JETBOX

JetBox 9462-w

Embedded 4-port Serial VPN Routing Computer, w/ miniPCIe & SIM slot

RoHS

4 RS 232/422/485	DIO	USB	SD/CF Card
miniPCIe	SIM	Modbus	JamVM
Linux SDK	VPN	IPv6	-40~80°C

- Intel IXP 435 667MHz networking processor
- VPN, DMVPN for enhanced secure networking
- Complete layer3 routing: OSPF, RIP, DVMRP, IPv6
- miniPCIe & SIM slot for mobile module (GSM/GPRS/3G/HSUPA)
- 4-port RS232/422/485 (DB37 connector), supporting TCP server/client and paired TCP modes
- Versatile interfaces of USB, DIO, SD control
- Full managed features with QoS, VLAN
- NTP for network time management
- Embedded Linux UI—Modulized Webmin, capable of running customized control programs
- Linux Auto-run SD card for customized configuration
- Cross-platform applications by JamVM
- DC 12~48V power input
- Fan-less and ruggedized industrial design for anti-vibration anti-shock
- -40~80°C operating temperature

Overview

The JetBox 9462 is an industrial layer-3 router with Linux computing capability. It is a gateway to connect different network groups (Ethernet, fieldbus, serial or IO control in a complex networking architecture and manage peripherals at the front-end site through its Linux programs. It is reliable network redundancy, system recovery) and robust (passive cooling protected against the dusts and spills, shock & vibration resistance) to adopt in severe industrial vertical markets, such as transportation, substation, or hazardous environment.

Serial device server

In today's network infrastructurs there is still a lot of device communications going through serial ports. JetBox 9462 is a perfect solution to manage serial devices via Ethernet in flexible ways, such as TCP server, TCP client, and paired TCP modes. JetBox 9462 creates a transparent gateway for the serial communication to Ethernet.

Mobile network (optional)
(GSM/GPRS/3G/3.5G/HSUPA)

The reserved mobile network card slot can extend the network communication via GSM/GPRS/3G/3.5G/HSUPA and enhance the mobility of the JetBox 9462.

GPS (optional)

GPS is another function which can be provided through the mobile network card for the geographic positioning service. It can deliver the vehicle position data through an unlimited networking and suitable to be used in fleet management.
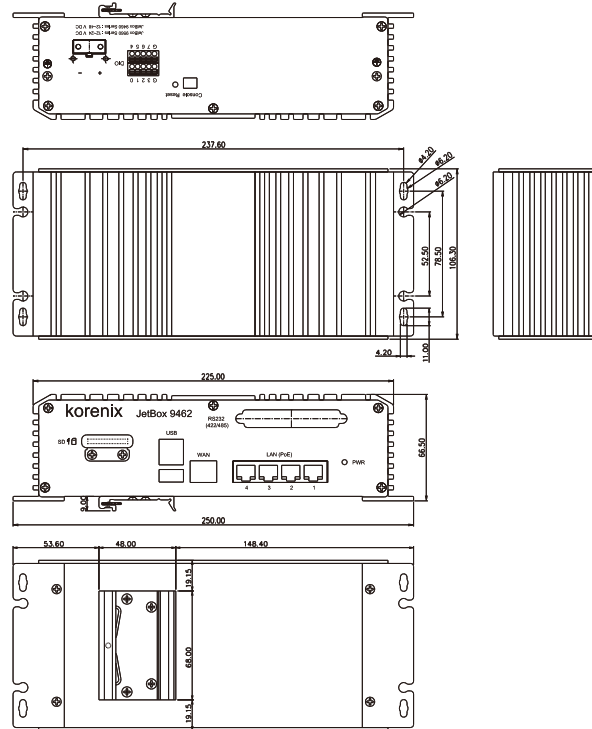
The most powerful control system in moving vehicles

In addition to the vehicle-specific power input, and the mobile communication enhancement, the JetBox 9462 carries 3 USB, 8 DIO and has the capability of layer3 routing, Linux computing, therefore the JetBox 9462 is the most powerful front-end control system used in moving vehicles.

