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Router Donyx
RS52 5G RedCap



Industrial single-module NR5 (RedCap) router
with Wi-Fi, GPI/GPO,
support for PoE IN and PoE OUT

This compact industrial router designed for reliable data transmission over cellular networks using 5G RedCap and LTE technologies.

Equipped with an NR5 RedCap module, the router provides data transfer speeds of up to 220 Mbps (downlink) and 120 Mbps (uplink). RedCap benefits from the improved spectrum efficiency and reduced latency of 5G, making it suitable for demanding applications requiring high performance in real-world scenarios.
The device features industrial-grade interfaces, including GPI/GPO, PoE IN, and PoE OUT, to support a wide range of connectivity requirements in industrial environments. Additionally, it includes an integrated Wi-Fi access point supporting IEEE 802.11b/g/n standards, enabling wireless network deployment.
The hardware platform is built on a high-performance processor, ensuring reliable operation and efficient handling of networking tasks.

The router runs on an dnxOS operating system, supporting modern encryption, tunneling protocols like OpenVPN and IPsec to ensure secure data transmission. It provides advanced features such as custom VPN configurations, diagnostics tools, and flexible scripting capabilities, tailored for industrial and enterprise use.
Data transmission is secured with robust encryption protocols, ensuring the safety and integrity of transmitted information.

This adaptability allows the equipment to meet diverse application needs, from simple connectivity to advanced network configurations.
Designed for both wireless and wired connectivity, the router is ideal for use cases such as:

- Payment terminals and ATMs
- Industrial equipment nodes
- Mobile offices
- Security and video surveillance systems
- Monitoring and control systems
- Other applications requiring fast, reliable Internet access

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Communication Standards

- 5G NR (New Radio) and LTE technologies, SMS

Electrical Specifications

- Supported Power Supply Voltage: 9–54 V DC
- Current consumption, maximum:
  - At power supply voltage +12 V – 800 mA
  - At power supply voltage +24 V – 400 mA

Physical Specifications

- Maximum dimensions (including connectors): 130 × 95 × 35 mm
- Maximum weight: 240 g
- Enclosure Material: Aluminum
- Enclosure Protection Rating: IP30
- Operating Temperature Range: from -40°C to +65°C
- Storage Temperature Range: from -40 to 50°C
- Operating Humidity: from 10 to 80% noncondensing

PoE Characteristics

When operating with Power over Ethernet (PoE), the supply voltage of the device must be at least 12V.

- Passive PoE-IN available on **Port 1**. Supported Passive PoE-IN voltage range : 9–54 V
- Passive PoE-OUT available on **Port 2**. Supported Passive PoE-OUT voltage range: 11–53 V
- Maximum load current for Passive PoE-OUT:
  - At supply voltage +12 V: 800 mA
  - At supply voltage +24 V: 500 mA

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Network Functions

Routing	Static
Network protocols	PPP, PPPoE, DHCP, TCP, UDP, ARP, IPv4, ICMP, HTTP, HTTPS, TLS, SSL
Connection monitoring	Ping Reboot, Periodic Reboot, LCP and ICMP for link tracking
Firewall	Port forwarding, ZONE-based rules, pre-configured firewall rules, custom rules, NAT
DHCP	Static and dynamic IP address allocation
Network backup	VRRP; Wired, Mobile, or WiFi WAN. Supports automatic failover to an alternative connection (Automatic Failover)
Network Services	DHCP Server, NTP, DNS, VRRP, SSH, UPnP, SNMP, Telnet Client, SMTP

Tunneling

OpenVPN	Ability to run one server and multiple clients simultaneously. Encryption: Client - AES-128-CBC, AES-192-CBC, AES-256-CBC; Server - AES-128-CBC, AES-128-GCM, AES-192-CBC, AES-192-GCM, AES-256-CBC, AES-256-GCM
IPsec	IKEv1, IKEv2. Encryption: Client - AES-128, AES-192, AES-256; Server - AES-128, AES-128, AES-192, AES-192, AES-256, AES-256
GRE	GRE TUN (Layer 3)
EoIP	MikroTik RouterOS protocol based on GRE RFC 1701
PPTP, L2TP	Server and Client mode support for L2TPv2, L2TPv3
DMVPN	Client mode operation, additional IP Security encryption
Wireguard	WireGuard tunnels and peers

Security Features

Authentication	Pre-shared key, digital certificates, X.509 certificates

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Attack prevention	DDOS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attacks)
VLAN	Port and tag based VLAN separation
Access control	WiFi access control (MAC address filter)

Hardware Specifications

Number of Cellular Modules	1 x NR5 (RedCap)
Processor	MIPS 24KEc 580 MHz
Dynamic RAM	128 MB
Flash Memory Capacity	32 MB
Wi-Fi	2.4 GHz 802.11b/g/n

Ports and Connectors

Microfit4 Connector	Power, GPI, GPO
Ethernet Connector	2 x 10/100 Mbps
SIM Card Slots	2 x Mini SIM
RST Button	Reset Button

ⓘ Specifications may change without prior notice!