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F-IM100 Series Technical Specification

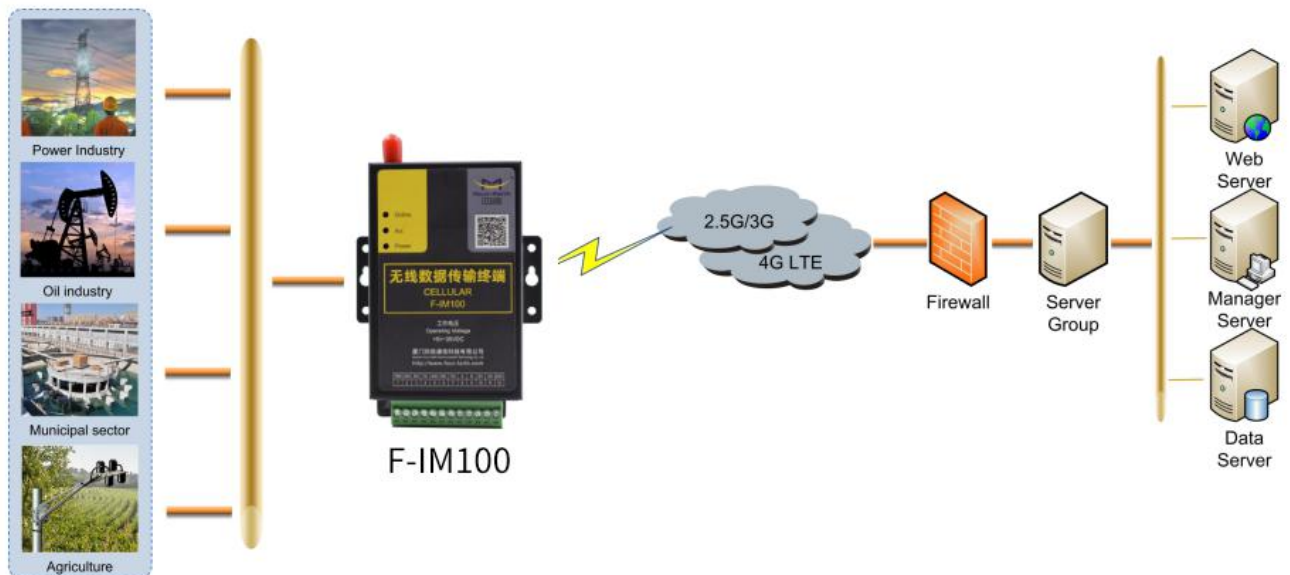| General |
|---|
| F-IM100 Series IP MODEM is a kind of cellular terminal device that provides data transfer function by public cellular network. |
| It adopts high-powered industrial 32 bits CPU and embedded real time operating system. It supports RS232 and RS485 port that can conveniently and transparently connect one device to a cellular network, allowing you to connect to your existing serial devices with only basic configuration. It has low power consumption; it support 1 ADC and 2 I/O,compatible digital input/output channel, Analog input, input pulse counter and pulse wave output function. |
| It has been widely used on M2M fields, such as intelligent transportation, smart grid, industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on. |

Product Feature --

Design for Industrial Application

◆ High-powered industrial cellular module

◆ High-powered industrial 32 bits CPU

◆ Low power consumption design, support multi-sleep and trigger modes to reduce the power dissipation farthest

◆ Housing: iron, providing IP30 protection,The metal casing and system are safely isolated, suitable for industrial applications.

◆ Wide power input: DC 9~36V

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 protection

◆ SIM/UIM port: 15KV ESD protection

◆ Power port: reverse-voltage and over-voltage protection

◆ Antenna port: lightning protection(optional)

Standard and Convenience

◆ Adopt terminal block interface, convenient for industrial application

◆ 1 RS232 and 1 RS485(or 2RS485) standard ports can connect to serial devices directly

◆ TTL logic level serial port/ADC interface can be customized

◆ Support intellectual mode, enter into communication state automatically when powered

◆ Provide powerful central management software for convenient management (optional)

◆ Easy to use, flexible, multiple working mode options

◆ Convenient configuration and maintenance interface

◆ Support serial software upgrade and remote maintenance

High-performance

◆ Support TCP server and support 4 TCP connection(optional)

◆ Support double data centers and multi-data center synchronous transmission (5 data centers)

◆ Supply 2 I/O channels, compatible 2 pulse wave output channels, 2 analog inputs and 2 pulse input counters

◆ Support multi online/offline trigger ways, including SMS, ring and data,serial data triggers online/offline mode

◆ Support domain name and IP access to data center

◆ Design with standard TCP/IP protocol stack

◆ Embedded standard TCP/IP protocol,support data transparent transmission

Product Specification ---

Cellular Specification

Item	Content
F-IM100 GPRS IP MODEM	
Standard and Band	Support GSM850/900/1800/1900MHz quad-band
	Support GSM phase 2/2+
	Support GPRS class 10/12 (optional 1-12)
Bandwidth	85.6Kbps

