Industrial VPN Router Computer with GbE/SFP, Serial

JetBox 5630Gf-w

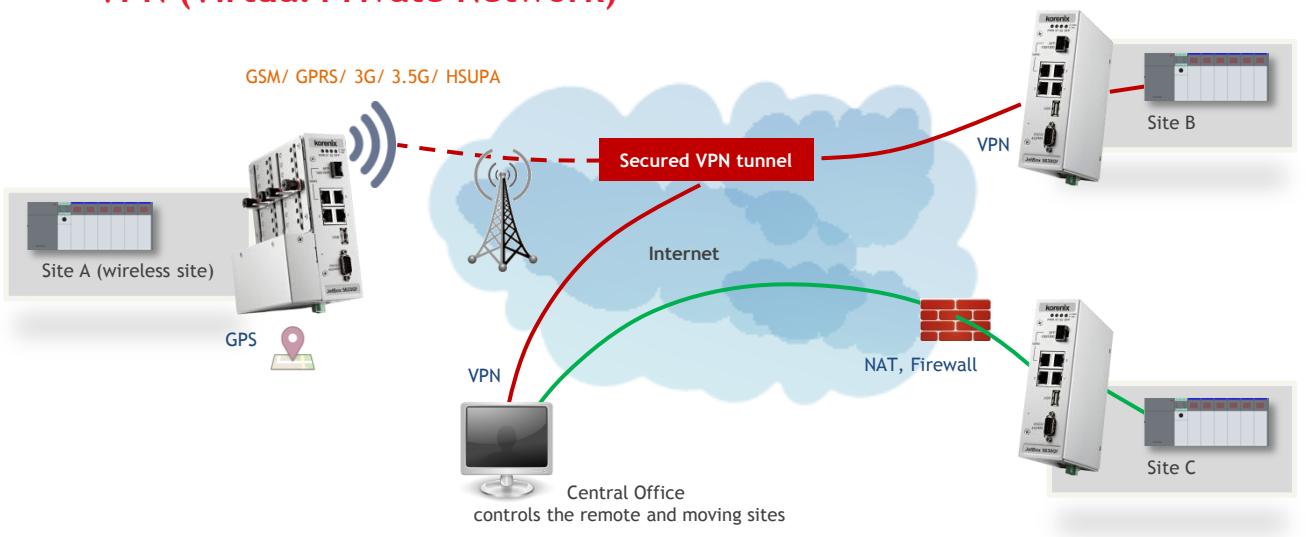
The stylish compact JetBox 5630Gf-w is an industrial layer 3 VPN router with Linux computing capability. It is a gateway to connect different network groups such as Ethernet and serial control in a complex networking architecture and manage peripherals at the front-end site. With Gigabit Ethernet, fiber connection and ability of network redundancy, JetBox 5630Gf-w can be applied in crossroads or highway for flow control and traffic monitoring of remote transportation control. Besides, JetBox 5630Gf-w is designed with features of compact, reliable and robust to adopt in various industrial vertical markets with hazardous environment such as transportation, surveillance and environmental monitoring.

Gigabit | SFP | Routing | VPN | Linux | Modbus | Heavy Industrial

Feature

- TI AM3352 720MHz with HW engine to enhance VPN performance: OpenVPN, IPsec VPN
- Complete Layer 3 routing support: Static, OSPF, RIP
- Full managed features with QoS, VLAN
- 3 port Gigabit LAN + 1 port Gigabit RJ/SFP combo WAN
- 1 port RS232/422/485 for serial device control
- SD/ USB for extra storage or wireless extension
- Linux ready platform with Web UI for easy configuration
- Programmable with Linux SDK for customization
- Modbus TCP/RTU gateway for Modbus devices control
- Network redundancy for ensuring network availability
- Rate limit function for flexible flow control
- DC 9~36V power input with reverse protection
- Fan-less, ruggedized industrial design for anti-vibration/shock, and -40~75℃ wide temperature

VPN (Virtual Private Network)

