JetBox 9533G

Embedded PoE VPN Router Computer: 1 WAN, 4 PoE, 4 GbE

- 4-port Gigabit Ethernet
- 48V PoE, 4 port, 15.4W per port
- Intel IXP435 667MHz Networking Processor
- Complete layer3 routing support: OSPF, RIP, DVMRP, IPv6
- Full managed features with QoS, VLAN, PoE scheduling
- 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 by JavaVM
- Fan-less and ruggedized industrial design for anti-vibration, anti-anti-shock, and -25~70°C operating temperature

RoHS

4GbE | PoE | L3 Router | VPN | IPv6

Overview

JetBox 9533G is an Embedded Gigabit L3 Router Computer with 4 PoE and 4 Gigabit Ethernet ports to provide high-bandwidth network connections in Industrial environments.

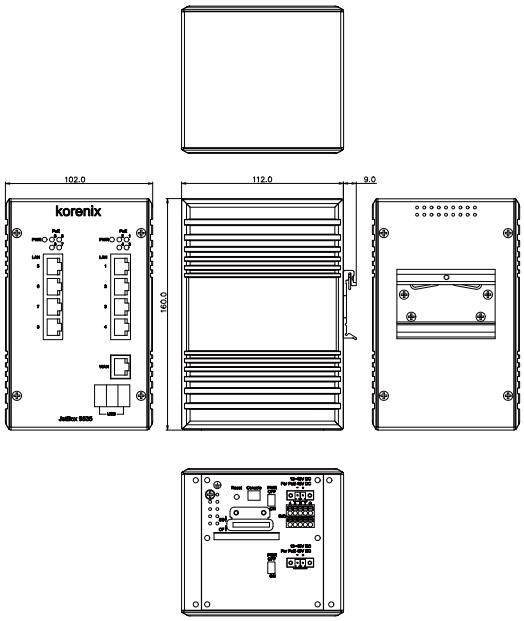
The 4 PoE ports of JetBox 9533G can deliver up to 15.4W power per port and 60W per unit along with data to the IP cameras and other remote network devices. With complete Layer3 routing and VPN functionalities the JetBox 9533G expands networking capabilities and reduces system costs by effectively managing dynamic long-distance and secure network groups.

To work reliably under vibration and shock environments, the rugged fan-less design and -25~70°C operating temperature provide solid Gigabit Ethernet and PoE connections in large network infrastructures.

The most powerful control system as a network gateway

Besides the Gigabit Ethernet and PoE (power over Ethernet) connections, the JetBox 9533G carries 3 USB, 8 DIO and has the capability of layer3 routing, Linux computing, and programs running in JavaVM, therefore the JetBox 9533G is the most powerful front-end control system as a networking gateway.

Dimensions (Unit = mm)



Hardware Specifications

System

Processor:
Intel Xscale IXP435 667MHz RISC-based
Fanless
System memory: 128MB DDR2 RAM
System flash: 32MB
Ethernet:
10/100/1000 Based-Tx RJ-45 connector x4
10/100 Based-Tx RJ-45 connector x5
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)
Network cables for Ethernet:
10Base-T: 2-pair UTP/STP Cat.3,4,5,
EIA/TIA-568 100ohm (100m)
100Base-Tx: 2-pair UTP/STP Cat.5
EIA/TIA-568 100ohm (100m)
1000Base-T: 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 Ethernet port (on the port):
Link/Activity (Green on/Green blinking)
Full Duplex/Collision (Yellow on/ Yellow blinking)
LED per PoE port (LAN1~LAN4):
Powered/none x4(Yellow on/off)
LED per Gigabit Ethernet port:
Link/Activity (Green on/Green blinking)
Speed 1000M/ Others (Yellow on/ off)
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 input 48V (for PoE)
DC input 12~48V
Power Consumption:
Single 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: Wall mount (DIN-rail optional)
Dimension: 160 (H) x 112 (W) x 76 (D) mm
Net weight: 1.07kg

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*
EN55022 class A, EN55024, EN61000-3-2, 3
EN61000-4-2, 3, 4, 5, 6, 8, 11
IEC 60950, IEC 61850*
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
*Pending

JETBOX

Feature Specifications

WAN Interface

Ethernet: 10/100 Based-Tx RJ-45 connector x1, auto MDI/MDI-X

LAN Interface

Gigabit Ethernet:
10/100/1000 Based-Tx RJ-45 x4
Ethernet: 10/100 Based-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

Switch Technology: Store and forward technology with 32Gbps switch fabric
Transfer Rate: 14,880 pps for Ethernet port,148,800 pps for fast Ethernet port, and 1,488,100 for Gigabit Ethernet
Transfer Packet Size:
Up to 10K byte Jumbo frames for GbE port
64 bytes to 1522 bytes (with VLAN tag) for LAN port
MAC address: 1K MAC address table
Memory Buffer:
1 Mbits for GbE port
512 Kbits for LAN port

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
IEEE802.3ab 1000Base-TX
IEEE802.3z Gigabit Ethernet Fiber
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, RSTP, LACP, IGMP snooping
Software packages: busybox (telnetd, inetd, udhcp), e2fsprongs, 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
JavaVM
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 9533G Intel IXP435 667MHz, 48V DC, 128MB DDR2 RAM, 4 GbE

Includes:

- JetBox 9533G
- Console cable
- Attached 2-pin power terminal block
- Attached 5-pin DIO terminal block x2
- Attached blanket to cover SD 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 & JavaVM for Linux