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F2X16-DK Series IP Modem Technical Specification

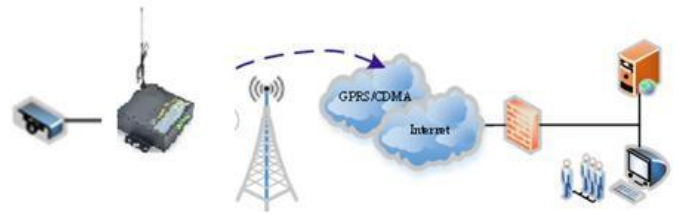


General

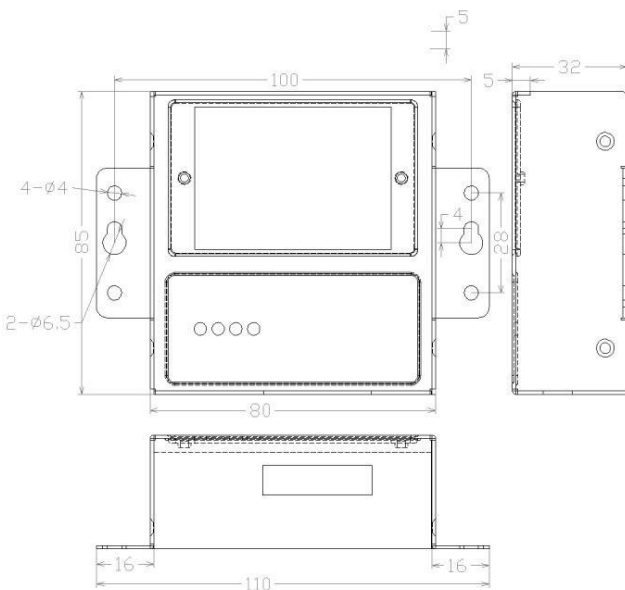
F2X16-DK Series IP Modem is a kind of cellular terminal device that provides data transfer function by WCDMA/EVDO/TDD-LTE/FDD-LTE network.

It adopts high-powered industrial 32 bits CPU and embedded real time operating system., it is dual serial port design, supports RS232 or RS485 port (Optional) that can conveniently and transparently connect one device to a cellular network, allowing you to connect to your existing serial devices with only basic configuration. It also has low power consumption states.

It has been widely used on M2M fields, such as intelligent substation, intelligent distribution network, smart electricity meters, intelligent interactive terminal, intelligent scheduling, intelligent home appliances, intelligent electricity building, power grids for smart cities, intelligent power generation system, smart grids (Such as new energy storage systems)and so on.



Product size (Unit: mm) :



Note: There may be differences between different types of accessories and interfaces. Please refer to the actual product.

Product Features

Design for Industrial Application

- ◆ High-powered industrial cellular module
- ◆ High-powered industrial 32 bits CPU
- ◆ Low power consumption design, to reduce the power dissipation in the most way
- ◆ Embedded Real-Time Clock (RTC)
- ◆ Metal shell, IP30. Metal enclosure is safely isolated with system , especially suitable for industrial control field applications
- ◆ Power range: DC 5~36V
- ◆ Operating temperature: -40~75°C

Stability and Reliability

- ◆ Support hardware and software WDT
- ◆ Support auto recovery mechanism, including online detect, auto redial when offline to make it always online
- ◆ RS232/RS485 ports: 15KV ESD and surge protection
- ◆ Power port: reverse-voltage and overvoltage protection
- ◆ SIM/UIM port: 15KV ESD protection

Standard and Convenience

- ◆ Support standard RS232/RS485 ports (Optional) that can connect to serial devices directly
- ◆ Support intellectual mode, enter into communication state automatically when power is on
- ◆ Provide management software for remote management (Optional)

- ◆ Support a variety of working modes which make it easy and flexible to use
- ◆ Convenient configuration and maintenance interface
- ◆ Support the serial update, remote update, can export the serial log
- ◆ Wall mounted , easy installation, fast fixing, conveniently and quickly

High-performance

- ◆ Support TCP server and support 4 TCP client connection (optional)
- ◆ Support protocol conversion between ModBus and RTU/TCP (optional)
- ◆ Support dual data center backup transmission and multiple data center synchronous transmission (5 data centers)
- ◆ Support multi data centers and it can support 1-5 data centers at the same time
- ◆ Support protocol conversion between 101 and 104 (optional)
- ◆ Support standard TCP/UDP protocol, support data transfer transparently
- ◆ Support login security authentication
- ◆ Multiple indicator lights that can indicate a variety of system states
- ◆ Support read device status in real-time by serial ports, such as IMEI, SIM card status, IP address, signal value and so on.