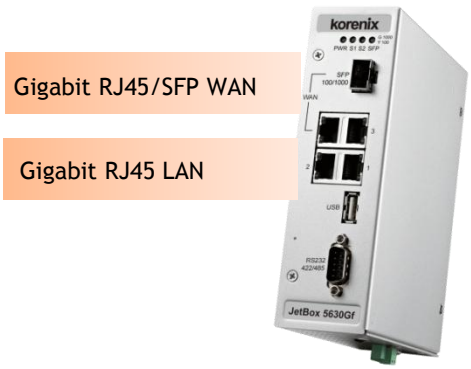


Now computer networks are no longer closed systems and may consist of intranets, extranets, and Internet sites. Therefore, the key requirement of remote access of on-site monitoring station must be a secure encrypted data exchange tunnel. JetBox 5630Gf-w series supports many kinds of VPN protocols such as IPSec, OpenVPN and L2TP for providing multi choices for different applications.

L2TPv3 (Layer 2 Tunneling Protocol Version 3) is an IETF standard related to L2TP that can be used as an alternative protocol to Multiprotocol Label Switching (MPLS) for encapsulation of multiprotocol Layer 2 communications traffic over IP networks.

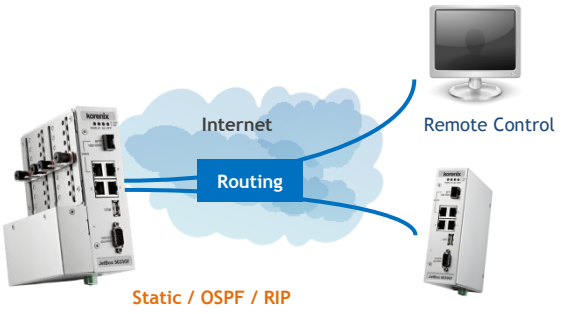
Gigabit Ethernet & SFP combo

The Gigabit Combo interface acts as the uplink and downlink path, allowing you to choose copper or different range fiber connection. The SFP socket supports 100/1000Base-X SFP transceiver, and you can choose different types of SFP transceivers, including Multi/Single mode, depending on the environmental, distance and installed fiber cable types.



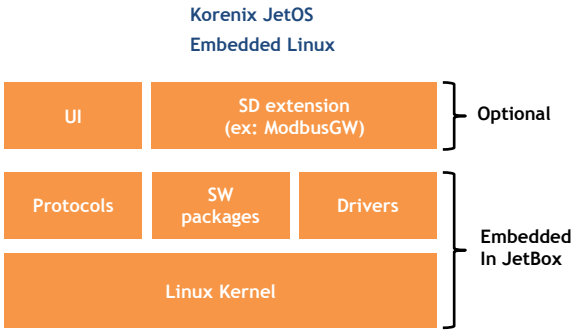
Layer 3 Routing and IPv6

JetBox 5630Gf-w supports layer 3 routing, such as static, OSPF and RIP protocol, to allow packets transferring between different subnets; therefore, it can be used in applications which need to exchange data cross-regionally or monitor devices from remote site. Also, IPv6 is available in JetBox 5630Gf-w to fulfill customers' requirements in on-coming network development.



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. JetBox 5630Gf-w adopts Linux kernel 3.2 with advanced efficiency to provide a more functional, stable and reliable system for specific front-end control applications.



Linux Auto-run

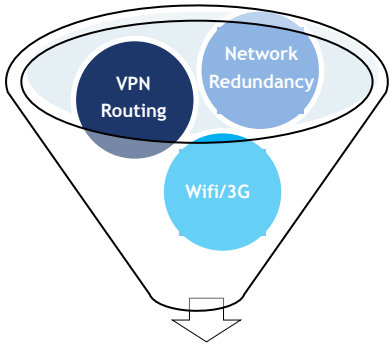
The advanced software feature allows users to configure their own Linux commands once the system is booted. Users only need to store the commands on an "Auto-Run“ file and then store it on an SD card, so they can automatically run specific configurations or run applications in the JetBox 5630Gf-w embedded computers to make the industrial network management easier and more flexible.

