# D1002

## 4G Industrial Router

**VPN**  **Remote Management**  **3G**  **4G**

**RS232**  **RS485**  **Dual-SIM**  **WIFI**

## Introduction

The D1002 Industrial Router is an IoT wireless communication router with the compact design and cost-effectiveness. It is using public cellular network GPRS/CDMA/WCDMA/EVDO/LTE to provide long distance, wireless and large data transmission function for users. The product has been widely used in the M2M industry of the IoT industrial chain, such as smart grid, intelligent transportation, smart home, finance, and etc.

### Industrial-grade Design

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

### Stability & Reliability

- ▶ Multiple protection mechanism to ensure system stability, always keeping online
- ▶ Ethernet interface with built-in 15KV ESD
- ▶ RS232/RS485 with built-in 15KV ESD
- ▶ SIM/UIM card slot with built-in 15KV ESD
- ▶ Power interface with built-in phase-reversal and over-voltage protection
- ▶ Antenna interface with lightning protection (optional)

### Standard & Convenience

- ▶ Standard RS232/RS485, ethernet and WIFI interface, can be connected to the serial device, ethernet devices and WIFI devices
- ▶ Standard wired WAN interface (support standard PPPOE protocol), Can be connected to ADSL devices directly
- ▶ Intelligent data terminal, automatically enter transmission status after power-on
- ▶ Powerful central management software for easy device management (optional)
- ▶ Easy to use and flexible, has multiple working modes
- ▶ Convenient system configuration and maintenance interface (including local and remote WEB or CLI access)

# D1002

- ▶ Support dual-link intelligent switching function between primary card and backup card
- ▶ Support various WAN connection type, including static IP, DHCP, PPPOE, 2.5G/3G/4G
- ▶ Support remote management, SYSLOG, SNMP, TELNET, SSHD, HTTPS, etc.
- ▶ Support upgrade software from the local and remote maintenance
- ▶ Support various network protocols including TCP/IP, UDP, FTP (optional), HTTP, etc.
- ▶ Support SPI firewall, VPN traversal, access control, URL filtering, etc.
- ▶ Support 802.11 b / g / n WIFI network, support WIFI AP, AP Client, Bridge and various working mode (optional)

**High Performance**

## Product Specification

| Cellular Specification | |
|---|---|
| **Product** | D1002 |
| **Items** | **Contents** |
| **Standard and Band** | FDD-LTE: B1/B2/B3/B4/B5/B7/B8/B28<br>TDD-LTE: B38/B39/B40/B41<br>TD-SCDMA: B34, B39<br>HSPA+/UMTS: B1/B2/B5/B8<br>EV-DO: BC0<br>CDMA 1x: BC0<br>EDGE/GPRS/GSM: 850/900/1800/1900MHz |
| **Bandwidth** | FDD-LTE: DL 150Mbps, UL 50Mbps<br>TD-LTE: DL 130Mbps, UL 35Mbps<br>TD-HSPA+: DL 4.2Mbps, UL 2.2Mbps<br>DC-HSPA+: DL 42Mbps, UL 5.76 Mbps<br>HSPA+: DL 21Mbps, UL 5.76 Mbps<br>UMTS: 384Kbps |
| **Transmit Power** | < 23dBm |
| **Sensitivity** | < -97dBm |

# D1002

## WIFI Specification
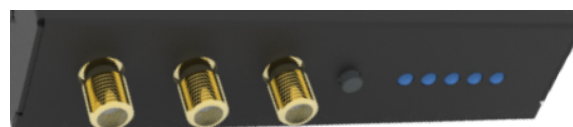
| Product | D1002 |
|---|---|
| **Items** | **Contents** |
| Standard and Band | IEEE802.11b/g/n |
| Bandwidth | IEEE802.11b/g: 54Mbps (Maximum)<br>IEEE802.11n: 144Mbps (Maximum) |
| Security | Support WEP, WPA, WPA2 encrypt methods, optional WPS function |
| Transmit Power | 15 ± 2dBm |
| Sensitivity | < -72dBm @ 54Mbps |

