

# JetBox 9535

## Embedded PoE VPN Router Computer: 1 WAN, 8 PoE



PoE

VPN

IPv6

- Intel IXP435 667MHz networking processor
- Complete Layer3 routing support: OSPF, RIP, DVMRP, IPv6
- 8-port PoE delivers full 15.4W per port, 123w per unit
- Full management features with QoS, VLAN, PoE scheduling
- Separated two DC 12~48V power inputs (48V for PoE)
- Versatile interfaces of USB, DIO, SD control, and optional modules for RFID, WLAN, and WiMax
- Embedded Linux UI—Modulized Webmin, capable of running customized control programs
- Cross-platform applications
- Fan-less and Ruggedized Industrial Design for anti-vibration, anti-shock, and -25~70°C operation temperature

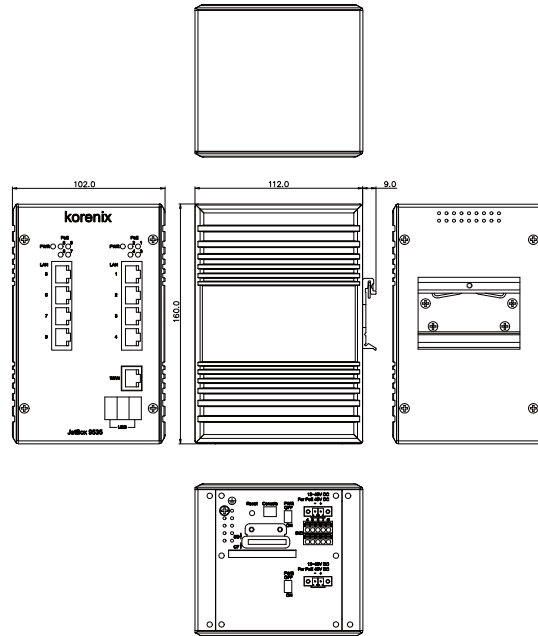


## Overview

The stylish JetBox 9535 series is an industrial layer-3 router with power-over-Ethernet technology and Linux computing. 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.

## 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 x9

#### Network cables for PoE:

10Base-T: 4-pair UTP/STP Cat.3,4,5,

EIA/TIA-568 100ohm (100m)

100Base-Tx: 4-pair UTP/STP Cat.5

EIA/TIA-568 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

**Console port:** 3-pin header (RS232 interface)

#### LED per port (on the port):

Link/Activity (Green on/Green blinking)

Full Duplex/Collision (Yellow on/ Yellow blinking)

#### LED per PoE port (LAN1~LAN8):

Powered/none x8(Yellow on/off)

#### LED per unit:

Power on/off x1 (Green on/off)

**Power on/off switch x1**

**Reset button x1**

**HW Watchdog timer:**

Generates a time-out system reset, 1sec

#### Power Supply:

Two separated power inputs

DC input 48V (for PoE)

DC 12~48V

#### Power Consumption:

One input 1.6A at 48V (Maximum, including PoE)

**OS support:** Embedded Linux 2.6.20

#### Mechanical

##### Construction:

Rugged Aluminum Alloy Chassis, IP31 protection

**Color:** Silver

**Mounting:** DIN rail (wall mount optional)

**Dimension:** 160(H) x 112 (W) x 102 (D) mm

**Net weight:** 1.2kg

#### Environment

##### Operating Temp:

-13 ~ 158°F(-25 ~ 70°C), 5 to 95% RH

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

**Regulation:** FCC class A, CE, UL\*(Pending)

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:** At least 200,000 hours @ 25°C

**Warranty:** 5 years

\*to be confirmed

Industrial  
PoE Switch

IP67/68  
Ethernet Switch

Rackmount  
Managed  
Switch

Gigabit Switch

Redundant  
Switch

Entry-Level  
Switch

Networking  
Computer

Communication  
Computer

Ethernet  
I/O Server

Serial Device  
Server

Media  
Converter

Multiport  
Serial Card

SFP Module

Din Rail  
Power Supply

## Feature Specifications

### 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 x8 (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

**Basic Web UI Module (Webmin):** PPP/PPPoE Dial up, Configure file management, DHCP Server, Initial System Boot up, Firewall, Network Configuration, Scheduled Jobs System Logs, System Time, User account manager Webmin configure

**Extensible for other proprietary Web UI modules:**

**Routing, NAT, Switch, DIO, Serial, PoE**

**Extensible for other standard Web UI (webmin) modules**

**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

\*Optional

## 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:** SD card, CF card, USB, Watchdog timer, UART, Ethernet, DIO

**Protocol:** ARP, PPP, CHAP, IPv4, IPv6, PAP, ICMP, TCP, UDP, NFS, RIP, RIP-II, OSPF, ISIS, BGP, DVMRP, L2TP, PPTP, SLIP, VLAN, IPsec, OpenVPN

**Software packages:** busybox (telnetd, inetd, udhcp), e2fsprogs, i2c-tools, ltp-testsuite, microcom, mtd, pciutils,

setserial, usbmount, usbutils, bridge-utils, ethtool, iptables, net-snmp, ntp, openssh, openssl, openVPN, openSWAN, pppd, pptp-linux, proftpd, samba, smtpclient, bind, l2tp, mrouted, quagga, wireless-tools, jamvm, syslogd, udhcp, goahead web server

### Korenix Linux auto-run function

Customized configuration

Process monitoring

### SDK

**Linux tool chain:** Gcc (C/C++ PC cross compiler), uClibc

**Linux sample code**

## Ordering Information

### JetBox 9535 Intel IXP435 667MHz, 48V DC, 128MB SDRAM

Includes:

- JetBox 9535
- Console cable x1
- Attached two 2-pin power terminal block
- Attached 5-pin DIO terminal block x 2
- Attached blanket to cover SD card slot
- Attached name plate to cover CD card slot
- 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 for Linux
- 802.11g wireless dongle

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