TX power	GSM850/900:<33dBm GSM1800/1900:<30dBm
RX sensitivity	<-108dBm

F-IM100 WCDMA IP MODEM

Standard and Band	Support UMTS/WCDMA/HSDPA/ HSUPA/HSPA+ 850/1900/2100MHz tri-band, optional 850/900/1900/2100MHz Quad-band Support GSM850/900/1800/1900MHz quad-band Support GPRS/EDGE CLASS 10/12
Bandwidth	UMTS: 384Kbps(DL/UL) HSDPA/HSUPA: 2.8 Mbps(DL), 2.2 Mbps(UL) HSPA+: 21Mbps(DL)，5.76Mbps(UL) DC-HSPA+: 42Mbps(DL)，5.76Mbps(UL) TD-HSPA+: 4.2Mbps(DL)，2.2Mbps(UL)
TX power	<24dBm
RX sensitivity	<-109dBm

F-IM100 LTE IP MODEM

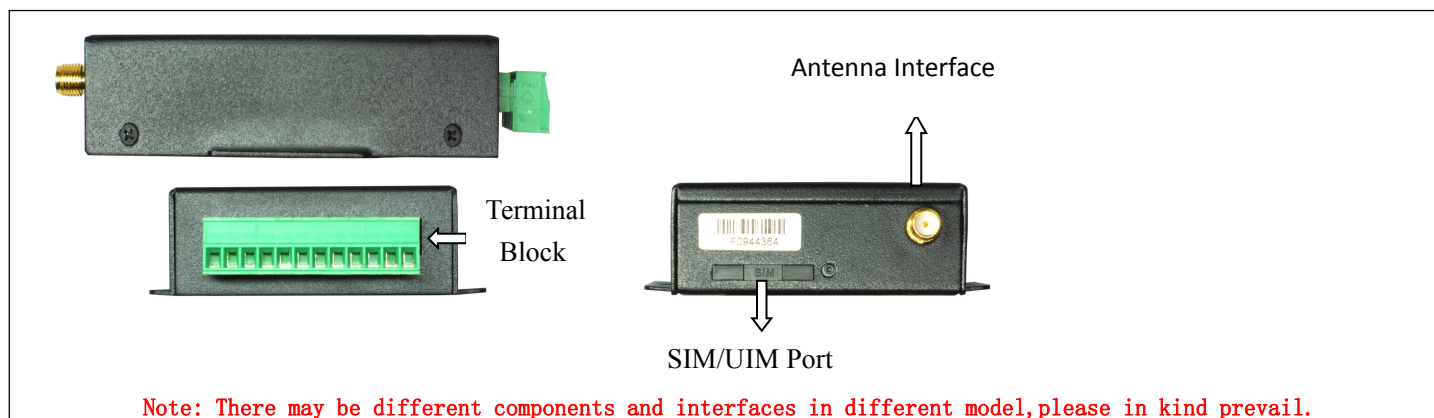|	
Standard and Band	Support All-modes network: LTE FDD, LTE TDD, EVDO, WCDMA, TD-SCDMA, CDMA1X, GPRS/EDGE
Bandwidth	LTE FDD：150Mbps(DL)，50Mbps(UL) LTE TDD：130Mbps(DL)，35Mbps(UL) DC-HSPA+：42Mpbs(DL)，5.76 Mbps(UL) TD-HSPA+：4.2Mbps(DL)，2.2Mbps(UL) EVDO Rev. A：3.1Mbps(DL)，1.8Mbps(UL)
TX power	<23dBm
RX sensitivity	<-98dBm

Hardware System

Item	Content
CPU	Industrial 32 bits CPU
FLASH	512KB (Extendable)
SRAM	256KB

Interface Type

Item	Content
Serial	1 RS232 port and 1 RS485(or 2 RS232) port, 15KV ESD protection Data bits: 5, 6 ,7, 8 Stop bits: 1, 1.5, 2 Parity: none, even, odd, space, mark Baud rate: 600-115200 bps
Indicator	"Power", "ACT", "Online"
Antenna	Standard SMA female interface, 50 ohm
SIM/UIM	Standard drawer interface,support 3V/1.8V SIM/UIM card, 15KV ESD protection
Power	Terminal block interface, reverse-voltage and overvoltage protection

Antenna Interface

Terminal Block

SIM/UIM Port

Note: There may be different components and interfaces in different model,please in kind prevail.

Power Input

Item	Content
Standard Power	DC 12V/0.5A
Power Range	DC 9~36V

Power Consumption

Working States	Power Consumption
Communication	20~65mA@12VDC(2G:20~40 mA 4G:20~65mA) 20~95mA@9VDC (2G:30~45 mA4G:20~95mA)
Standby	15~30 mA@12VDC 20~40 mA@9VDC
Sleep	5~17mA@12VDC 6~22mA@9VDC

Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	91x58.5x22 mm((excluding antennas and mountings))
Weight	205g

Environmental Limits

Item	Content
Operating Temperature	-35~+75ºC (-22~+167℉)
Storage Temperature	-40~+85ºC (-40~+185℉)
Operating Humidity	95% (unfreezing)

Ordering Information

Model No.	Description
F-IM100-G	GPRS IP MODEM
F-IM100-W	WCDMA IP MODEM
F-IM100-L	LTE IP MODEM