

JetBox 9430-w

Embedded VPN Router Computer: 1 WAN, 4 LAN



- Intel IXP435 667MHz with Networking Processor to enhance routing and VPN performance
- Complete Layer3 routing support: OSPF, RIP, DVMRP, IPv6
- Full managed features with QoS, VLAN
- Versatile interfaces of USB, DIO, CF/ SD card slot
- Linux ready platform with Linux UI Webmin (optional), programmable
- Cross-platform applications by JavaVM
- DC 12~48V power input
- Fan-less, ruggedized industrial Design for anti-vibration, anti-shock, and -40~80°C wide temperature

Overview

The stylish JetBox 9430 series 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 or Java applications. It is reliable (network redundancy, system recovery) and robust (passive cooling, protected against dusts and spills, shock & vibration resistance) to adopt in severe industrial vertical markets, such as transportation, substation, or hazardous environment.

Embedded Linux Ready

Korenix is devoted to the Linux computing and benefits customers by providing the JetBox series with embedded Linux ready system and easy-to-use interface. Compared to general purpose Linux system, embedded Linux is performance-optimized for front-end industrial control.

Linux Auto-run

The JetBox 9430 series support Korenix Auto-Run

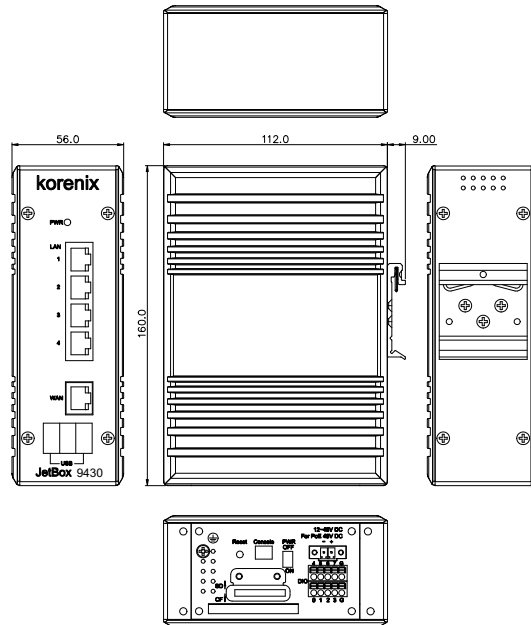
customization setting on SD card. The advanced software feature allows users to configure their own Linux commands once the system is booted. Users only need to store the commands on an "Auto-Run" file and then store it on an SD card. This way they can automatically run specific configurations or run specific applications in the JetBox 9430 embedded computers making the industrial network management easier and more flexible.

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)



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

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

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 DO), 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 unit:

Power on/off x 1 (Green on/off)

Reset button x 1

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: DIN-rail

Dimension: 160(H) x 112(W) x 56(D) mm

Net weight: 0.9kg

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, UL*

EN55022 class A EN55024

EN61000-3-2, 3

EN61000-4-2, 3, 4, 5, 6, 8, 11

IEC 60950

IEC61373* (Railway)

EN50155* (Railway)

EN50121-4* (Railway)

NEMA TS2* (traffic control)

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

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 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

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

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

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

*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,

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, setserial, goahead web server

JavaVM

Korenix Linux auto-run function

Customized configuration

Process monitoring

SDK

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

Linux sample code

Industrial Communication Computer

Ordering Information

Jetbox 9430-w Intel IXP435 667MHz, 12~48V DC, 128MB DDR2 RAM, -40~80°C

Includes:

- JetBox 9430-w x1
- Console cable x1
- Attached 2-pin power terminal block
- Attached 5-pin DIO terminal block x2
- Attached blanket to cover SD card slot
- Attached nameplate to cover CF card slot
- Quick installation guide
- Documentation and software CD-ROM

Optional Accessories

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

- Add-on Webmin modules & JavaVM
- Advanced Linux configuration

802.11g wireless dongle

3.5G wireless card

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