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F2X46-DK Series IP Modem Technical Specification
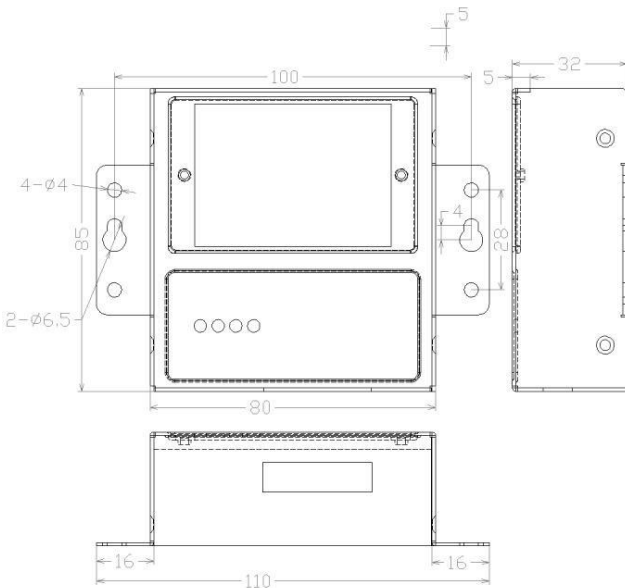
General
F2X46-DK Series IP Modem is a kind of cellular terminal device that provides data transfer function by WCDMA/EVDO/TDD-LTE/FDD-LTE network. It adopts high-powered industrial 32 bits CPU and embedded real time operating system., it is dual serial port design, supports dual SIM cards, supports RS232 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℃

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 deivce status in real-time by serial ports, such as IMEI, SIM card status,IP address, signal value and so on.

◆ Support dual SIM cards.

Product Specification--

Wireless parameters

Item	Content
F2446-DK WCDMA Dual-SIM IP MODEM	
Standard and Band	DC-HSPA+/HSPA+/HSDPA/HSUPA/UMTS 850/1900/2100MHz 850/900/1900/2100MHz (Optional) GSM850/900/1800/1900MHz GPRS/EDGE CLASS 12
Bandwidth	DC-HSPA+:Download speed 42Mpbs,Upload speed 5.76 Mbps HSPA+:Download speed 21Mpbs,Upload speed 5.76 Mbps HSDPA:Download speed 7.2Mbps HSUPA:Upload speed 5.76Mbps UMTS:384Kbps
TX power	<24dBm
RX sensitivity	<-109dBm
F2646-DK EVDO Dual-SIM 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
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
F2746-DK TDD-LTE Dual-SIM 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
F2846-DK FDD-LTE Dual-SIM 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

Bandwidth	LTE FDD:Download speed 100Mbps,Upload speed 50Mbps DC-HSPA+:Download speed 42Mpbs,Upload speed 5.76 Mbps HSPA+:Download speed 21Mpbs,Upload speed 5.76 Mbps HSDPA:Download speed 7.2Mbps ,HSUPA:Upload speed 5.76Mbps UMTS:384Kbps
TX power	<23dBm
RX sensitivity	<-93.3dBm

F2A46-DK LTE Dual-SIM IP MODEM

Standard and Band	Support the entire network: 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 42Mpbs,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 female antenna interface, 50 ohm
SIM/UIM	2 pcs of standard clamshell socket interface, support 1.8V/3V SIM/UIM card, 15KV ESD
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℃(-40~+167℉)
Storage temperature	-40~+85℃(-40~+185℉)
Relative humidity	95%((unfreezing)

Ordering Information

Model No.	Description
F2446-DK	WCDMA Dual-SIM IP MODEM
F2646-DK	EVDO Dual-SIM IP MODEM
F2746-DK	TDD-LTE Dual-SIM IP MODEM
F2846-DK	FDD-LTE Dual-SIM IP MODEM
F2A46-DK	LTE Dual-SIM IP MODEM