoft .Net Framework 2.0 with service pack 2 (CLR and the .NET Framework class library)
• Active Directory Service Interface (ADSI) Core
• Active Template Library (ATL),ASP.NET 2.0
• Certificate Request Client & Certificate Autoenrollment (CLR and the .NET Framework class library)
• COM APIs
• Common Control Libraries
• Common File Dialogs
• Direct3D, DirectPlay, DirectShow and Direct show filters
• Distributed Transaction Coordinator (MSDTC)
• Enhanced Write Filter (Redirect disk write operations to volatile (RAM) or non-volatile (disk) storage)
• Event Log, Internet Explorer
• Mapi32 Libraries
• Message Queuing (MSMQ) Core
• Microsoft Visual C++ Run Time Libraries
• Power Management dynamic-link library
• Registry Editor
• RPC
• Smart Card Cryptographic Service Providers
• USB 2.0 core drivers compliant with USB .95 or 1.0
• Windows API, Media Player 10, Script Engines, and WMI

: Ordering Information

Available Models

V466-CE: x86 embedded computer with 4 serial ports, quad LANs, 8-port Ethernet switch, VGA, CompactFlash, USB, and WinCE 6.0 OS, -10 to 60°C operating temperature

V466-XPE: x86 embedded computer with 4 serial ports, quad LANs, 8-port Ethernet switch, VGA, CompactFlash, USB, and Windows XP Embedded OS, -10 to 60°C operating temperature

V466-T-CE: x86 embedded computer with 4 serial ports, quad LANs, 8-port Ethernet switch, VGA, CompactFlash, USB, and WinCE 6.0 OS, -40 to 75°C operating temperature

V466-T-XPE: x86 embedded computer with 4 serial ports, quad LANs, 8-port Ethernet switch, VGA, CompactFlash, USB, and Windows XP Embedded OS, -40 to 75°C operating temperature

Package Checklist

• V466 embedded computer
• Ethernet cable: RJ45 to RJ45 cross-over cable, 100 cm
• DIN-rail Mounting Kit
• PS2 to KB/MS Y-type Cable
• Document and Software CD or DVD
• Quick Installation Guide (printed)
• Warranty Card