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F2116 GPRS IP MODEM TECHNICAL SPECIFICATION

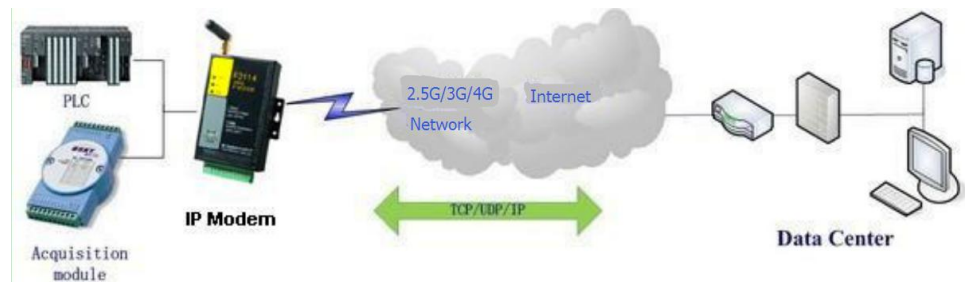


General

F2116 GPRS IP MODEM is a kind of cellular terminal device that provides data transfer function by public GPRS network.

It adopts high-powered industrial 32 bits CPU and embedded real time operating system. It supports RS232 and RS485 (or RS422) 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 states in which the power consumption could be lower than 5mA@12VDC. It has compatible digital I/O channel, ADC, 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
- ◆ Embedded Real Time Clock(RTC) circuit which can realize timing online/offline function
- ◆ Housing: iron, providing IP30 protection
- ◆ Power range: DC 5~36V

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 overvoltage protection
- ◆ Antenna port: lightning protection(optional)

Standard and Convenience

- ◆ Adopt terminal block interface, convenient for industrial application
- ◆ Support 2 standard RS232 and 1 RS485 ports that can connect to serial devices directly
- ◆ TTL logic level RS232 interface can be customized,

- ◆ Support intellectual mode, enter into communication state automatically when powered
- ◆ Provide management software for remote management
- ◆ Support several work modes
- ◆ Convenient configuration and maintenance interface

High-performance

- ◆ Support TCP server and support multi TCP client connection(optional)
- ◆ Support double data centers, one main and another backup

- ◆ Supply 2 I/O channels, compatible 2 pulse wave output channels, 2 analog inputs and 2 pulse input counters.
- ◆ Support multi data centers and it can support 5 data centers at the same time
- ◆ Support multi online trigger ways, including SMS, ring and data. Support link disconnection when timeout
- ◆ Support dynamic domain name(DDNS) and IP access to data center
- ◆ Design with standard TCP/IP protocol stack
Support APN/VPDN

Product Specification -----

Cellular Specification

Item	Content
Cellular Module	Industrial cellular module
Standard and Band	EGSM900/GSM1800MHz, GSM850/900/1800/1900MHz(optional) Compliant to GSM phase 2/2+ GPRS class 10, class 12(optional)
Bandwidth	85.6Kbps(DL), 85.6Kbps(UL)
TX power	GSM850/900: <33dBm GSM1800/1900: <30dBm
RX sensitivity	<-107dBm

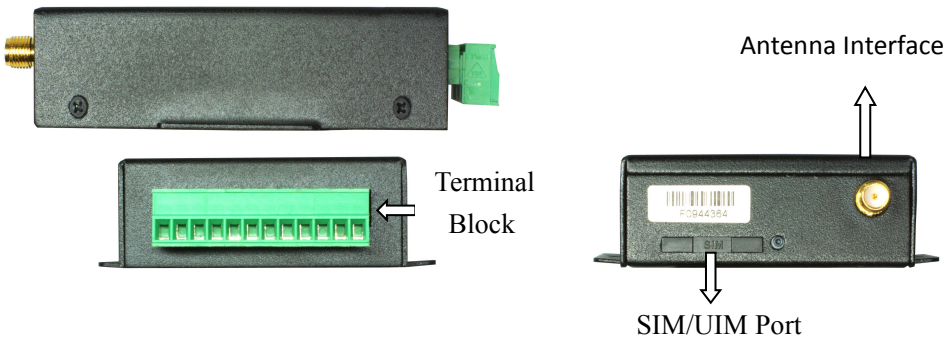
Hardware System

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

Interface Type

Item	Content
Serial	2 RS232 port and 1 RS485(orRS422) port, 15KV ESD protection Data bits: 5, 6, 7, 8 Stop bits: 1, 1.5, 2 Parity: none, even, odd, space, mark Baud rate: 110~230400 bps
Indicator	"Power", "ACT", "Online"
Antenna	Standard SMA female interface, 50 ohm, lightning protection(optional)

SIM/UIM	Standard 3V/1.8V user card interface, 15KV ESD protection
Power	Terminal block interface, reverse-voltage and overvoltage protection



The diagram illustrates the physical layout of the modem. On the left side, there is a green terminal block for power input. On the bottom edge, there is a SIM/UIM port. On the right side, there is an antenna interface. A barcode is visible on the front panel of the device.

Power Input

Item	Content
Standard Power	DC 12V/0.5A
Power Range	DC 5~36V

Power Consumption

Working States	Power Consumption	
Communication	45~55mA@12VDC	105~115mA@5VDC
Standby	35~40mA@12VDC	55~65mA@5VDC
Sleep	3mA@12VDC	6mA@5VDC

Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	91x58.5x22 mm
Weight	205g

Environmental Limits

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