

JetBox 9300 (preliminary)

Industrial Communication Computer



Communication Transformer: An Ultimate Networking Engine

- **Industrial computer**
 1. RISC, 64MB SDRAM
 2. Linux, VCOM, Modbus, Modbus/TCP
 3. 4 COM, 2 USB, 4 DI/DO, SD card
- **Router (5 Ethernet ports)**
 1. Free combination between WAN & LAN
 2. IP routed, static routing
 3. NAT, Firewall, DMZ
- **Light management switch**
 1. SNMP v1/ v2c/ v3
 2. QoS
 3. VLAN (802.1Q, Port-based)

Overview

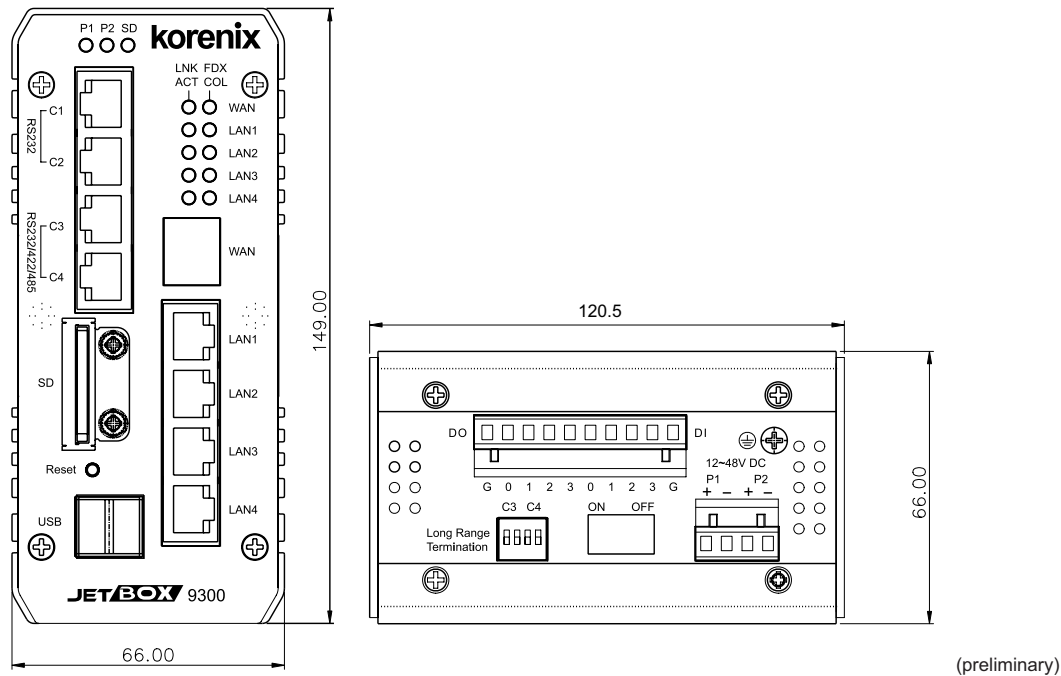
In a networking communication environment, router, switch and computer are indispensable devices to a typical networking architecture. Along with technology development, the complexity of devices increases and the troublesome settings become more and more confusing. Hence, the revolution of networking devices is anticipated. Functional integration and human-oriented manipulation will be the mainstream in next networking generation.

JetBox 9300 is the communication transformer to digest router, switch and computer functions into one tiny box. Extreme simple operation is the core spirit

of JetBox 9300. Korenix provides not only API but also User Interface to make router, switch and computer setting simple.

JetBox 9300 is a RISC-based embedded computer, system memory 64MB SDRAM default (128MB optional) and carries all major interfaces such as five Ethernet ports, two USB2.0 ports, two RS-232 ports, two RS-232/422/485 ports, four digital inputs, four digital outputs and one SD card slot. Moreover, built-in Linux OS and network essential applications make JetBox 9300 a powerful network engine.