Product Specification-----

Wireless parameters

| Item | Content |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F2416-DK WCDMA IP MODEM | |
| Standard and Band | DC-HSPA+/HSPA+/HSDPA/HSUPA/UMTS,850/1900/2100Mz 850/900/1900/2100MHz (Optional) GSM850/900/1800/1900MHz GPRS/EDGE CLASS 12 |
| Bandwidth | DC-HSPA+: Download speed 42Mbps, Upload speed 5.76 Mbps HSPA+: Download speed 21Mbps, Upload speed 5.76 Mbps HSDPA: Download speed 7.2Mbps , HSUPA: Upload speed 5.76Mbps UMTS: 384Kbps |
| TX power | <24dBm |
| RX sensitivity | <-109dBm |
| F2616-DK EVDO IP MODEM | |
| Standard and Band | CDMA2000 1X EVDO Rev A 800MHz , 800/1900MHz (Optional), 450MHz (Optional) CDMA2000 1X EVDO Rev B 800/1900MHz (Optional) IS-95 A/B and CDMA2000 1xRTT wireless network |
| Bandwidth | EVDO Rev. A: Download speed 3.1Mbps, Upload speed 1.8Mbps EVDO Rev. B: Download speed 14.7Mbps, Upload speed 5.4Mbps (Optional) |
| TX power | <23dBm |
| RX sensitivity | <-104dBm |
| F2716-DK TDD-LTE IP MODEM | |
| Standard and Band | LTE TDD 2600/1900/2300MHz(Band 38/39/40),800/1400/1800MHz (Band 27/61/62) (Optional) TD-SCDMA 2010/1900MHz (A/F Band : 34/39) GSM/GPRS/EDGE 900/1800/1900MHz |
| Bandwidth | LTE TDD: Download speed 61Mbps, Upload speed 18Mbps TD-HSPA+: Download speed 4.2Mbps, Upload speed 2.2Mbps TD-HSPA: Download speed 2.8Mbps, Upload speed 2.2Mbps |
| TX power | <23dBm |
| RX sensitivity | <-97dBm |
| F2816-DK FDD-LTE IP MODEM | |
| Standard and Band | LTE FDD 2600/2100/1800/900/800MHz, 700/1700/2100MHz (Optional) DC-HSPA+/HSPA+/HSDPA/HSUPA/UMTS 850/900/2100MHz , 800/850/1900/2100MHz (Optional) EDGE/GPRS/GSM 850/900/1800/1900MHz , GPRS CLASS 10 EDGE CLASS 12 |

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|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bandwidth | LTE FDD: Download speed 100Mbps, Upload speed 50Mbps DC-HSPA+: Download speed 42Mbps, Upload speed 5.76 Mbps HSPA+: Download speed 21Mbps, Upload speed 5.76 Mbps HSDPA: Download speed 7.2Mbps, HSUPA: Upload speed 5.76Mbps UMTS: 384Kbps |
| TX power | <23dBm |
| RX sensitivity | <-93.3dBm |
| F2A16-DK LTE IP MODEM | |
| Standard and Band | LTE FDD、LTE TDD、EVDO、WCDMA、TD-SCDMA、CDMA1X、GPRS/EDGE |
| Bandwidth | LTE FDD: Download speed 100Mbps, Upload speed 50Mbps LTE TDD: Download speed 61Mbps, Upload speed 18Mbps DC-HSPA+: Download speed 42Mbps, Upload speed 5.76 Mbps TD-HSPA+: Download speed 4.2Mbps, Upload speed 2.2Mbps EVDO Rev. A: Download speed 3.1Mbps, Upload speed 1.8Mbps |
| TX power | <23dBm |
| RX sensitivity | <-93.3dBm |

Interface type

| Item | Content |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDI | Num.of ports: 2 Port 1: RS232 Port 2: RS232 (Standard) / RS485 (Optional) Serial port type : Terminal interface Stop bits: 1、2 Parity: none, even, odd, Baud rate: 300~115200bps |
| Antenna | Standard SMA negative head antenna interface, 50 ohm |
| SIM/UIM | Standard clamshell socket interface, support 1.8V/3V SIM/UIM card, 15KV ESD protection |
| Indicator | Power、Module、SIM、Status |

Power supply

| Item | Content |
|-------------|-------------|
| Standard | DC 12V/0.5A |
| Power range | DC 5~36V |

Consumption

| Item | Content | |
|---------------|-------------|------------|
| Communication | 120mA@12VDC | 255mA@5VDC |
| Standby | 41 mA@12VDC | 85 mA@5VDC |
| Sleeping mode | 3mA@12VDC | 6mA@5VDC |

Physical Characteristics

| Item | Content |
|---------|-------------|
| Housing | Metal, IP30 |

| | |
|-----------|------------------------------|
| Dimension | 110x85x32mm (Except antenna) |
| Weight | About 290 g |

Other parameters

| Item | Content |
|---------------------|------------------------|
| Working temperature | -40~+75°C (-40~+167°F) |
| Storage temperature | -40~+85°C (-40~+185°F) |
| Relative humidity | 95% ((unfreezing)) |

Ordering Information

| Model No. | Description |
|-----------|------------------|
| F2416-DK | WCDMA IP MODEM |
| F2616-DK | EVDO IP MODEM |
| F2716-DK | TDD-LTE IP MODEM |
| F2816-DK | FDD-LTE IP MODEM |
| F2A16-DK | LTE IP MODEM |