## Hardware System

| Items | Contents |
|---|---|
| CPU | Industrial-grade CPU |
| Flash | 16MB, 128MB (Optional) |
| DDR2 | 128MB |

## 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 RS232/485 serial interface with built-in 15KV ESD<br>Data bits:5, 6, 7, 8 bits<br>Stop bits:1, 1.5 (Optional), 2 bits<br>Error detection: none, even parity, odd parity, SPACE (optional) and MARK (optional)<br>Serial Port Rate: 2400~115200bits/s |
| LED Indicators | "PWR", "Online", "LAN", "WAN/LAN", "WIFI" |
| I/O Port | 1 input, 1 output, ;<br>Input high level: 5 to 30 VDC<br>Input low level: 0 to 3 VDC<br>Load current: <50mA @ 30VDC |
| Antenna Interface | Cellular: Standard SMA female antenna interface, characteristic impedance: 50 Ω<br>WIFI: Standard SMA male antenna interface, characteristic impedance: 50 Ω |
| SIM/UIM Slot | Standard SIM card slot, support 1.8V/3V SIM/UIM card, built-in 15KV ESD, support dual-SIM card (Optional) |
| Power Interface | Standard 3.5mm 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 |

Note: There may be differences between models of accessories and interfaces, actual products shall prevail.

# D1002

## Power

| Product | D1002 |
|---|---|
| Items | Contents |
| Input Voltage | DC 12V/1.5A |
| Accepted Range | DC 5~36V |

### Power Consumption

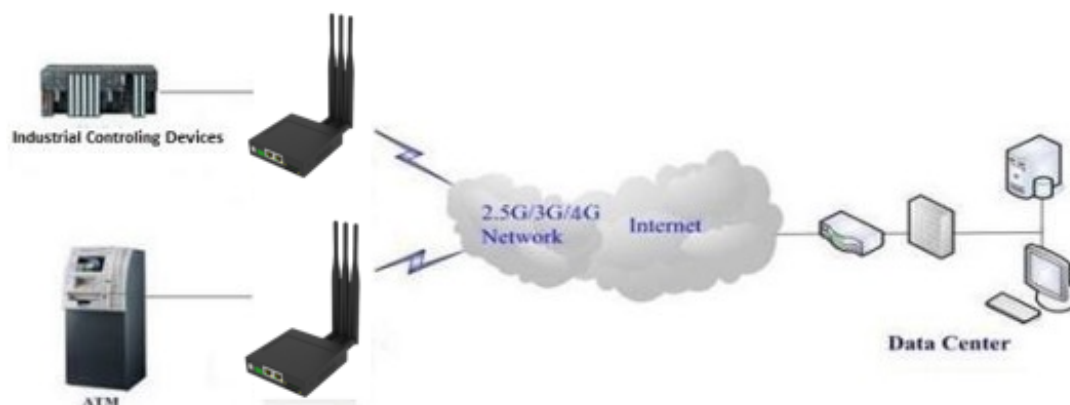| Work Mode | Consumption |
|---|---|
| Standby | 95~135mA@12VDC |
| Communicating | 165~220mA@12VDC |

### Physical Properties

| Items | Contents |
|---|---|
| Casing | Metal casing, IP30 protection level, suitable for most industrial control applications. |
| Dimensions | 95x93x25mm (excluding antennas and mountings) |
| Weight | 250g |

### Others

| Items | Contents |
|---|---|
| Operating Temperature | -35~+75℃ |
| Storage Temperature | -40~+85℃ |
| Relative Humidity | 95% (non-condensing) |

## Topology



## Order Information

| Version | Description | WAN | LAN | Cellular Antenna | WIFI Antenna | SIM/UIM |
|---|---|---|---|---|---|---|
| 4G Single SIM | FDD-LTE/TDD-LTE/TD-SCDMA/ HSPA+/UMTS/EV-DO/CDMA/ EDGE/GPRS/GSM WIFI Industrial Router | 1 | 1 | 2 | 1 | 1 |
| 4G Dual SIM | | | | | | 2 |