

JetBox 9562

Embedded 5-Port Booster & 4-Port Serial PoE VPN Routing Computer, w/ miniPCIe & SIM slot



- Intel IXP 435 667MHz networking processor
- VPN, DMVPN for enhanced secure networking
- Complete layer3 routing: OSPF, RIP, DVMRP, IPv6
- DC 12~24V Boost 48V 4-port PoE delivers full 15.4W per port
- 4-port RS 232/422/485 (DB37 connector), supporting TCP server/client and paired TCP modes
- Full managed features with QoS, VLAN, PoE scheduling
- Versatile interfaces of USB, DIO, SD control
- miniPCIe & SIM slot for mobile module (GSM/GPRS/3G/HSUPA)
- Embedded Linux UI—Modulized Webmin, capable of running customized control programs
- Cross-platform applications by JamVM
- Fan-less and ruggedized industrial design for anti-vibration, anti-shock
- -25~70°C operating temperature



Overview

JetBox 9562 is an industrial embedded Booster PoE VPN system designed with serial interfaces to allow users connecting and remotely managing access and security control devices, as a result delivering maximum flexibility to IPC providers for in-vehicle applications. It is further equipped with a PoE booster technology accepting 12~24V DC power input and boosting 48V DC output for powering PoE enabled devices and becoming a perfect solution for transit surveillance systems. The rugged fanless design with 50g shock and 5g vibration resistance makes them suitable for carriage installations.

12~24V booster for 48V PoE

The JetBox 9562 is a specific surveillance system used in vehicles. It accepts 12~24V DC power input and boosts to 48V DC output for 802.3af standard PoE-enabled devices. Rugged industrial design to withstand 50g shock and 5g vibration is suitable to be installed in carriages.

Serial device server

There are still a lot of device communications going through serial ports. JetBox 9562 is a perfect solution to manage serial devices via Ethernet in flexible ways, such as TCP server, TCP client, and paired TCP modes. JetBox 9562 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 9562.

It makes IP surveillance in public transportations, trucks or railways simple. General 12~24V industrial power input can enable 48V PoE IP cam and the captured IP cam images can be sent back to control center via wireless network.

GPS (optional)

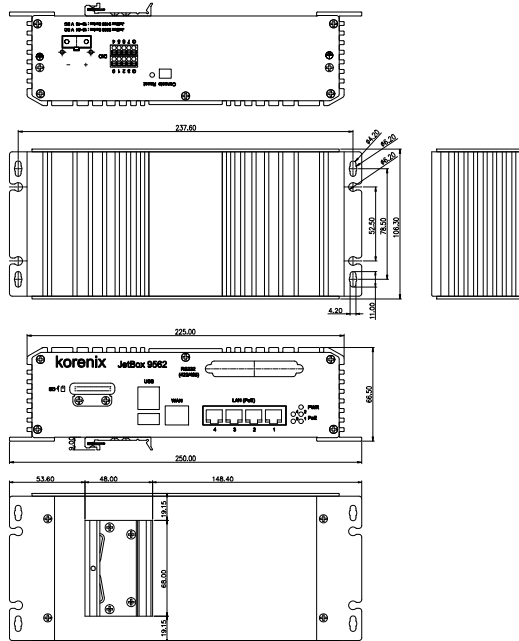
GPS is another function which can be provided through the mobile network card for the geographic positioning service. It can deliver the vehicle position data through an unlimited networking and suitable to be used in fleet management.

The most powerful control system in moving vehicles

In addition to the vehicle-specific power input, and the mobile communication enhancement, the JetBox 9562 carries 3 USB, 8 DIO ports and has the capability of layer3 routing, Linux computing, therefore becoming 9562 is the most powerful front-end control system used in moving vehicles.

- 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
- IP67/68 Ethernet 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

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 Based-Tx RJ-45 connector x5

PoE: 4 ports with PoE, IEEE802.3af compliant, 15.4W per port

Cables:

10Base-T: 4-pair UTP/STP Cat 3,4,5, 100ohm (100m) for PoE

100Base-Tx: 4-pair UTP/STP Cat.5, 100ohm (100m) for PoE

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

Mobile slot:

miniPCle x1

SIM x1

Console port: 3-pin header (RS232 interface)

LED per unit:

PoE Powered/ none (Yellow on/ off) x4

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 12~24V

Power Consumption:

100W with PoE

25W without PoE

OS support: Embedded Linux 2.6.20

Mechanical

Construction: Rugged Aluminum Alloy Chassis, IP31 protection

Color: Silver

Mounting: Wall mount/DIN rail

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

Net weight: 1.07kg

Environment

Operating Temp:

-13 ~ 158°F(-25 ~ 70°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

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

Feature Specifications

Serial Interface

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

WAN Interface

Ethernet: 10/100 Based-Tx RJ-45 connector x1, auto

MDI/MDI-X

LAN Interface

Ethernet: 10/100 Based-Tx RJ-45 connector x4

(with PoE), 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

Web UI 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

Power over Ethernet

PD classification: detection, class ID 0~3 follow

IEEE802.3af standard

PIN assignment (RJ45 connector): V+ (Pin 4,5), V-(Pin 7,8),

Tx(Pin 1,2), Rx (Pin 3,6)

PoE control: Support user configuration for PoE enable, disable, or based on schedule

PoE schedule control: Each PoE port can be active and powered scheduling with different rules. It supports weekly schedule on hourly basis

Power Limit Control: The control mode supports IEEE802.3af standard. The maximum DC power delivery on each PoE is 15.4W@DC 48 V input.

Technology

Standard:

IEEE802.3 10Base-T Ethernet

IEEE802.3u 100Base-Tx Fast Ethernet

IEEE802.3af Power over Ethernet (PoE)

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

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

IP67/68
Ethernet
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

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, OSPF, 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, mrouded, 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 9562 Embedded 5-Port Booster & 4-Port Serial PoE VPN Routing Computer, w/ miniPCle & SIM slot

Includes:

- JetBox 9562
- 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