

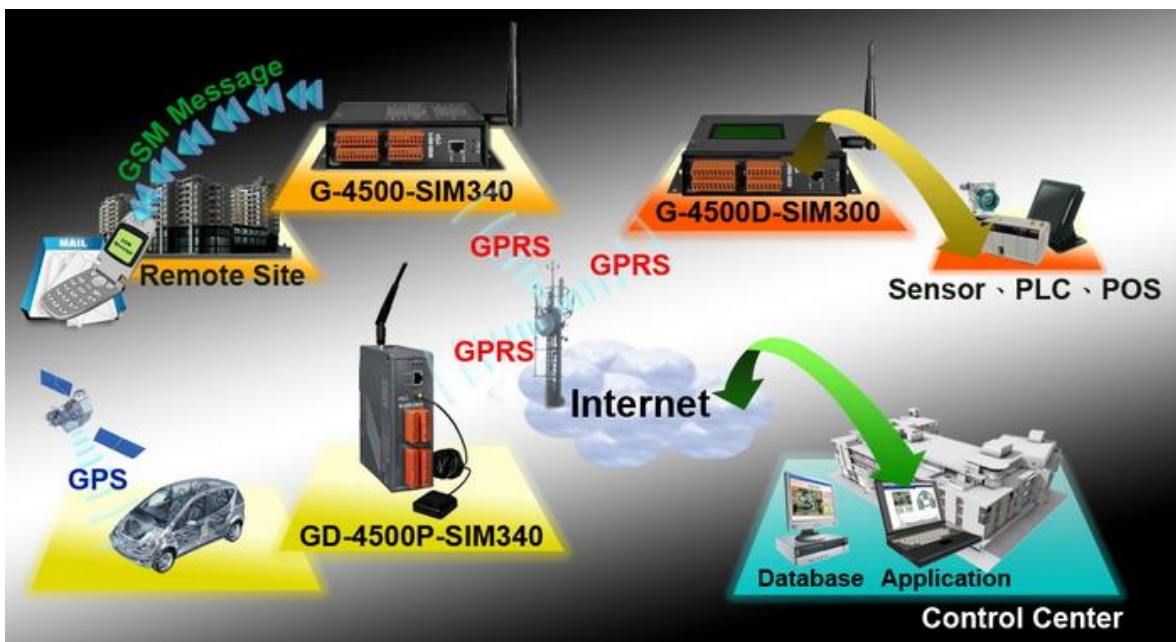
GD-4500P-SIM340 (with GPS)



The tri-band G-4500 series are M2M (Machine to Machine) mini programmable controller are widely praised and loved in the market. They are widely applied in various applications like hydrographic monitoring, intelligent power, flow meter report system and GPS car-tracking system. The Quad-band GD-4500 series to meet the requirements of more customers. Most GSM networks operate in the 900 MHz or 1800 MHz bands. Some countries in the Americas (including Canada and the United States) use the 850 MHz and 1900 MHz bands because the 900 and 1800 MHz frequency bands were already allocated. However, Quad-band GD-4500 series is supporting GSM 850/900/1800/1900 MHz more than tri-band GD-4500 series. They can be achieved that roam the world's GSM system. Quad-band GD-4500 Series with plastic case can be applied to some special needs of the environment. Advantages of the plastic case of the GD-4500 series are less likely to rust and more lightweight.....etc.

The GD-4500 series feature GPRS/GSM module, Ethernet interface, optional GPS module, 3 digital inputs, 3 digital outputs, 8 analog inputs, 2 RS-232 and 1 RS-485 port. That can be used in various application fields to transfer data by GPRS, SMS, Ethernet or serial bus. In traditional application, users need a master controller to integrate a GPRS/GSM modem with developing GPRS or SMS programs into the host. That would waste much time to integrate the various communication interfaces. Now, we have GD-4500 series to solve the hardware integration problems with easy-to-used libraries. The GD-4500 series built-in MiniOS7 provide the same development environment with I-7188/I-7186 series. It is more easy for I-7188/I-7186 users to apply the GD-4500 series.

By using GD-4500 series, a machine can be installed virtually anywhere but still be connected to a support centre to signal performance or need for service. M2M data will improve the service quality and reduce operating costs.



Features

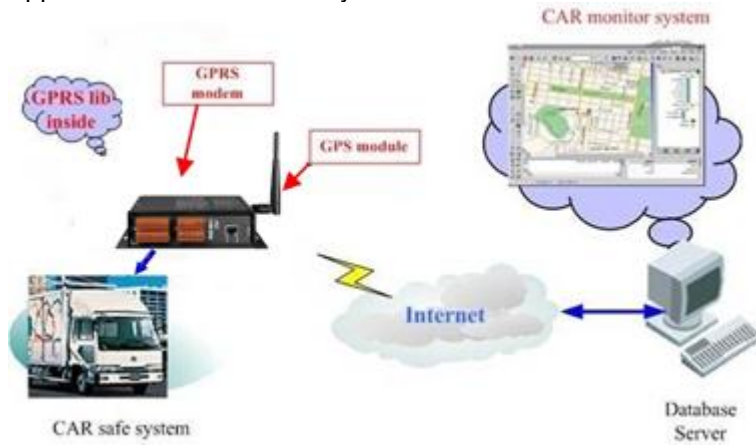
- Embedded MiniOS7, anti-virus
- Supports a variety of TCP/IP features, including TCP, UDP, IP, ICMP, ARP
- 10/100Base-TX Ethernet Controller
- COM port: COM1 (5-wire RS-232), COM2 (RS-485), COM3 (3-wire RS-232)
- Built-in self-tuner ASIC controller on RS-485 port
- I/O: 3 channel DI, 3 channel DO, 8 channel AI
- Support SD storage card
- GPRS/GSM: Quad-band 850/900/1800/1900 MHz
- Support TCP server, TCP client, UDP client connection from GPRS
- GPS : 16 channels with All-In-View tracking (option)
- 128*64 dots LCM display (only for GD-4500D-SIM340 and GD-4500PD-SIM340)
- Support Virtual COM technology
- Support Modbus Protocol
- High reliability in harsh environment
- Free easy-to-use software development toolkits

