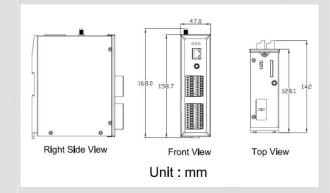
M2M Series Products

M2M Power Saving PAC with Solar Charger



G-4511 Series



Dimensions

The G-4511 series are M2M (Machine to Machine) Power Saving PAC with a cellular transceiver and a solar charger. It can be used in hydrologic monitoring or mudslide monitoring system. With optional GPS model, the G-4511 can also be a GPS tracking system for vehicle management or maritime system. The features of G-4511-2G series: Solar charger, GSM module, Ethernet interface, optional GPS module, 3 digital inputs, 3 digital outputs, 8 analog inputs, 1 relay output.

Features

- Embedded MiniOS7, anti-virus
- Support GSM 850 / 900 / 1800 / 1900 MHz.
- Solar charger for Lead acid battery
- 10/100 Base-TX compatible Ethernet controller
- COM port: COM1 (5-wire RS232), COM2 (RS-485)
- I/O: 3 DI, 3 DO, 8 AI, 1 relay DO
- Support SD card.

- Built-in RTC, NVRAM, EEPROM
- 128*64 dots LCM display (option)
- GPS : 32 channels with All-In-View tracking (option)
- Support TCP, UDP client connection over GPRS
- High reliability in harsh environments
- DIN-Rail mountable





