

Model Information



■ Features

- ▣ VPNRouter with rich connectivity
- ▣ Secure VPN over Ethernet, WLAN and 3G/4G
- ▣ SimpleVPN software for easy deployment
- ▣ Firewall operation, NAT/DNS, SSL/TLS, AES-256
- ▣ Remote Control for Serial, CAN-Bus, GPIO
- ▣ 5 × LAN (1 Gigabit, 4 Fast Ethernet)
- ▣ Robust metal case, for harsh environments
- ▣ DIN RAIL mountable
- ▣ Option: internal 3G/4G-Modem
- ▣ Option; internal WLAN 802.11b/g/n
- ▣ 3 × antenna sockets

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VPNRouter iR 5221

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■ Overview

Industrial VPNRouter devices are ideal to establish your own private VPN application networks. The product's benefit is an easy configurable industrial Router, which allows to setup secure VPN connections (SSL/TLS and AES-256 based) to other remote VPNRouters. This is achieved with only little configuration effort.

A VPN Router can act as the central Firewall/Server to the Internet and to other remote VPN Routers/Clients, or as a VPN Gateway within an existing local network. The VPNRouter software is based on de facto standard OpenWrt, which complies with all industrial high security standards. The necessary encryption keys and certificates can be conveniently created on each device itself. Over the browser based web front-end the user can easily configure all network parameters, such as DHCP, DNS, NTP, UPnP and Firewall as well as the additional implemented VPN remote services, such as ModBus/TCP for GPIO, Serial ports and CAN-Bus.

A special VPN-Service allows the simple and comfortable configuration of VPNRouters. Existing VPNRouter configurations can be easily exported to other VPNRouters in the network via USB-Stick, configuration file or over Ethernet cables.

The industrial VPNRouter series stands out due to their robust and compact design. VPNRouters are fanless, have compact dimensions and provide DIN Rail mounting. Low power consumption, wide temperature range (−20°C to 65°C) and

wide range power supply (12-50V DC) make them ideal for harsh industrial environment. The great variety of interfaces, like 2-5 LAN ports, CAN Bus, RS232/422/485 serial ports, USB 2.0, Digital I/O and other options, allows simple connection to various industrial machines. WLAN and 3G/4G modems for installation on mobile platforms are optional available. MTBF of 14 years in 40°C environments documents the high technological reliability of VPNRouter series.

■ Hardware

System	VPNRouter iR 5221 is based on Baltos iR 5221, see Details VPNRouter iR 3220 is based on Baltos iR 3220, see Details VPNRouter iR 2110 is based on Baltos iR 2110, see Details
Interfaces	<ul style="list-style-type: none"> • iR 5221: 5×LAN, 2×USB, 2×RS232/422/485, 8×GPIO, 1×CAN Bus • iR 3220: 3×LAN, 2×USB, 2×RS232/422/485, 8×GPIO • iR 2110: 2×LAN, 1×USB, 1×RS232/422/485
Environment	Low Power <10W , Metal Case, -40°C - 65°C for harsh industrial environments
MTBF	125000 hours @ 40°C (14 Years)
Services	<p>These interfaces allow remote access</p> <ul style="list-style-type: none"> • GPIO via MODBUS/TCP • Serial Port RS232/RS422/RS485 via RFC 2217 and Telnet • CAN Bus via VSCAN API

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■ SimpleVPN Features

Concept	<p>SimpleVPN implemented in to VPN Routers creates a network of VPN tunnels. The network has star topology: all Client/Routers (in Branches or Home Offices) connect to one central Server/Router (in the Head Office). The Server acts as a central Hub/Switch for all data transfers: each PC in an office communicates with any other in other offices over the Server/Router.</p> <p>Also changes in configuration of Client/Routers are easy done on the Server/Router alone. All Client/Routers are central managed this way. The central Server/Router also supports the backup of all Client/Servers.</p>
Security	Based on OpenVPN with SSL/TLS and AES-256 The VPN uses certificates for Authentication. Only Firewall configuration uses password.
Firewall	NAT and DHCP, DNS, NTP Dynamic DNS, UPnP
VPN Tunnels	Max. 5 Clients per Server. Performance depends on Internet connection and data transfer profiles.
Management	<p>Configuration of Clients is done on the Server. Transfers of configuration to other clients via</p> <ul style="list-style-type: none"> • USB-Stick • File Upload / Download • Ethernet cable (before deploying the Client Router)
Keys / Certificates	Generated locally on the Router, or upload them from another reliable source
Firewall Mode	In this mode VPN Router can be configured as DHCP server providing access to Internet via Ethernet, WLAN or 3G/4G Modem. Ethernet supports xDSL, TV-Cable or fiber. The VPN tunnels are supported on all types of media.
Gateway Mode	A VPN Router is connected to the existing company local network, creating VPN tunnels for IP addresses outside of the local network. PCs and other Devices in the local network use this Router as a Gateway to access the other offices.

Remote Access / Remote Service

The integrated software services allow secure VPN connections also to remote located machines and devices with the Serial Ports, CAN Bus or GPIO interfaces, implementing smart remote control of these interfaces on the VPN Routers. Using VSCAN API for CAN-Bus, RFC 2217 for serial ports and Modbus/TCP for GPIOs full remote access to the machines is established in a very convenient way. Machines and devices with LAN interfaces are remote connected via LAN ports of the VPN Router.

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■ Standards

Declarations

CE, FCC

EMI

- EN 55022 Class B
- EN 61000-3-2: Limits of harmonic current emissions
- EN 61000-3-3: Limitation of voltage changes
- 47 CFR FCC Part 15 Subpart B

EMS (EN 55024)

- EN 61000-4-3: Radiated RFI
- EN 61000-4-4: Electrical Fast Transient
- EN 61000-4-5: Surge
- EN 61000-4-6: Induced RFI
- EN 61000-4-8: Power Frequency Magnetic Field
- EN 61000-4-11: Power supply dips

ESD

EN 61000-4-2 4kV contact 8kV air for

- Serial Ports
- USB
- Ethernet
- DC Power connector
- Digital-I/O

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■ Ordering Information

6860

VPNRouter iR 5221 ([product page](#))

6861

VPNRouter iR 3220 ([product page](#))

6863

VPNRouter iR 2110 ([product page](#))

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■ Options

6689

WLAN Kit internal
internal module 802.11b/g/n, pigtail and SMA antenna
Choose at purchase time, not for later retrofitting

6690

WLAN Kit external
USB stick 802.11b/g/n, antenna

6031

Power supply adapter 12V DC, 1.5A

3304

GSM/UMTS mPCIe card for 3G modem

3306

GSM/UMTS/LTE mPCIe card for 3G/4G modem

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■ Packaging

Packing list

- VPNRouter system
- Printed Quick Installation Guide
- Terminal blocks for Power Supply, Digital-I/O, CAN Bus
- DIN Rail Clamp
- Wall mounting plates

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