JETBOX

JetBox 5300-w

Embedded 2 LAN & 4 Serial Linux Computer

CE FC RoHS

2 RS 232/ 422/485 | 2 RS 232 | DIO | USB

SD Card | Linux SDK | Modbus | -40~80°C

- RISC CPU with low power consumption for reliable performance
- Embedded Linux ready for easy maintenance
- SD card slot for customized configuration
- 4DI & 4DO for digital device connections
- 2 RS232/422/485 and 2 RS232, supporting TCP server mode for device remote control
- 2 LAN ports for Daisy-Chain Controller
- Modbus gateway (optional)
- Dual DC 12~48V redundant power inputs for system reliability
- -40~80°C wide operating temp, fanless

Programmable

Overview

JetBox 5300-w is an embedded Linux computer with low power consumption and -40 ~80°C wide operating temperature, designed to provide advanced network performance in front-end industrial control applications. The embedded Linux-based computer acts as an outstanding network platform and provides efficient and reliable data transmission through its flexible interface, including 4 Serial, 8 DIO, 2 Ethernet and 2 USB ports. Moreover, with the Linux SDK and Korenix auto-run function it becomes an excellent embedded solution for developing programmable customized applications while ensuring the reliable data transmission in severe industrial 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.

Linux Auto-run

The JetBox 5300 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 5300 embedded computers making the industrial network management easier and more flexible.

RISC-Based Computer with low power consumption

The JetBox 5300 is a RISC-based computer with lower power consumption and is stable and reliable. The JetBox 5300 carries 2 LAN ports, 2 USB ports, 2 RS232/422/485, 2 RS232, 4 digital inputs and 4 outputs to be the best solution in industrial control.

Dual power inputs

The JetBox 5300 carries dual power inputs to make a power redundancy to reduce the impact of unstable power inputs.

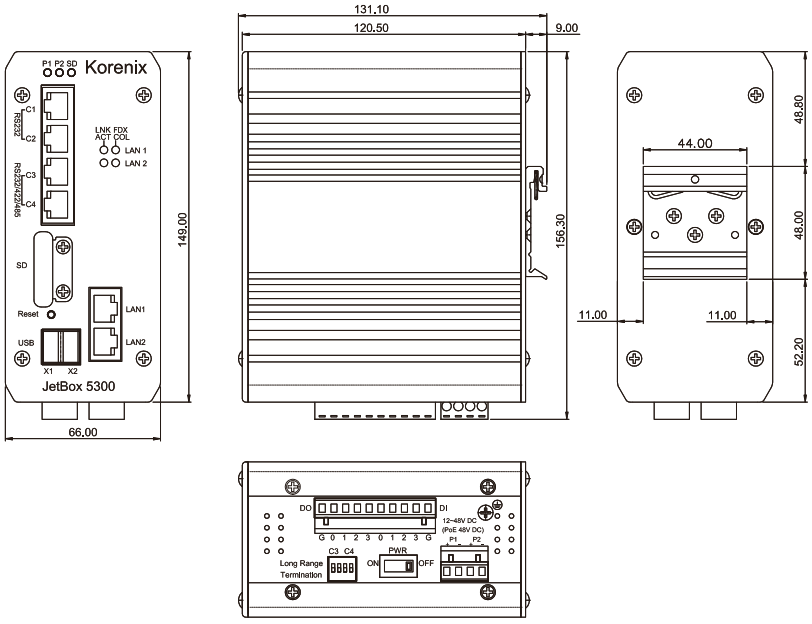
Digital Input & Output

Digital inputs and outputs are widely used in industrial applications such as indicators, alarms, reed switches, or sensors. The compact JetBox carries 4 digital output and 4 digital input channels and work as a front- end control agent.

Modbus Gateway (Optional)

For Modbus control applications, Korenix also provides the optional Modbus Gateway function on the SD card. This value-added software enables serial Modbus RTU (or Modbus ASCII) devices to communicate with Modbus TCP devices. It is an open serial communication protocol based on master/slave architecture and used to connect a supervisory computer with a remote terminal unit (RTU) in supervisory control and data acquisition (SCADA).

Dimensions (Unit = mm)



Hardware Specifications

System

Processor: Atmel AT91RM9200 180MHz
System flash: 16MB Flash ROM
System memory: SDRAM 64MB
Ethernet: 10/100 Base-Tx RJ-45 connector x2
Storage: 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
Digital IO: 4 DI & 4 DO
LED on Ethernet port:
Link/ Activity (Green on/ blinking)
Fdx/Col status (Yellow on/ blinking)
LED per unit:
Power On/off x2 (Green on/off)
SD card x1 (Green plug/unplug)
Power on/off switch x1
Reset button x1
HW Watchdog timer:
Generates a time-out system reset, 1sec
Power Supply: dual inputs
DC input 12~48V

Power Consumption:
Single input 5.4W at 12V, 6.72W at 48V
Dual inputs 5.28W at 12V, 7.2W at 48V
OS support: Embedded Linux 2.6.21

Mechanical

Construction:
Rugged Aluminum Alloy Chassis, IP31 protection
Color: Silver
Mounting: DIN rail
Dimension: 149(H) x 120.5(W) x 66(D) mm
Net weight: 0.7kg

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)
IEC61373 (Random/ 5~150Hz/ operating)
MTBF: Greater than 200,000 hours @25°C
Warranty: 5 years

JETBOX

Linux Specifications

Embedded Linux

Bootloader: JetBox bootloader
Linux Kernel: 2.6.21
Shell: GNU ash
File system: JFFS2, NFS, Ext2, Ext3, VFAT, FAT
Device drivers: SD card, USB, Watchdog timer, UART, Ethernet
Protocol: ARP, PPP, CHAP, IPv4, PAP, ICMP, TCP, UDP, NFS
Software packages: busybox (telnetd, inetd, udhcp), microcom, setserial, bridge-utils, ethtool, iptables, net-snmp, ntp, openssh, openssl, pppd, ftpd, rp-pppoe, smtpclient, syslogd, goahead web server
Korenix Linux auto-run function
Customized configuration
Process monitoring

Serial Interface

Serial service modes: TCP server

LAN Interface

Ethernet: 10/100 Based-Tx RJ-45 connector x2(redundant), auto MDI/MDI-X

Management & Security

Security
HTTPS, SSH
SNMP: MIB and traps
NTP for time management

SDK

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

Ordering Information

JetBox 5300-w Embedded 2 LAN & 4 Serial Linux Computer

Includes:

- JetBox 5300-w
- Serial cable (RJ45 to DB9 male, 150cm) x1
- Attached 4-pin power terminal block
- Attached 10-pin DIO terminal block
- Attached blanket to cover SD card slot
- Quick installation guide
- Documentation and software CD-ROM

Optional Accessories

- Additional applications on SD card: SD card capacity is 1G/2G

SD1G-LM	SD 1G, Modbus gateway for Linux
SD2G-LM	SD 2G, Modbus gateway for Linux