VPN (Virtual Private Network)

Computer networks are no longer closed systems and may consist of intranets, extranets, and Internet sites. The key remote access requirement of an enterprise organization can be provided using VPN to mitigate the risks of malicious intrusion and establish a mechanism of users' identity. DMVPN (Dynamic Multipoint Virtual Private Network)is an enhancement of VPN and an effective solution for dynamic secure overlay networks.

Dimensions (Unit = mm)

Hardware Specifications

System

Processor:
Intel Xscale IXP435 667MHz RISC-based
Fanless

System memory: 128MB DDR2 RAM

System flash: 32MB

Ethernet: 10/100 Base-Tx RJ-45 connector x5

Storage:
SD card slot x1
CF card slot x1

Serial port: RS232/422/485 x4 (DB37 connector) with long distance termination switches (internal), default RS232

USB: USB 2.0 x3 (Host)
Supporting devices: USB flash, wireless dongle

Digital IO: 8 DIO (default 8 DI), DI or DO is defined by customers

Console port: 3-pin header (RS232 interface)

LED per unit:
Power on/ off (Green on/ off) x1

LED on Ethernet port:
Link/ Activity (Green on/ blinking)
Fdx/Col status (Yellow on/ blinking)

Reset buttonx1

HW Watchdog timer:
Generates a time-out system reset, 1sec

Power Supply: DC 12~48V

Power Consumption: 25W

OS support: Embedded Linux 2.6.20

Mechanical

Construction: Rugged Aluminum Alloy Chassis, IP31 protection

Color: Silver

Mounting: Wall mount (DIN-rail optional)

Dimension: 66.5(H) x 250 (W) x 106.3 (D) mm

Net weight: 1.07kg

Environment

Operating Temp:
-40 ~ 176°F(-40 ~ 80°C), 5 to 95% RH

Storage Temp: -40 ~ 176°F(-40 ~ 80°C), 5 to 95% RH

Regulation: FCC class A, CE
EN55022 class A EN55024, EN61000-3-2, 3
EN61000-4-2, 3, 4, 5, 6, 8, 11, IEC 60950

Shock: IEC60068-2-27 (50g peak acceleration)

Vibration: IEC60068-2-6 (5g/ 10~150Hz/operating)

MTBF: Greater than 20,000 hrs@25°C

Warranty: 5 years

*Specifications may change without prior notice

Industrial Intelligent NMS

Rackmount PoE Plus Switch

Industrial PoE Plus Switch

Industrial 12-24V PoE Switch

Industrial PoE Switch

Rackmount L3/L2 Switch

Gigabit Managed Switch

Managed Ethernet Switch

Entry-level Switch

Wireless Outdoor AP

Embedded PoE/Router Computer (LINUX)

Industrial Communication Computer (WIN/LINUX)

Ethernet/PoE/ Serial Board

Ethernet I/O Server

Media Converter

Serial Device Server

SFP Module

Din Rail Power Supply

JET BOX

Feature Specifications

Serial Interface
Serial service modes: TCP server, TCP client, Paired TCP

WAN Interface
Ethernet: 10/100 Base-Tx RJ-45 connector x1, auto MDI/MDI-X

LAN Interface
Ethernet: 10/100 Base-Tx RJ-45 connector x4, auto MDI/MDI-X
Routing per VLAN: Support port-based VLAN and IEEE802.1Q VLAN
Quality of Service: Four priority queues per port, 802.1p COS and IP Layer TOS/DiffServ

Ethernet Performance
Transfer Rate: 14,880 pps for Ethernet port and 148,800 pps for fast Ethernet port
Transfer Packet Size: 64 bytes to 1522 bytes (with VLAN tag)
MAC address: 1K MAC address table
Memory Buffer: 512 Kbits

IP Routing Service
Static routing
Dynamic routing: RIP, RIP-II, OSPF, ISIS*, BGP*, DVMRP
PPP
PPPoE