Hardware Specifications

	Item	G-4511-2G	G-4511D-2G	G-4511P-2G	G-4511PD-2G
CPU		80 MHz internal micropro			
		512K/512K, real time clock, watchdog timer			
NVRAM EEPPOM		31 bytes, battery backup, data valid up to 10 years			
EEPROM	•	16 KB, retention > 40 years. 1,000,000 erase/write cycles			
Comm. Inter			N/A D.A. 405		
COM ports		COM1:5-wire RS-232; COM2: RS-485 10/100 Base-TX Ethernet controller			
Ethernet		10/100 Base-1X Ethernet controller			
GSM Interfa					
Frequency		GSM 850/900/1800/1900			
GPRS conr	nectivity	GPRS class 10/8; GPRS station class B MT, MO, CB, Text and PDU mode			
SMS		MI, MO, CB, Text and PI	DU mode		
Digital Input		2			
Input Chan		3 Source(Dry Type), Common Ground			
Input Type Off Voltage		+1 V max.			
		+1 V max. +3.5 ~ +30 V			
On Voltage Level Isolated Voltage		+3.5 ~ +30 V Non-isolated			
		INOII-ISOIated			
Digital Output Output Cha	out	3			
		3 Open Collector (Sink/NPN)			
Output Type Load Voltage		Open Collector (Sink/NPN) +30 VDC max.			
Load Current		+30 VDC max. 100 mA max.			
Isolated Voltage		Non-isolated			
Analog Input		11011-15014160			
Input Chan		8			
Resolution		8 12 - bit			
Input Range/Type		$12 - 60$ 0 ~ 20 mA			
Sample Rate		1 KHz max. (Read one channel)			
Accuracy		+/- 2 LSB (+/- 0.0097 mA)			
Isolated Voltage		2500Vrms 3000Dc to DC			
Relay	Jiugo	2500 11115 5000 20 10 20			
	annel / Type	1 / Form C			
Input Rang		2A@30 Vdc ; 0.25 A @250 Vac			
	l endurance	typ. 10 ⁸ operations			
GPS Interfac	ce				
Support Channels		-		32	
				Tracking = up to -159 dBr	n (with external LNA)
Sensitivity		-		Cold start = up to -146 dB	
					m (with external LNA)
Acquisitior		·		Cold start = up to -146 dB	m (with external LNA) (typical)
	n Time			Cold start = up to -146 dB Hot start (Open Sky) = 2 s	m (with external LNA) (typical)
Acquisitior	n Time upport	-		Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 3	m (with external LNA) (typical) 6 s(typical)
Acquisitior Protocol Su	n Time upport ce Effective	- - -	80.61 mm x 14.37 mm	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 3 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W
Acquisitior Protocol Su	n Time upport ce Effective display area	-	(W x H)	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 3	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H)
Acquisitior Protocol Su LCD Interfac	n Time upport ce Effective display area Module	- - -	(W x H) 93 mm x 70 mm x 1.6	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 3 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm
Acquisitior Protocol Su LCD Interfac	n Time upport ce Effective display area	- - -	(W x H)	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T)
Acquisitior Protocol Su LCD Interfac	n Time upport ce Effective display area Module	- - -	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under
Acquisitior Protocol Su LCD Interfac General Life Time	n Time upport CE Effective display area Module Dimension	- - - -	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than
Acquisitior Protocol Su LCD Interfac General Life Time Power (Solar	n Time upport ice Effective display area Module Dimension r Input)		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection	n Time upport ce Effective display area Module Dimension r Input)		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou	n Time upport ce Effective display area Module Dimension r Input) ound Protection	- - - - - Power reverse polarity pro ESD, Surge, EFT, Hi-Pot	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - -	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req	n Time upport ce Effective display area Module Dimension r Input) pund Protection uirement	- - - - - Power reverse polarity pro ESD, Surge, EFT, Hi-Pot +10 V _{DC} ~ +30 V _{DC} , (Max	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - ast less +30V)	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req Power Con	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement usumption	- - - - - Power reverse polarity pro ESD, Surge, EFT, Hi-Pot +10 V _{DC} ~ +30 V _{DC} , (Max	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - -	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement usumption		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - ast less +30V)	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement asumption attery	- \cdot \cdot - \cdot \cdot - \cdot - \cdot	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - ast less +30V)	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery Charging V	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement sumption attery Voltage		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery Charging V Low Voltag	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement usumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interfac General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicato	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement usumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicat System	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement usumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interface General Life Time Power (Solar Protection Frame Group Power Con Frame Group Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement usumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM GPS	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement asumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM GPS Charging /	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement asumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisitior Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Req Power Con Ead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM GPS Charging / Mechanical	n Time upport ce Effective display area Module Dimension r Input) und Protection uirement asumption attery Voltage ge Protect		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mu 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisition Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM GPS Charging / Mechanical Casing	n Time upport (ce Effective display area Module Dimension r Input) und Protection uirement uirement usumption attery Voltage ge Protect	- - <td< td=""><td>(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V_{DC}; Data Linl ust be over +16V 11.1V / Low Voltage recon</td><td>Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V</td><td>m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation</td></td<>	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V 11.1V / Low Voltage recon	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisition Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Req Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM GPS Charging / Mechanical Casing Dimension	n Time upport (ce Effective display area Module Dimension r Input) urd Protection uirement uirement uirement usumption attery Voltage ge Protect	- - <td< td=""><td>(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V_{DC}; Data Linl ust be over +16V 11.1V / Low Voltage recon</td><td>Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V</td><td>m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation</td></td<>	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V 11.1V / Low Voltage recon	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisition Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicate System GSM GPS Charging / Mechanical Casing	n Time upport ice Effective display area Module Dimension r Input) urd Protection uirement isumption attery Voltage ge Protect isors Fault	- - <td< td=""><td>(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V_{DC}; Data Linl ust be over +16V 11.1V / Low Voltage recon</td><td>Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V</td><td>m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation</td></td<>	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V 11.1V / Low Voltage recon	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) s: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisition Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Con Dewer Req Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicato System GSM GPS Charging / Mechanical Casing Dimension Installation	n Time upport ice Effective display area Module Dimension r Input) urd Protection uirement isumption attery Voltage ge Protect isors Fault	- - <td< td=""><td>(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V_{DC}; Data Linl ust be over +16V 11.1V / Low Voltage recon</td><td>Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2 mect = 12.6V Green</td><td>m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation 4 V_{DC}</td></td<>	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V 11.1V / Low Voltage recon	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2 mect = 12.6V Green	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation 4 V _{DC}
Acquisition Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Con Dewer Req Power Con Lead Acid Ba Battery Charging V Low Voltag LED Indicato System GSM GPS Charging / Mechanical Casing Dimension Installation	n Time upport cc ffective display area Module Dimension r Input) und Protection uirement asumption attery Voltage ge Protect fault Fault fault Temperature	- - <td< td=""><td>(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V_{DC}; Data Linl ust be over +16V 11.1V / Low Voltage recom</td><td>Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2 mect = 12.6V</td><td>m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation</td></td<>	(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm 75 mA @ 24 V _{DC} ; Data Linl ust be over +16V 11.1V / Low Voltage recom	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2 mect = 12.6V	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation
Acquisition Protocol St LCD Interface General Life Time Power (Solar Protection Frame Grou Power Con Frame Grou Power Con Lead Acid B: Battery Charging V Low Voltag LED Indicate System GSM GPS Charging / Mechanical Casing Dimension Installation	n Time upport ice Effective display area Module Dimension r Input) und Protection uirement asumption attery Voltage ge Protect ors Fault sum t Temperature		(W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation stection x. Voltage of Solar Panel mm /5 mA @ 24 V _{DC} ; Data Linl int be over +16V 11.1V / Low Voltage recon m (W x L x H) -15 ~ +55 °C -20 ~ +70 °C	Cold start = up to -146 dB Hot start (Open Sky) = 2 s Cold start (Open Sky) = 30 NMEA 0183 version 3.01 - - - ust less +30V) c: 150 ~ 400 mA (peak) @ 2 mect = 12.6V Green	m (with external LNA) (typical) 6 s(typical) 80.61 mm x 14.37 mm (W x H) 93 mm x 70 mm x 1.6 mm (W x H x T) Expected life is more than 100,000 hours under normal operation 4 V _{DC} -15 ~ +55 °C