JetBox 5430-w

Embedded VPN Linux Computer

- Intel IXP435 400MHz Networking Processor to enhance routing and VPN performance
- Complete Layer3 routing: OSPF, RIP, DVMRP, IPv6
- Full managed features with QoS and VLAN
- Embedded Linux ready for easy maintenance
- DC 12~48V power inputs
- -40~80°C wide operating temp, fanless

RoHS

USB   Linux SDK   Router

VPN   -40~80°C

Overview

The compact JetBox 5430 series is an industrial embedded layer-3 router computer with performance-optimized Linux computing capabilities for front-end industrial controller applications. With it's rich interface, including Ethernet, fieldbus, serial console and USB ports, the router computer operates as a gateway to connect different network groups and to manage peripherals at the front-end site through Linux programs. Combined with IP31 rugged fan-less design, including vibration/shock resistance and -40~80°C wide operating temperature range, the JetBox 5430 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.

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.

JET BOX

Dimensions (Unit = mm)
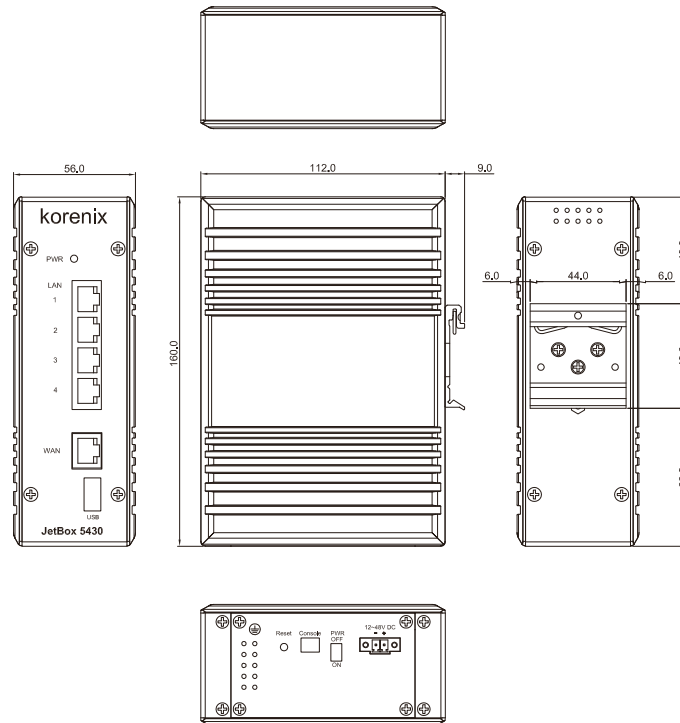
Hardware Specifications

System

Processor:
Intel Xscale IXP435 400MHz* RISC-based
Fanless
System memory: 128MB DDR2 RAM
System flash: 32MB
Ethernet: 10/100 Base-Tx RJ-45 connector x5
USB: USB 2.0 x1 (Host)
Console port: 3-pin header (RS232 interface)
LED per unit:
Power on/ off (Green on/ off) x1
LED on Ethernet port:
Link/ Activity (Green on/ blinking)
Fdx/Col status (Yellow on/ blinking)
Power on/off switch x1
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
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

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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, 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
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
*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
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 5430-w Embedded VPN Linux Computer
Includes:
- JetBox 5430-w
- Console cable x1
- Attached 2-pin power terminal block
- Quick installation guide
- Documentation and software CD-ROM

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

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