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F2X14-DG IP Modem Technical Specification
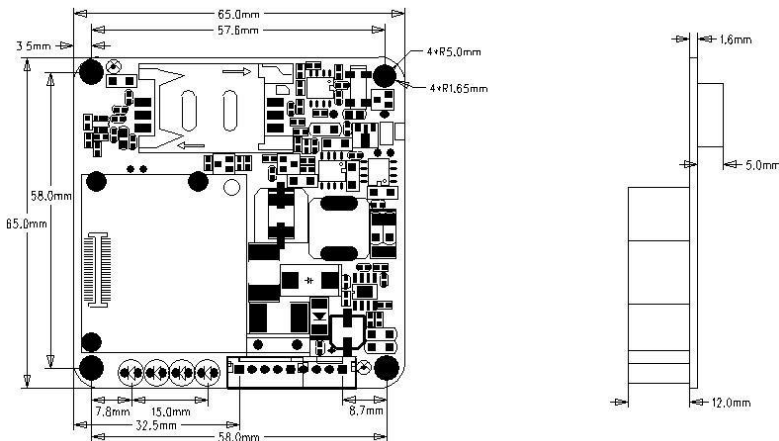

General

F2X14-DG IP Modem is a kind of cellular terminal device that provides data transfer function by Beidou/GPS+GSM/WCDMA/TD-SCDMA/TDD-LTE/FDD-LTE network, It also provides Beidou/GPS positioning function.

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:The components and their position on the PCB board will change slightly with the version upgrade, please refer to the actual product!)

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) circuit

◆ 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/RS422 ports:15KV ESD and surge protection

◆ Power port: reverse-voltage and overvoltage protection

◆ SIM/UIM port: 15KV ESD protection

◆ Few connectors, with good seismic performance

Standard and Convenience

◆ Support standard RS232/RS485 ports 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 several work modes

◆ Convenient configuration and maintenance interface

◆ Support the serial update,remote update, can export the serial log

◆ Easy installation with embedded way, 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 Beidou/GPS positioning function

◆ 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.

Product Specification--

Wireless parameters

Item	Content
F2814-DG 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
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

GPS/BDS Parameters

Item	Content
Receiver type	32 Channel GPS/BDS L1,1575.42MHz;B1,1561.098MHz
Data update rate	1 Hz
Accuracy	GPS&BDS＜2.5m CPE50%（Open space） GPS ONLY 3m CPE50%（Open space） BDS ONLY 5m CPE50%（Open space）
Catch	Cold start：32S Warm start：1S Restart：1S
Sensitivity	Standby：-160dBm Cold start：-148dBm
Timing accuracy	20ns

Interface type

Item	Content
SDI	Num.of ports：2 Port 1：RS232 Port 2：RS232（Standard）/ RS485（Optional） Serial port type ：5 pin 2.54mm pitch ；Single row of female header +3 pin 2.54mm pitch; Single row of female header Stop bits：1、2 Parity: none, even, odd, Baud rate：300~115200bps

Antenna	Cellular：IPEX connector， 50 ohm GPS：IPEX connector， 50 ohm
SIM/UIM	Standard clamshell socket interface， support 1.8V/3V SIM/UIM card, 15KV ESD protection
Indicator	Power、SIM card、Operation、network state

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
Dormant state	3mA@12VDC	6mA@5VDC

Physical Characteristics

Item	Content
Installation	Embedded
Dimension	65x65x18.6mm
Weight	About 40g

Other parameters

Item	Content
Working temperature	-40~+75ºC（-40~+167℉）
Storage temperature	-40~+85ºC（-40~+185℉）
Relative humidity	95%（(unfreezing）

Ordering Information

Model No.	Description
F2814-DG	FDD LTE IP MODEM