R2000 Dual

Industrial Dual Module Cellular VPN Router
with Power over Ethernet

INTRODUCTION

Robustel's R2000 Dual Industrial Dual Module Cellular VPN Router with Power over Ethernet provides fast and reliable communication for monitoring and controlling remote equipment. The added new feature, Power over Ethernet, makes installing or expanding much simpler and cheaper for both power and data transmission.
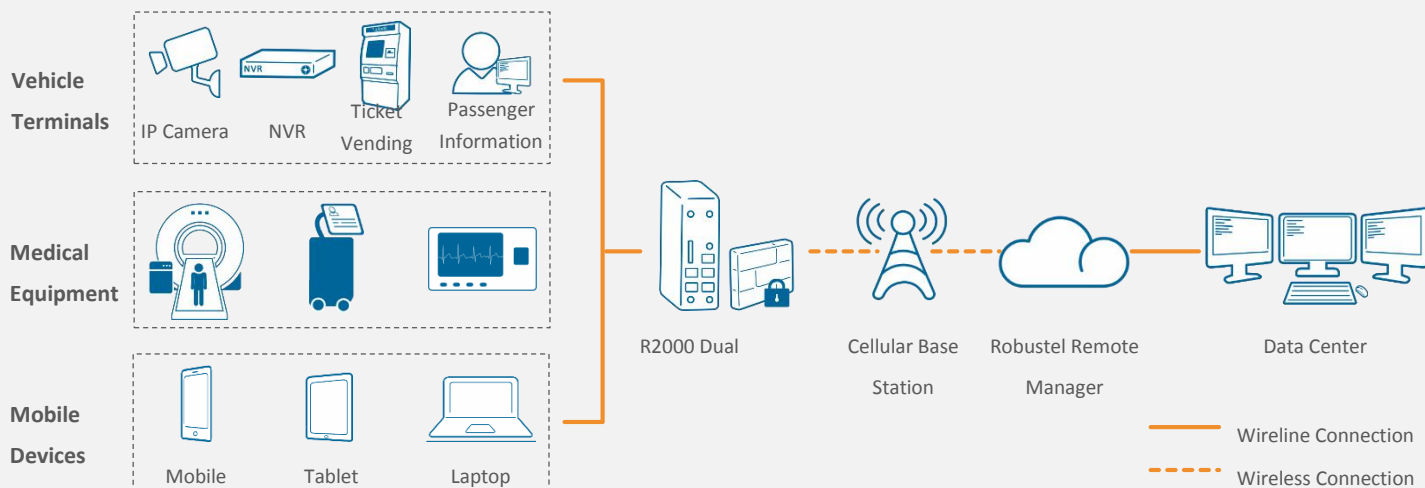
The R2000 Dual router adds the Power over Ethernet (POE) function, which can provide DC power to such devices while transmitting data signals to some IP-based terminal devices. Not only save network construction costs, reduce manpower and material resources, but also facilitate installation and management.

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since its establishment in 2010 in Guangzhou, China, Robustel has been focusing on designing and manufacturing industrial cellular routers, gateways, modems, cloud platforms and E2E solutions. In order to support global business in more than 100+ countries and regions, Robustel has set up local offices in Germany, Australia, the Netherlands, the UK, Japan and Hong Kong. The main application areas of the R2000 Dual router are: ATMs, vending machines, telephone booths and other terminals; branches, convenience stores, fast food restaurants, digital signage, IP video surveillance, etc.

KEY FEATURES

- Embedded dual module supports two SIM cards online simultaneously
- Four fast Ethernet LAN port supporting Power over Ethernet (12.95 W of POE / 30 W of POE+ shared across the four LAN ports)
- The feature *Link Manager* supports Cellular WAN, WLAN link backup and ICMP detection
- WAN – Static/PPPoE/DHCP Client
- Wi-Fi supports AP mode and Client mode
- VPN tunnel - IPsec/OpenVPN/GRE/ L2TP/PPTP/DMVPN
- Auto reboot via SMS/Timing
- Supports RobustLink (a centralized M2M management platform for remote monitoring, configuration and firmware upgrade)
- Management and maintenance via Web user interface/CLI/SMS/RobustLink Cloud
- Supports various APP like QoS, DDNS, VRRP, Captive Portal, SNMP, WLAN multi, multi-language
- Robust industrial design (desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE

