



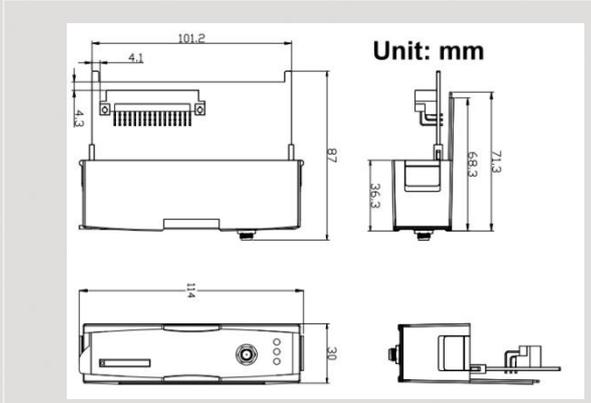
# M2M Series Products



## Industrial Quad-band 2G GSM/GPRS module



I-8212W/I-8213W



Dimensions

The I-8212W and I-8213W are industrial Quad-band GSM/GPRS modules with GPS function (only I-8213W) that work on frequencies of GSM 850 MHz, EGSM 900 MHz, DCS 1800 MHz and PCS 1900 MHz. These modules utilize the GSM/GPRS network for convenient and inexpensive data transfer from remote instruments, meters, computers or control systems in either live data or packet data. Both the I-8212W and I-8213W have the integrated TCP/IP stack so that even simple controllers with serial communications ports can be connected to the modem without the need for special driver implementation. With the features of I-8212W and I-8213W, the systems can be SMS and GPRS connection applications with our PAC series like iPAC-8000, WinPAC-8000, LinPAC-8000 or XP-8000.

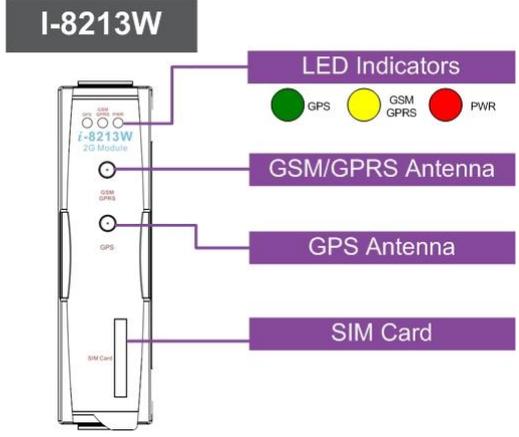
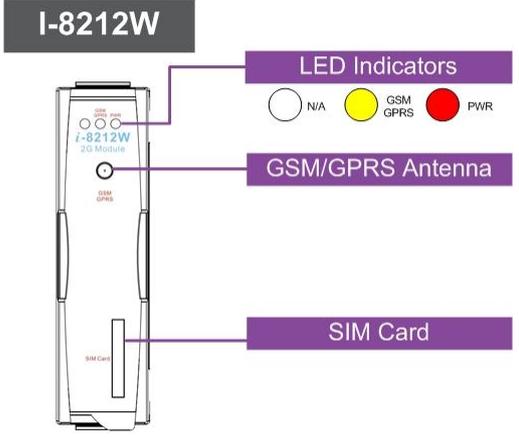
### Features

- Quad-band GSM/GPRS Modem Operating on 850/900/1800/1900 MHz
- 4 KV ESD Protection
- Designed for GPRS and SMS Applications
- Support TCP Server, TCP Client, UDP Client Connection stack from GPRS
- Support Standard AT Commands
- LED Indicators for Power, GSM and GPS(only I-8213W) Indication
- High Reliability in Harsh Environment
- Support 32-channels GPS and NMEA v0183 v3.01(only I-8213W)
- PPS: 100 ms pulse output/sec for precise timekeeping and time measurement(only I-8213W)
- Support XP-8000, WinPAC-8000, LinPAC-8000, ViewPAC, iPAC-8000