Dimensions (Unit = mm)



Hardware Specifications

System

- Processor:** RISC
- System Memory:** SDRAM 64MB, Max. 128MB (Optional)
- Ethernet:** 10/100 Based-TX RJ-45 connector x5
Built-in 15KV ESD protection for all signals
- SSD:** SD card slot x1
- Serial Port:**
RS-232 x2, RS-232/422/485 x2 (RJ45 connector)
- USB:** USB 2.0 x2 (Host)
Supporting devices: USB flash, wireless dongle
- System Control:**
LED per port: Link/Activity x5
(Green on/Green blinking)@100Mbps
LED per unit: Power x2 (Green blinking/Green)
SD card x1 (Green)
Power on/off switch x1
Reset button x1
- Watchdog Timer:**
Generates a time-out system reset, 1 sec
- Power Supply:** DC input: 12 ~ 48 VDC (-48VDC)
- OS support:** Embedded Linux 2.6.21

Mechanical

- Construction:** Rugged Aluminum Alloy Chassis, IP30 protection
- Color:** Aluminum
- Mounting:** DIN rail
- Dimension:** 66(W) x 149(H) x 120.5(D) mm
- Net weight:** 700g

Environment

- Operating Temp:** -4 ~ 158°F (-20 ~ 70°C), 5 ~ 95% RH
- Storage Temp:** -40 ~ 176°F (-40 ~ 80°C), 5 ~ 95% RH
- EMC:**
EMI: FCC class A, EN55022 Class A
EMC:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE, UL, cUL, EN60950
Shock: IEC60068-2-27 (50g peak acceleration)
Free Fall: IEC60068-2-32
Vibration: IEC60068-2-6 (5g/ 5~500Hz/random operation)
MTBF: 319,175 hours MIL-HDBK-217 GB (MILITARY HANDBOOK) standard
- Warranty:** 5 years

Software Specifications

Embedded Linux 2.6.21

Technology:

Standard :

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX Fast Ethernet

IEEE 802.3x Flow Control and Back-pressure

IEEE 802.1p class of service

IEEE 802.1Q VLAN

IEEE 802.1D Spanning Tree Protocol (STP)*

IEEE 802.1W Rapid Spanning Tree Protocol (RSTP)*

Processing: Store and Forward architecture

Packet Filter: Broadcast packet filtering

Interface:

Number of Ports: 5x 10/100 Base-TX, Auto MDI/MDI-X

Network Cable:

10Base-T: 2-pair UTP/STP Cat.3,4,5 cable, EIA/TIA-568 100-ohm (100m)

100Base-TX : 2-pair UTP/STP Cat. 5 cable, EIA/TIA-568 100-ohm (100m)

Routing:

IP routed, static routing

Per VLAN routing

NAT/DMZ

ICMP, ARP

Block/Allow IP or port addresses

Managed Switch:

Configuration: Web-interface, FTP update, configuration

backup and restore, DHCP Client/Server, warm reboot, reset to default, Admin password, Port Speed/ Duplex Control, Status and Statistic display, SNMPV1/V2c, Traps, RMON 1 (Statistics History, Alarm, Events), Command line interface

MIB: MIB-II, Bridge MIB, Ethernet-like MIB, VLAN MIB, Private MIB

NTP for time management

VLAN: Supports Port-based VLAN and IEEE802.1Q VLAN Management VLAN adjustment

Quality of Service: Four priority queues per port, 802.1p, COS and IP Layer TOS/DiffServ

IP Access Control: Support IP address security to prevent unauthorized access

E-mail warning, SMTP: Automatic e-mail warning by pre-defined events

System Event Log: Support both Local mode and Server

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: 512Kbits

Back-plane: 1.2 Gbps

Device Drivers: SD card, USB, Watchdog timer, UART

*Supported by SW phase II

Ordering Information

JetBox 9300 Atmel 180MHz, 12~48VDC, 64MB SDRAM

All items include:

- JetBox 9300 Atmel 180MHz industrial communication computer
- Serial cables (RJ45 to DB9 male, 150cm) x1
- 4-pin apatable power terminal block
- 10-pin DIO terminal block
- Quick installation guide
- Documentation and software CD-ROM

Optional Accessories

- Additional applications on SD card: SD card capacity is 1G

SD1G-M Modbus, Modbus/TCP