Vehicle Terminals: IP Camera, NVR, Ticket Vending, Passenger Information

Medical Equipment

Mobile Devices: Mobile, Tablet, Laptop

R2000 Dual — Cellular Base Station — Robustel Remote Manager — Data Center

Wireline Connection
Wireless Connection

SPECIFICATIONS

Cellular Interface

Standards	GSM/GPRS/EDGE/UMTS/WCDMA/HSPA/ HSDPA/HSUPA/HSPA+/DC-HSPA+/LTE
FDD LTE	max. 150/50 Mbps (DL/UL) @20M BW cat4
TDD LTE	max. 100/50 Mbps (DL/UL)
DC-HSPA+	42/5.76 Mbps (DL/UL)
HSPA+	max. 21.6/5.76 Mbps (DL/UL)
WCDMA	384/384 kbps (DL/UL)
EDGE	236.8 kbps (DL/UL)
GPRS	85.6 kbps (DL/UL)
SIM	2 (3 V & 1.8 V)
Connector	SMA-k (2 x MAIN + 2 x AUX)

Ethernet Interface

Number of ports	1 x WAN and 4 x LAN (10/100 Mbps)
Magnet isolation protection	1.5 KV

WLAN Interface

Standards	802.11b/g/n, supports AP and Client modes
Data speed	150 Mbps
Frequency bands	2.4 GHz
Security	WEP, WPA, WPA2
Encryption	64/128 AES, TKIP
Connector	RP-SMA-K

Device Interface

POE (4 x LAN)	Four ports power supply output IEEE802.3 at/af standard compatibility Maximum power output up to 30 W per port Power management function
Voltage Range	48 to 57V DC
Digital Input (DI)	When router is used in in-vehicle networks, DI function makes router enter a state of low power consumption which can avoid the battery excessive consumption of the vehicle

System

1 x Reset button	
LED indicators	1 x RUN, 2 x PPP, 1 x USR, 2 x NET, 6 x RSSI

Software (Basic features of RobustOS)

Network protocols	PPP, TCP, UDP, DHCP, ICMP, NAT, DMZ, DDNS, VRRP, HTTP, HTTPs, DNS, ARP, SNTP, SSH, Telnet, SNMP, AAA etc.
VPN tunnel	IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
Firewall	SPI, anti-DoS, Filter, Access Control
Management	Web, CLI, SMS

Power Supply and Consumption

Connector	3.5 mm terminal socket
Input voltage	9 to 57V DC
Power consumption	Idle: 100 mA@12 V Data link: 800 mA (peak) @12 V
With ground screw	

Physical Characteristics

Housing & Weight	Metal, 750 g
Dimensions	145 x 130 x 46 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting

Approvals

Regulatory	RCM, CE, EAC,
Environmental	RoHS2.0, WEEE
EMI	EN 55032: 2015/AC: 2016 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Contact Level 2; Air Level 3 IEC 61000-4-3 (RS) Level 2 IEC 61000-4-4 (EFT) Level 2 IEC 61000-4-5 (Surge) Level 3 IEC 61000-4-6 (Cs) Level 2

ORDERING INFORMATION

Model	R2000-D3P1	R2000-D3P2	R2000-D4L1	R2000-D4L2
Router Type	HSPA+ Router	HSPA+ Router	LTE Router	LTE Router
Air Interface	GSM/GPRS/EDGE/HSDPA/HSUPA/ HSPA+	GSM/GPRS/EDGE/HSDPA/HSUPA/ HAPA+	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/ HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE	GSM/GPRS/EDGE/WCDMA/HSDPA/ HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/ CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE
Frequency Bands 4G*	--	--	EMEA:B1/B3/B5/B7/B8/B20; B38/B40/B41 AU: B1/B2/B3/B4/B5/B7/B8/B28; B40	EMEA:B1/B3/B5/B7/B8/B20; B38/B40/B41 AU: B1/B2/B3/B4/B5/B7/B8/B28; B40
3G	B1/B2/B4(AWS)/B5/ B8/B19	B1/B2/B4(AWS)/B5/ B8/B19	EMEA:B1/B5/B8 AU: B1/B2/B5/B8	EMEA:B1/B5/B8 AU: B1/B2/B5/B8
2G	B2/B3/B5/B8	B2/B3/B5/B8	EMEA: B3/B8 AU: B2/B3/B5/B8	EMEA: B3/B8 AU: B2/B3/B5/B8
Operating Temperature	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C
Storage Temperature	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C
Relative Humidity	5 to 95% RH	5 to 95% RH	5 to 95% RH	5 to 95% RH

*For more information about 4G frequency bands in different countries, please contact your Robustel sales representative.