

NT-RTU-2024_(R1511)

Embedded 4G Router

2 Ethernet + Wi-Fi + 1 SIM + 1 RS232/RS485

INTRODUCTION

The NT-RTU_2024 is a fully featured embedded 4G router targeted at applications such as EV Charging, traffic signs, vending machines, medical instrumentation, industrial instrumentation and many more IOT-type applications. An embedded router solves two problems that traditional routers do not – cost and size.

The NT-RTU_2024 is a cost-effective small footprint board with Ethernet WAN, Wi-Fi WAN and 4G WAN interfaces that can all be independently configured in the powerful onboard Operating System.

NT-RTU_2024 is a Linux based router operating system that offers functionality that could take a software engineer many months to write and even more months to adequately test. Key features of NT-RTU_2024 include: **VPN** – innovative use of Open VPN tunneling to provide a fixed IP address on the router anywhere

RCMS – Robustel’s Cloud management platform – essential for managing an estate of routers – can be OEM branded

SMS Control – total control of the router using SMS for general status or fixing fault conditions with IP Comms

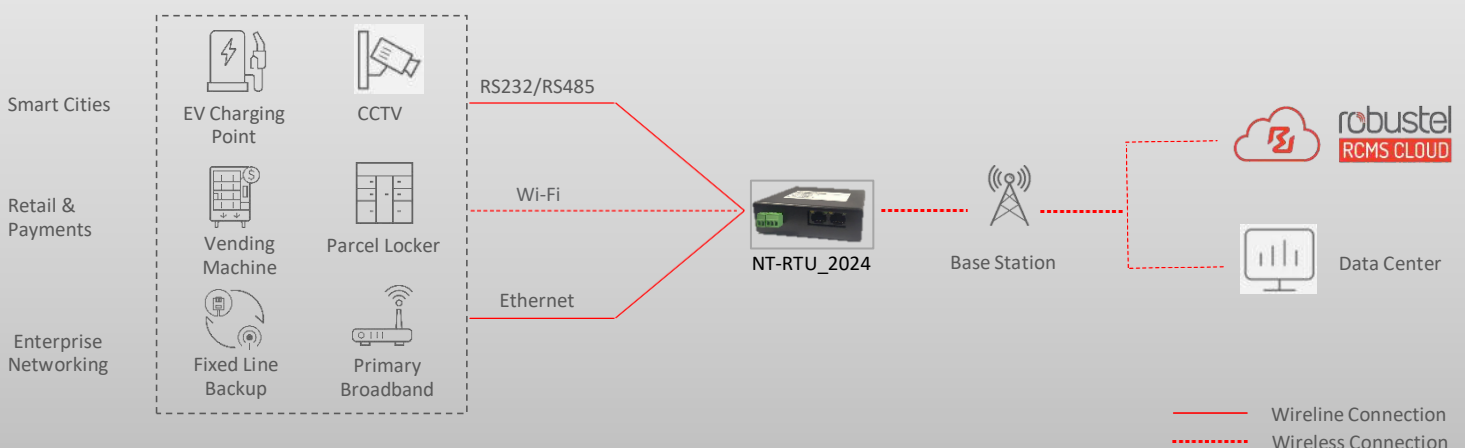
Automated failover – configure the router to automatically fail from WAN/Wi-Fi to 4G with just a few clicks



KEY FEATURES

- Small footprint powerful 4G Modem – fully customizable in software
- Dual Ethernet, Wi-Fi (AP and client) and 4G/3G/2G capability
- RS232 (default) or RS485 port for connection to serial devices + integrated Modbus gateway
- Fully programmable Linux environment with excellent SDK Documentation
- Can be connected directly to Raspberry Pi or similar low cost embedded PC for internet access
- Bulk packaging + shipping options to minimize addition to customer BOM cost

APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

Number of antennas	2 External antennas (MAIN + AUX)
Connector	SMA-K
SIM	1 Mini SIM (2FF)

Ethernet Interface

Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN
Magnet isolation	
Protection	1.5 KV

Wi-Fi Interface

Number of antennas	2, 1 External antenna + 1 PCB antenna
Connector	RP-SMA-K (External antenna)
Standards	802.11b/g/n, supports AP and Client modes
Frequency Bands	2.4 GHz
Security	WEP, WPA, WPA2, WPA3
Encryption	64/128 AES, TKIP

Serial Interface

Type	1 x RS232 or 1 x RS485 (Hardware configuration)
Connector	3-pin 3.5 mm female socket
Baud rate	300bps ~ 115200bps

Regulatory and Type Approvals

EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Contact Level 2 Air Level 3 EN 61000-4-3 (RS) Level 2 EN 61000-4-4 (EFT) Level 2 EN 61000-4-5 (Surge) Level 3 EN 61000-4-6 (CS) Level 2

Others

Reset button	1 x RST
LED indicators	1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI, 1 x WLAN
Watchdog	Built-in

Software (Basic features of OS)

Network protocols	PPPoE, TCP, UDP, DHCP, NAT, DNS, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE, Wire guard
Firewall	DMZ, anti-DDoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Remote Management	Web, CLI, SMS

SDK

Supported programming languages	C, C++
Flash available for SDK	4 MB
RAM available for SDK	64 MB

App Center

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, Captive Portal, WLAN Multi AP, SNMP, Language, RCMS
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Power Supply and Consumption

Connector	2-pin 3.5 mm female socket
Input voltage	9 ~ 36V DC
Power consumption	Idle: 100 mA@12 V Data link: 500 mA (peak) @12 V

Physical Characteristics

Weight	165 g
Installations	Three screw holes are fixed ST2 x 8 black cross grooved pan head tapping
Operating temperature	-25 ~ +70 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH

ORDERING INFORMATION

Model	PN	Serial Interface	LTE Category	Frequency Bands*	Region/Country	Certification
R1511-4L-A02EU-B	B061714	RS485	CAT4	4G: LTE FDD: B1/B3/B7/B8/B20/B28A 3G: WCDMA: B1/B8 2G: GSM: B3/B8	EMEA	CE, UKCA