

JetBox 5432-w

Embedded VPN Linux Computer: 1 WAN, 4 LAN, VPN, 4 Serial



CE FC  RoHS

- 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
- 4-port serial device server (DB37 connector), supporting TCP server/client and paired TCP modes
- Embedded Linux ready for easy maintenance
- DC 12~48V power input
- Fan-less, ruggedized industrial design for anti-vibration, anti-shock, and -40~80°C wide temperature operation



Overview

The compact JetBox 5432 series is an industrial embedded layer-3 router computer with Linux computing capabilities and serial ports for connecting and remotely managing access and security control devices, such as card readers, cameras, speakers etc. in embedded front-end controller applications. In addition, with Ethernet, serial console and USB interfaces, the router computer can operate as a networking gateway to connect different network groups in flexible ways and manage peripherals at the front-end site through Linux programs.

Combined with IP-31 rugged fan-less design, including vibration/shock resistance and -40~80°C wide operating temperature range, the JetBox 5432 series ensure the reliability and high performance of large network infrastructures in severe industrial vertical markets, such as transportation systems, public utilities, substations or other hazardous environments.

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.

Serial Device Server

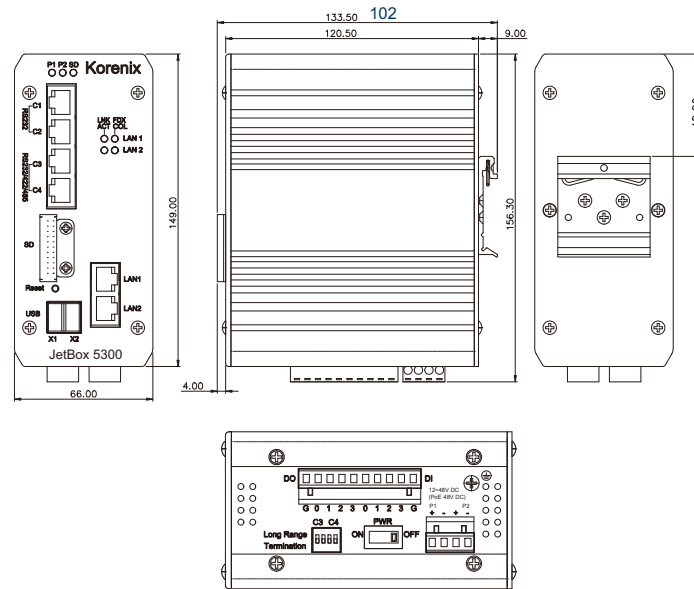
In today's network infrastructures there is still a large number of device communications going through serial ports. JetBox 5432 series is a perfect solution to manage serial devices via Ethernet in flexible ways, such as TCP server, TCP client, and paired TCP modes, while creating a transparent gateway for the serial communication to Ethernet.

VPN (Virtual Private Network)

Since 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 Specification

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

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

USB: USB 2.0 x1 (Host)

Supporting devices: USB flash, wireless dongle

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 x1 (Green on/off)

Reset button x1

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 76(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

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

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, 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

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 Specification

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

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

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 5432-w Intel IXP435 667MHz, 12~48V DC, 128MB DDR2 RAM, -40~80°C

Includes:

- JetBox 5432-w
- Console cable x1
- Attached 2-pin power terminal block
- Quick installation guide
- Documentation and software CD-ROM

Optional Accessories

- 802.11g wireless dongle
- 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

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