

# JetBox 5300-w

## 2 LAN, 4 Serial Linux Computer



- RISC CPU low power consumption
- -40~80°C operating temp, fanless
- Linux programming
- Linux customized configuration auto-run via SD card
- 4-port serial: TCP server mode
- Digital I/O controller: 4 DI & 4 DO, DIO scheduling
- SNMP control
- Modbus gateway (optional)



## Overview

### 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 JetBox5300 is a RISC-based computer with lower power consumption and is stable and reliable. The JetBox5300 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.

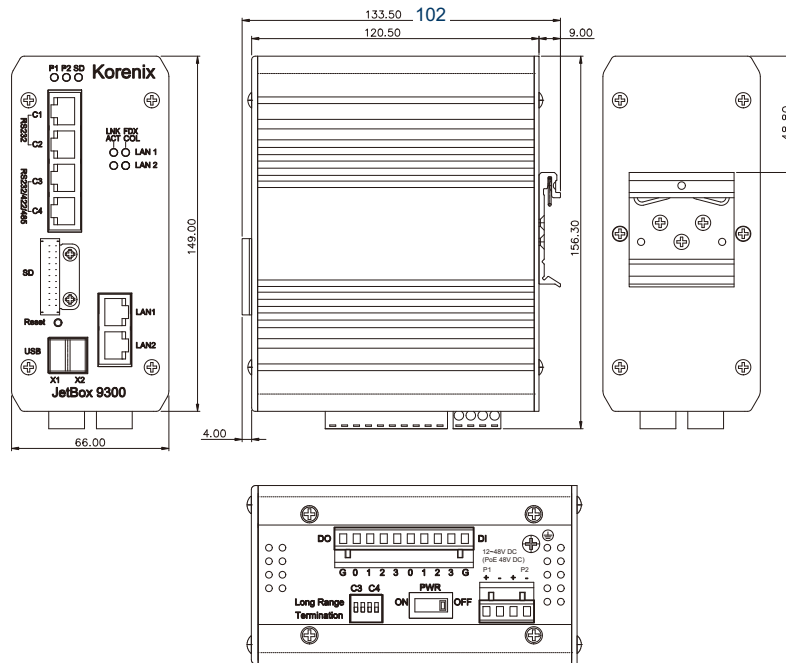
### Digital Input & Output

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)



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:** Atmel AT91RM9200 180MHz

**System memory:** SDRAM 64MB

**Ethernet:** 10/100 Based-Tx RJ-45 connector x2

**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

**Digital IO:** 4 DI & 4 DO

**System Control:**

**LED per port:**

Link/Activity x2 (Green on/Green blinking)

Full Duplex/ Collision x2 (Orange on/ Orange 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:** 66(D) x149(H) x 120.5(W) mm

**Net weight:** 800g

**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:** At least 200,000 hours @25°C

**Warranty:** 5 years

## Linux Specification

### 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, 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 Atmel 180MHz, 12~48V DC, 64MB SDRAM, -40~80°C**

Includes:

- JetBox 5300-w x1
- 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**

- SD1G-LM Linux Modbus Gateway

**Wireless dongle**