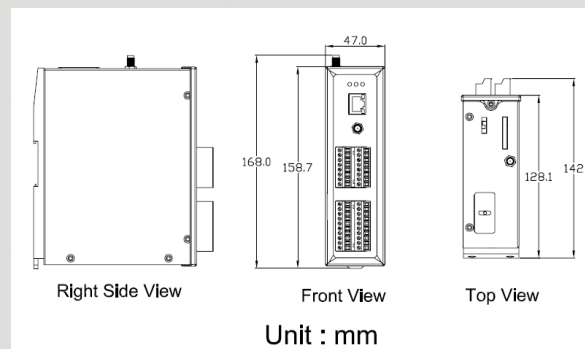


M2M Mini-Programmable Automation Controller



G-4500-3GWA



Dimensions

The G-4500 series provided by ICP DAS are M2M (Machine to Machine) mini programmable controller with a cellular transceiver can monitoring industrial equipment that sends live data to the monitoring system, providing real-time status. With optional GPS model, the G-4500 can also be a GPS tracking system. It can be used in vehicle management system or maritime system. Within the high performance CPU, the G-4500 series can handle a large of data and are suit for the hard industrial environment. The G-4500-3GWA series feature 3G/GSM module, Ethernet interface, optional GPS module, 3 digital inputs, 3 digital outputs, 8 analog inputs, 2 RS-232 and 1 RS-485 port.

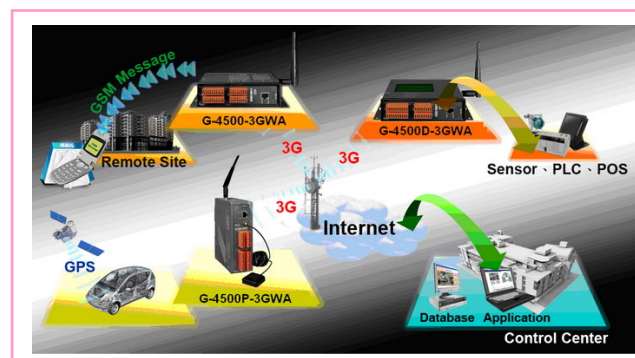
Features

- Embedded MiniOS7, anti-virus
- Supports a variety of TCP/IP features, including TCP, UDP, IP, ICMP, ARP
- 10/100 Base-TX compatible ethernet controller
- COM port: COM1 (5-wire RS232), COM2 (RS-485), COM3 (3-wire RS232)
- Built-in self-tuner ASIC controller on RS-485 port
- I/O: 3 channels DI, 3 channels DO, 8 channels AI
- Support SD storage card
- Tri-band 2100/1900/850 MHz WCDMA supporting UMTS / HSDPA / HSUPA
- Quad-band 850/900/1800/1900 MHz GSM supporting GPRS
- GPS : 32 channels with All-In-View tracking (option)
- Support TCP server, TCP client, UDP client connection from GPRS
- 128*64 dots LCM display (only for G-4500D-3GWA and G-4500PD-3GWA)
- Support Virtual COM technology
- Support Modbus Protocol
- Built-in RTC, NVRAM, EEPROM
- High reliability in harsh environment
- Free easy-to-use software development toolkits

I/O Specifications

Digital Output	
Output Channel	3
Output Type	Open Collector (Sink/NPN)
Load Voltage	+30 V _{DC} max.
Load Current	100 mA max.
Isolated Voltage	Non-isolated
Digital Input	
Input Channel	3
Input Type	Source(Dry Type), Common Ground
Off Voltage Level	+1 V max.
On Voltage Level	+3.5 ~ +30 V
Isolated Voltage	Non-isolated
Analog Input	
Input Channel	8
Resolution	12 - bit
Input Range/Type	0 ~ 20 mA
Sample Rate	1 KHz max. (Read one channel)
Accuracy	+/- 2 LSB (+/- 0.0097 mA)

