JetBox 9560

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

RoHS

12~24V Booster PoE | DIO | USB | SD/CF Card

miniPCIe | SIM | JamVM | Linux SDK

L3 Router | VPN | IPv6

- 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
- 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

Programmable | 12~24V PoE

Overview

JetBox 9560 is an industrial embedded Booster PoE VPN system designed 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. In addition to the rich interface, the rugged fanless design with 50g shock and 5g vibration resistance makes the PoE computers suitable for carriage installations.

12~24V booster for 48V PoE

The JetBox 9560 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.

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 9560. 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.

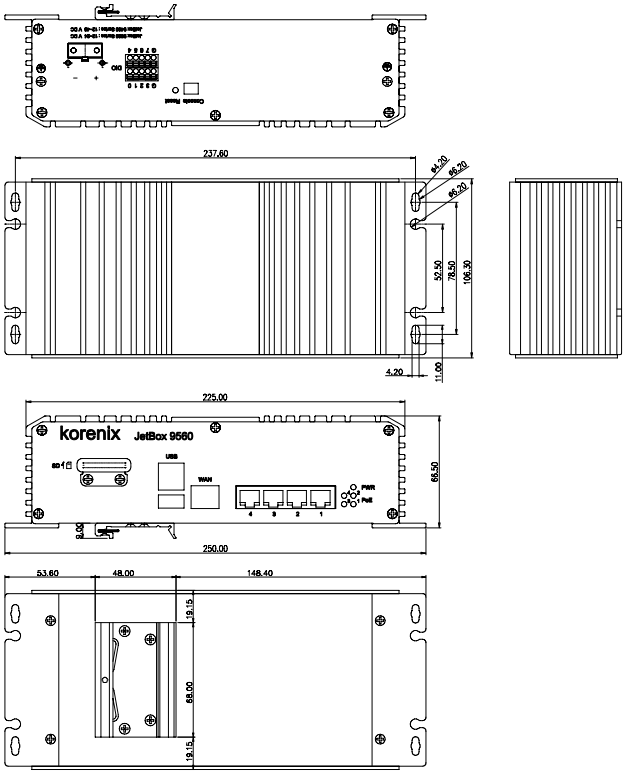
GPS (optional)

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 9560 carries 3 USB, 8 DIO ports and has the capability of layer3 routing, Linux computing, therefore becoming powerful front-end control system used in moving vehicles.

Dimensions (Unit = mm)



Hardware Specifications

System

Processor:
Intel XscaleIXP435 667MHz RISC-based
Fanless
System memory: 128MB DDR2 RAM
System flash: 32MB
Ethernet: 10/100 Based-TxRJ-45 connector x5
PoE: 4 ports with PoE, IEEE802.3af compliant, 15.4W per port
Network cables for PoE:
10Base-T: 4-pair UTP/STP Cat.3,4,5 100ohm (100m)
100Base-Tx: 4-pair UTP/STP Cat.5 100ohm (100m)
Storage:
SD card slot x1
CF card slot x1
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 miniPCIe 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 200,000 hours@25°C
Warranty: 5 years
*Specifications may change without prior notice

Feature Specifications

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 (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

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 9560 Embedded 5-Port Booster PoE VPN Routing Computer, w/ miniPCIe & SIM slot

Includes:

- JetBox 9560
- 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