### Support PAC

Model	I-8212W / I-8213W
WinPAC-8000 (WinCE 5.0)	√
LinPAC-8000 (Linux kernel 2.6.19)	√
iPAC-8000 Compact PAC (MiniOS 7)	√
XP-8000 (Windows Embedded Standard 2009)	√

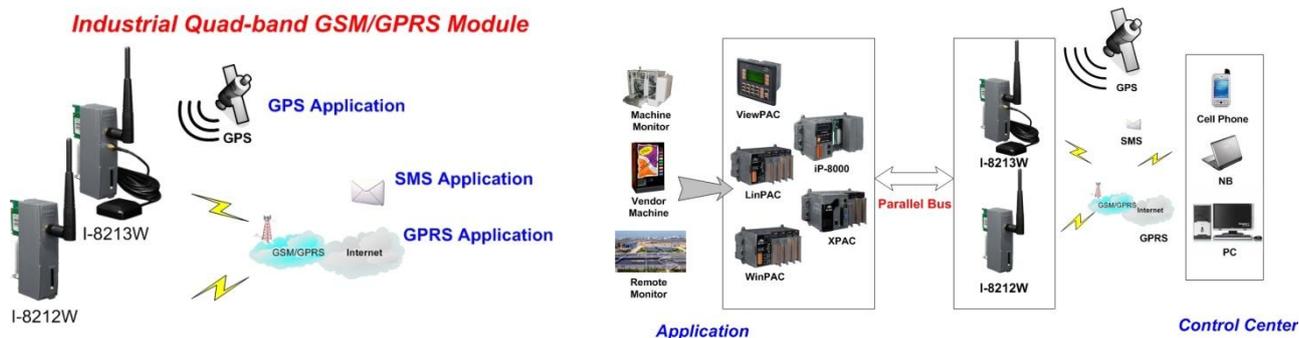
### Pin Assignment



## Hardware Specifications

Models	I-8212W	I-8213W
<b>GSM/GPRS System</b>		
GSM/GPRS Quad-band	850/900/1800/1900 MHz	
GPRS Multi-slot	Class 10/8	
GPRS Mobile Station	Class B	
GPRS Class 10	Downlink transfer: Max. 85.6 kbps; Uplink transfer: Max 42.8 kbps	
CSD	Up to 14.4 kbps	
Compliant to GSM Phase 2/2+	MT, MO, CB, Text and PDU mode	
Coding Schemes	CS 1, CS 2, CS 3, CS 4	
SMS	Text and PDU Mode	
<b>GPS Interface</b>		
Support Channels	-	32
Sensitivity	-	Tracking = up to -159 dBm (with external LNA)
		Cold start = up to -146 dBm (with external LNA)
Acquisition Time	-	Hot start (Open Sky) = 2 s(typical)
		Cold start (Open Sky) = 36 s(typical)
Protocol Support	-	NMEA 0183 version 3.01
<b>LED Indicators</b>		
Power	Red color	
GPRS	Yellow color	
GPS	-	Green color
<b>Power</b>		
Frame Ground Protection	ESD, Surge, EFT, Hi-Pot	
Power Consumption	Idle: 0.16 A @ 5 V <sub>DC</sub> ; Data Link: 0.2 ~ 1.64 A (peak) @ 5 V <sub>DC</sub>	
<b>Mechanical</b>		
Casing	Plastic	
Dimensions (W x L x H)	30mm x 85mm x 114mm	
<b>Environment</b>		
Operating Temperature	-25°C ~ +75 °C	
Storage Temperature	-30°C ~ +80 °C	
Humidity	5~95% RH, non-condensing	

## Applications



## Ordering Information

<b>I-8212W CR</b>	Industrial Quad-band 2G GSM/GPRS module (RoHS)
<b>I-8213W CR</b>	Industrial Quad-band 2G GSM/GPRS module with GPS function (RoHS)

## Accessories

<b>ANT-421-01</b>	3m external GSM/GPRS antenna
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