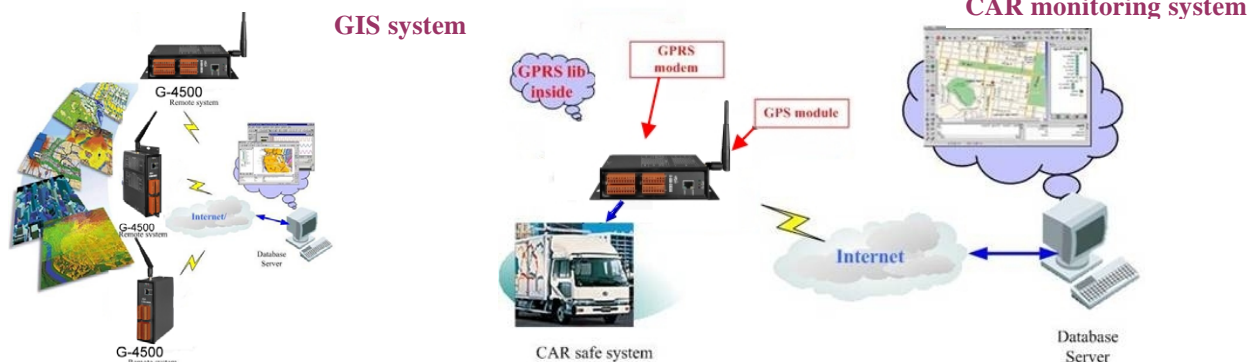
Remote Monitoring System



Hardware Specifications

Item	G-4500-3GWA	G-4500D-3GWA	G-4500P-3GWA	G-4500PD-3GWA
CPU	80 MHz internal microprocessor			
SRAM/Flash	512K/512K , real time clock, watchdog timer			
NVRAM	31 bytes, battery backup, data valid up to 10 years			
EEPROM	16 KB, retention > 40 years. 1,000,000 erase/write cycles			
Comm. Interface				
COM ports	COM1:5-wire RS-232; COM2: RS-485; COM3:3-wire RS-232			
Ethernet	10/100 Base-TX Ethernet controller			
3G Interface				
Frequency Band	Tri-band 2100/1900/850 MHz			
Data Transmission	UMTS / HSDPA / HSUPA ; Downlink transfer: Max. 7.2Mbps; Uplink transfer: Max 5.76Mbps			
GSM Interface				
Frequency Band	Quad-band 850/900/1800/1900 MHz			
GPRS connectivity	GPRS class 12/10; GPRS station class B			
DATA GPRS	Downlink transfer: Max. 85.6 kbps; Uplink transfer: Max 42.8kbps			
SMS	MT, MO, CB, Text and PDU mode			
GPS Interface				
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	
LCD Interface				
General	Effective display area	-	80.61 mm x 14.37 mm (W x H)	-
	Module Dimension	-	93 mm x 70 mm x 1.6 mm (W x H x T)	-
Life Time	-		Expected life is more than 100,000 hours under normal operation	-
				Expected life is more than 100,000 hours under normal operation
Power				
Protection	Power reverse polarity protection			
Frame Ground Protection	ESD, Surge, EFT, Hi-Pot			
Power Requirement	15W; Unregulated +10 V _{DC} ~ +30 V _{DC}			
Power Consumption	Idle: 75 mA @ 24 V _{DC} ; Data Link: 150 ~ 400 mA (peak) @ 24 V _{DC}			
LED Indicators				
System	Red			
3G/GSM	Yellow			
GPS	Green		Yes	
Mechanical				
Casing	Metal			
Dimensions	47 mm x 142 mm x 168 mm (W x L x H)			
Installation	DIN-Rail and Wall mount			
Environment				
Operating Temperature	-20 ~ +70 °C	-15 ~ +55 °C	-20 ~ +70 °C	-15 ~ +55 °C
Storage Temperature	-40 ~ +80 °C	-20 ~ +70 °C	-40 ~ +80 °C	-20 ~ +70 °C
Humidity	5~90% RH, non-condensing			

Applications



Ordering Information

G-4500-3GWA CR	3G/GSM M2M Mini-Programmable Automation Controller (RoHS)
G-4500D-3GWA CR	3G/GSM M2M Mini-Programmable Automation Controller with LCD display (RoHS)
G-4500P-3GWA CR	3G/GSM M2M Mini-Programmable Automation Controller with GPS function (RoHS)
G-4500PD-3GWA CR	3G/GSM M2M Mini-Programmable Automation Controller with LCD display and GPS function (RoHS)