APPLICATIONS

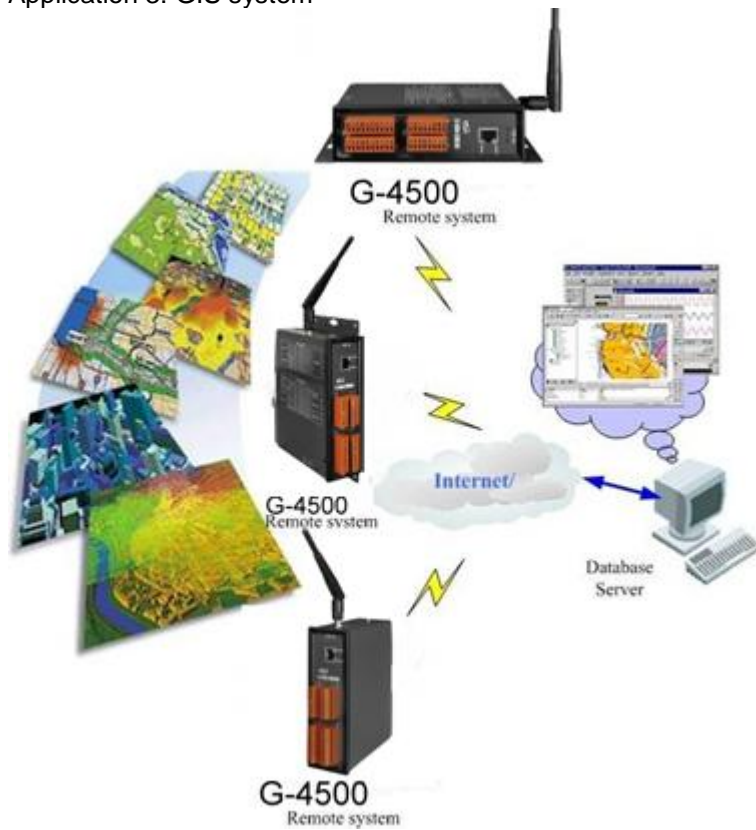
Application 1 : Remote Control/Monitor System



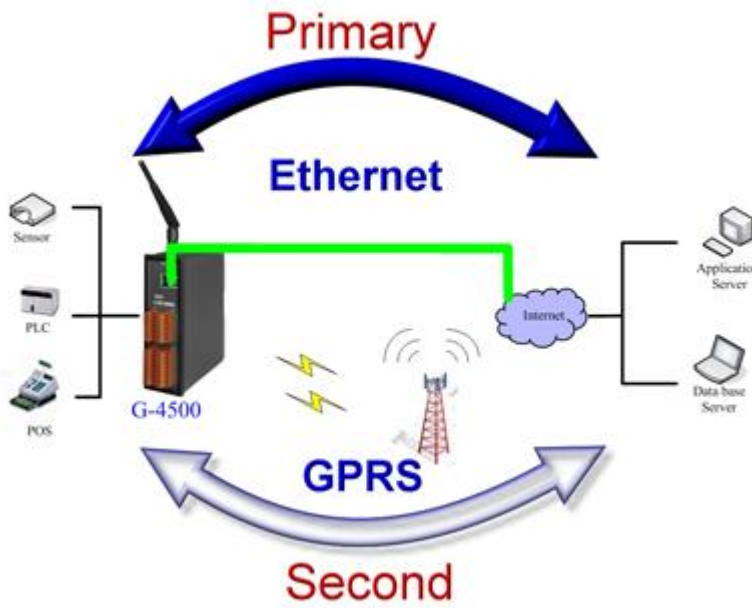
Application 2: Car Monitor System



Application 3: GIS system



Application 4: Redundance Communication System



I/O Specifications

| | |
|-----------------------|---------------------------------|
| Digital Output | |
| Output Channel | 3 |
| Output Type | Open Collector (Sink/NPN) |
| Load Voltage | +30 VDC 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) |

Mode Switch

| Operation Mode Switch | |
|-----------------------|---|
| RUN | OS can execute autoexec.bat Flash can be read/wirte. |
| Lock | OS can execute autoexec.bat Flash is read only (lock). |
| INIT | OS can not execute autoexec.bat Flash can be read/wirte. |

Specifications & Additional Information

| Item | GD-4500-SIM340 | GD-4500D-SIM340 | GD-4500P-SIM340 | GD-4500PD-SIM340 |
|--------------------------------|--|-----------------|---|---|
| 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 | | | |
| GPRS Interface | | | | |
| Frequency Band | Quad-band 850/900/1800/1900 MHz | | | |
| GPRS connectivity | GPRS class 10/8; 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) | 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) | 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 VDC ~ +30 VDC | | | |
| Power Consumption | Idle: 75 mA @ 24 VDC; Data Link: 150 ~ 400 mA (peak) @ 24 VDC | | | |
| LED Indicators | | | | |
| System | Red | | | |
| GPRS | Yellow | | | |
| GPS | Green | | | Yes |
| Mechanical | | | | |
| Casing | Plastic | | | |
| Dimensions | 60 mm x 140 mm x 172 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 | | | |