IP Firewall/ Perimeter Security
IP address and port filtering
NAT/ DMZ
VPN: L2TP, PPTP, SLIP, VLAN, IPsec, OpenVPN, GRE*, NHRP*, DMVPN*

Management & Security
Security
HTTPS, SSH, SFTP
WebUI Webmin (optional)
Linux shell access via TELNET connection or console port
SNMP v1, v2c, v3: MIB and traps
MIB-II, Bridge MIB, Ethernet-like MIB, VLAN MIB
Proprietary SNMP MIB sample code
NTP for time management

Technology
Standard:
IEEE802.3 10Base-T Ethernet
IEEE802.3u 100Base-Tx Fast Ethernet
IEEE802.3x Flow Control and Back-pressure
IEEE802.1p Class of service
IEEE802.1Q VLAN
Processing: Store and Forward architecture
Packet filter: Broadcast packet filtering
*Specifications may change without prior notice

Linux Specifications

Embedded Linux
Bootloader: JetBox bootloader
Linux Kernel: 2.6.20
Shell: GNU ash
File system: jffs2, NFS, Ext2, Ext3, VFAT, FAT
Device drivers: USB, Watchdog timer, UART, Ethernet, DIO, PoE, SD/mSD card, CF card, HW IPsec VPN, HW Open VPN, JetCard1608/ 2105/ 2154G, VGA*, Mobile dongle*, GPS dongle*
Protocols: ARP, PPP, CHAP, IPv4, IPv6, PAP, ICMP, TCP, UDP, NFS, SNMP v1/v2c/v3, NTP, SSH1.0/2.0, SSL, OpenVPN, Ipsec, PPP, PPPoE, PPTP, FTP, HTTP, SMTP, DNS, L2TP, DVMRP, OSFP, RIP v1.0/2.0, BGP*, ISIS*, VRRP*, 802.11*, HSDPA*, GPRS* telnet, dhcp, VLAN
SW package: Busybox (telnetd, inetd, udhcp, syslogd), e2fsprogs, firmware, i2c-tools, microcom, mtd, netcat, pciutils, ser2net, setserial ssdutil, usbmount, usbutils, version, bridge-utils, ethtool, iptables, net-snmp, ntp, openssh, openssl, openvpn, openswan, pppd, rp-pppoe,

pptp-linux, proftpd, samba, goahead, mutt, bind, l2tp, mrouted, quagga, vrrpd, wireless-tools, wvdial
WebUI (optional) includes:
Webmin by Korenix: DIO, PoE, Device Server (TCP Server mode), DHCP, DMVPN, DVMRP, Firmware Upgrade, GPRS, Modbus Gateway*, Module Upgrade, OSPF, RIP, Switch Port, VLAN
Webmin basic
Webmin system
Webmin servers
Webmin others
JavaVM (optional)
Korenix Linux auto-run function
Customized configuration
Process monitoring

SDK
Linux tool chain: Gcc(C/C++ PC cross compiler), uClibc
Linux sample code

Note: Software supports differ from HW functions of each model

Ordering Information

JetBox 9462-w Embedded 4-port Serial VPN Routing Computer, w/ miniPCI & SIM slot

Includes:

- JetBox 9462-w
- Console cable x1
- Attached 2-pin power terminal block
- Attached 5-pin DIO terminal block x 2
- Attached blanket to cover SD card slot
- DIN-rail kits
- Quick installation guide
- Documentation and software CD-ROM

Optional Accessories

- Additional applications on CF card: CF card capacity is 2G

    CF2G-L-J   Webmin UI & JamVM for Linux

    CF2G-LM-J Webmin UI, Modbus gateway & JamVM for Linux
- Serial cable:

    CM37M9x4-60 4-port male DB37 to male DB9 connection cable, 60cm

    CM37M25x4-60 4-port male DB37 to male DB25 connection cable, 60cm

Industrial Intelligent NMS

Rackmount PoE Plus Switch

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Industrial 12-24V PoE Switch

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