Linux workstation
- Install Korenix SDK in Linux computer
- Compile your program with the SDK

Linux auto-run for customization
- JetBox would execute settings in SD card automatically
- Optional security function for protection

User Friendly WebUI

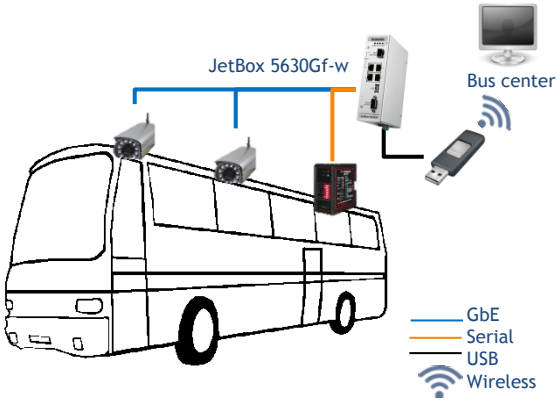
To enhance user experience, Korenix provides a user friendly interface based on LuCi, which is a compact-size, multi-programming-language compatible and high performance web interface, with Korenix featured functions such as routing, switching, VPN and network redundancy settings. Besides, users can choose to set up with user interface or directly with Linux command.



Korenix JetBox User Interface

Suitable for Vertical Market

In transportation applications such as bus or train, devices would only get 9V power supply from battery before the engine boosts wit 12V power input, so JetBox 5630Gf-w which is designed with wide power input range from 9V to 36V is suitable for this kind of environment with unstable power supply. Besides, it also supports wide operating temperature(-40~75℃) to withstand extreme hot or cold hazard environment.



Hardware Specification

System	
Processor	TI AM3352 720MHz ARM Cortex-A8 (Fan-less)
System memory	512MB DDR2 SDRAM
System flash	256MB, up to 100MB free space for customized program storage
Ethernet Ports	4 x 10/100/1000 Base-T(X) RJ-45
Fiber Port	1 x 100/1000 Mbps SFP fiber/RJ-45 combo
Memory storage	1 x SD card slot
Serial port	1 x RS232/422/485 (DB9 connector), default RS232, RS485 support 4-wire only
USB	1 x USB 2.0 (Host) Supporting devices: USB flash, wireless dongle
Console port	3-pin header (RS232 interface)
Diagnostic LEDs	Power Status, System: On (Green on) 2 x Status for Customization (Green or Amber) Fiber Status: 1000Mbps (Green on) / 100Mbps (Amber on) Ethernet Port: Link (Green on) / Activity (Green blinking) Ethernet Speed: 1000Mbps (Amber on) / 10 or 100Mbps (Amber off)
Power on/off	1 x Power on/off switch
Reset	1 x Reset button, reboot: 3 seconds/reset default: 7 seconds
HW Watchdog timer	Embedded hardware watchdog timer to auto reset system when system failure
Power Supply	DC 9~36V power input with polarity auto reverse protection
Power Consumption	10W
OS support	Embedded Linux 3.2
Mechanical	
Case	IP30 grade sheet metal chassis
Color	Silver
Mounting	EN50022 DIN-rail mount
Dimension (H x W x D)	160 x 47 x 118 mm (without DIN-rail clip)
Net weight	0.9kg
Environment	
Operating Temperature	-40 ~ 75°C (-40 ~ 167°F)
Operating Humidity	0 ~ 95%
Storage Temp	-40 ~ 80°C (-40 ~ 176°F)
Storage Humidity	0 ~ 95%
Approvals	
EMI	CISPR 16-1-2/ 16-2-1/ 16-2-3 / 22, FCC Part 15 Subpart B Class A, ANSI C63.4 Heavy Industrial IEC/EN61000-6-4
EMS	Heavy Industrial IEC/EN 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-9
Shock	IEC60068-2-27
Bump	IEC60068-2-29
Vibration	IEC60068-2-64
Free Fall	IEC60068-2-32
Railway EMC	EN 50121-1/-4 (Compliance)
Warranty	5 years

