

4G Industrial Router

D1002



Introduction

D1002 is an industrial-grade 4G router featuring a high-performance processor and wireless module, running on an embedded real-time operating system. It offers versatile connectivity with 1 RS232, 1 RS485, 1 Ethernet LAN, 1 Ethernet WAN, DI/DO, and Wi-Fi. This router enables seamless data transmission between serial, Ethernet, and Wi-Fi devices. It supports dual SIM cards with intelligent switching for backup, making it perfect for industrial IoT and M2M applications, ensuring reliable and continuous connectivity.



Industrial-grade Design

- ▶ High-performance industrial-grade CPU
- ▶ High-performance industrial-grade wireless communication module
- ▶ Metal casing, IP30 protection level
- ▶ Wide range power input (DC 5~36V)



Stability & Reliability

- ▶ EMC Level 3 and above, with strong anti-interference capability
- ▶ Dual SIM card design with complete dropout prevention mechanisms, ensuring the data terminal is always online
- ▶ Ethernet interface with 1.5KV electromagnetic isolation protection
- ▶ RS232/RS485 interfaces with 1.5KV ESD protection
- ▶ SIM card interface with 15KV ESD protection



Standard & Convenience

- ▶ Provides standard RS232 and RS485 ports for direct connection to serial devices
- ▶ 2 x 100M Ethernet ports for direct connection to Ethernet devices
- ▶ Supports standard network protocols, ensuring strong compatibility
- ▶ Supports remote management, simplifying operations
- ▶ Supports rail and wall-mounted installation for flexible deployment

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D1002



High Performance

- ▶ Supports multiple VPN protocols including IPsec, OpenVPN, and WireGuard
- ▶ Built-in MQTT gateway, supporting data transparent transmission to HTTP/MQTT/Azure cloud
- ▶ Supports remote management platform and PC client applications
- ▶ Supports SPI firewall
- ▶ Wi-Fi supports multiple encryption methods including WEP, WPA, WPA2 and,etc.
- ▶ Supports multiple network protocols including TCP, UDP, IPv4, DNSS, Telnet
- ▶ Supports mounting remote file systems via SSH protocol
- ▶ Equipped with DDoS protection (SYN flood protection, SSH attack protection, Telnet attack protection)
- ▶ Flexible access control for SSH, Web interface, CLI, and Telnet
- ▶ Supports MODBUS TCP and Modbus RTU status/control
- ▶ Supports MQTT subscription and MQTT publishing
- ▶ Supports bridging and transparent transmission functions

Product Specification

Cellular Specification

| Product | D1002 |
|--------------------------|--|
| Items | Contents |
| Standard and Band | LTE FDD: B1/3/5/7/8/20/28 LTE TDD: B38/40/41 WCDMA: B1/5/8 GSM/GPRS/EDGE: 850/900/1800MHz |
| Bandwidth | LTE FDD: 150Mbps DL, 50Mbps UL LTE TDD: 130Mbps DL, 30.5Mbps UL WCDMA: 384 kbps DL, 384 kbps UL DC-HSPA+: 42Mbps DL, 5.76Mbps UL EDGE: 296Kbps DL, 236.8Kbps UL GPRS: 107Kbps DL, 85.6Kbps UL |

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| Hardware System | |
|-----------------------|--|
| Product | D1002 |
| Items | Contents |
| CPU | Industrial-grade CPU |
| Flash | 32MB |
| DDR2 | 128MB |
| WIFI Specification | |
| Items | Contents |
| Standard and Band | IEEE802.11b/g/n, 2.4G |
| Bandwidth | IEEE802.11b/g: 54Mbps (Maximum) IEEE802.11n: 144Mbps (Maximum) |
| Security | Support WEP, WPA, WPA2 and other encrypt methods |
| Transmit Power | 15 ± 2dBm |
| Sensitivity | < -72dBm @ 54Mbps |
| Interfaces | |
| Items | Contents |
| WAN Interface | 1 x 10/100M RJ45 ethernet port, adaptive MDI/MDIX, built-in 15KV ESD |
| LAN Interface | 1 x 10/100M RJ45 ethernet port, adaptive MDI/MDIX, built-in 15KV ESD |
| Serial | 1 x RS232, 1 x RS485 serial interface with built-in 15KV ESD |
| LED Indicators | "PWR", "Online", "LAN", "WAN", "WIFI", "SYS" |
| Antenna Interface | Cellular: 2 x Standard SMA female antenna interface, characteristic impedance: 50 Ω WIFI: 1 x Standard SMA male antenna interface, characteristic impedance: 50 Ω |
| SIM/UIM Slot | 2 x Standard 2FF SIM card slot |
| Power Interface | Standard 4 pin terminal block interface, with built-in phase-reversal and over-voltage protection |
| Reset Button | Can reset router's configuration to default factory setting by this button |
| Power Consumption | |
| Items | Contents |
| Standard | DC 12V/1.5A |
| Voltage Range | DC 9~36V |
| Operating Current | <1.2A (12V) |
| Physical Properties | |
| Items | Contents |
| Casing | Aluminum metal casing, IP30 protection level |
| Dimensions | 91.4x92.4x29mm (excluding antennas and mountings) |
| Weight | <250g |
| Operating Temperature | -40~+75°C |
| Storage Temperature | -40~+85°C |
| Relative Humidity | 95% (non-condensing) |

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Dimension (mm)