Feature Specification

Serial Interface	
Serial service modes	Serial to Ethernet. Connect a network to a serial port
WAN Interface	
Ethernet	10/100/1000 Base-TX RJ-45 connector, 100/1000 fiber SFP socket combo x1 , auto MDI/MDI-X
LAN Interface	
Ethernet	10/100/1000 Base-TX RJ-45 connector x3, auto MDI/MDI-X
VLAN	Support IEEE802.1Q VLAN and port-based 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
Transfer Rate	14,880 pps for 10M Ethernet, 148,800 pps for 100M Fast Ethernet, 1,488,100 pps for Gigabit Ethernet
Transfer Packet Size	64 bytes to 1522 bytes (with IEEE tagged frames)
Jumbo Frame	Default enabled, Up to 10 K bytes
MAC address	8K MAC address table
Packet Buffer Memory	1Mbits
Packet filtering	Broadcast packet filtering
IP Routing Service	
Static routing	Yes
Dynamic routing	RIP, RIP-II, OSPF, BGP
PPP	Yes
PPPoE	Yes
IP Firewall/ Perimeter Security	
IP	IP address and port filtering
NAT/ DMZ	Yes
VPN	IPsec, OpenVPN, GRE, PPTP, L2TP V3
Management & Security	
Security	HTTPS, SSH, SFTP
WebUI	Luci-based
Linux shell	Linux shell access via TELNET connection or console port
SNMP	v1, v2c, v3 MIB-II and traps
NTP	Yes, for time management
Technology	
Standard	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-Tx Fast Ethernet IEEE 802.3ab 1000Base-T IEEE 802.3z Gigabit Ethernet Fiber IEEE802.3x Flow Control and Back-pressure IEEE802.1p Class of service IEEE802.1Q VLAN

Linux Specification

Embedded Linux	
Bootloader	U-Boot
Linux Kernel	3.2
Shell	GNU ash
File system	jffs2, NFS, Ext2, Ext3, VFAT, FAT, Squashfs, UBIFS
Device drivers	USB, Watchdog timer, UART, Ethernet, SD/mSD card, CF card, HW IPsec VPN, HW Open VPN, Mobile 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, L2TPv3, L2TP over IPSec, OSPF, RIP v1.0/2.0, BGP*, 802.11*, HSDPA*, GPRS* telnet, dhcp, VLAN
SW package	Busybox (telnetd, inetd, udhcp, syslogd), e2fsprogs, firmware, i2c-tools, microcom, mtd, netcat, pciutils, ser2net, setserial, usbmount, usbutils, version, bridge-utils, ethtool, iptables, net-snmp, ntp, openssh, openssl, openvpn, openswan, pppd, rp-pppoe, Quagga, wireless-tools, wvdial, Samba
WebUI includes	WebUI by Korenix: System Settings, Network Settings, Switch, Configuration/Firmware Upgrade, OSPF, RIP, VLAN, Wireless WiFi/3G Settings, OpenVPN/IPSec/L2TP, Firewall, Multi-language Select*, Network Redundancy
Korenix Linux auto-run function	Yes
Customized configuration	Yes
Process monitoring	Yes
SDK	
Linux tool chain	Gcc(C/C++ PC cross compiler), glibc
Linux sample code	Yes
Note	Software supports differ from HW functions of each model *Specifications may change without prior notice

Ordering Information

JetBox 5630Gf-w Industrial VPN Router Computer with GbE/SFP, Serial

Includes:

- JetBox 5630Gf-w x1
- Console cable x1
- Attached 2-pin power terminal block
- Quick installation guide

Optional Accessories

Additional applications on SD card: SD card capacity is 4G

- SD4G-LM Modbus gateway
- SD4G-LM2S Modbus2SNMP gateway

SFP transceiver

- 100Base-FX multi-mode SFP transceiver**
- 100Base-FX single-mode SFP transceiver**
- 100Base-FX BIDI/WDM single-mode SFP transceiver**
- Gigabit multi-mode SFP transceiver
- Gigabit single-mode SFP transceiver
- Gigabit BIDI/WDM single-mode SFP transceiver

** 100M fiber is optional and can be supported by different settings

Dimension (Unit = mm)