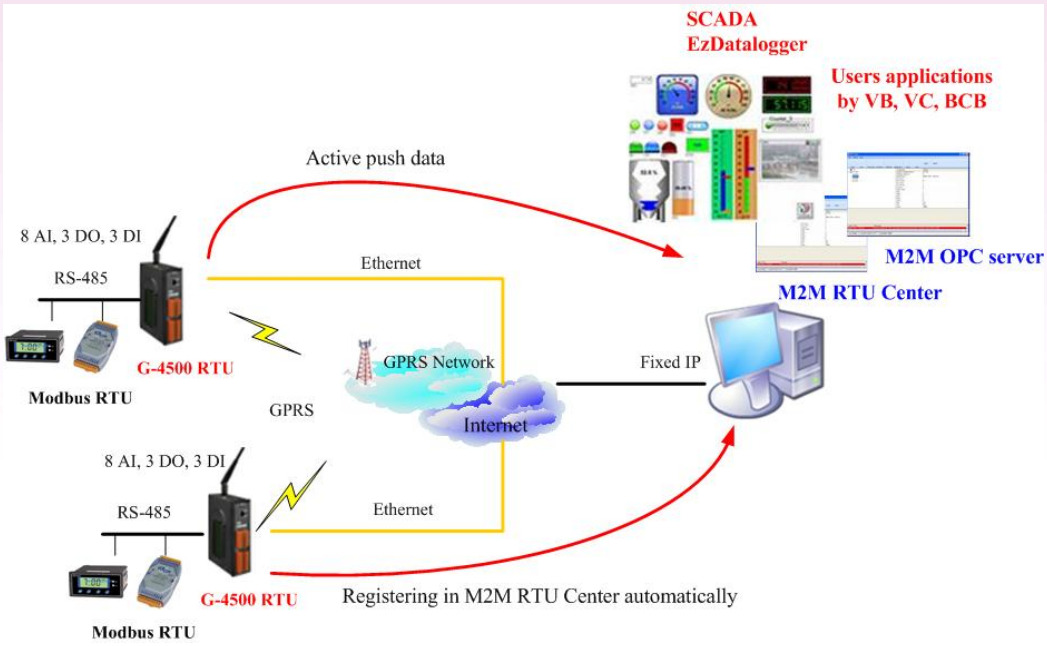
G-4500 RTU -Intelligent GPRS Remote Terminal Unit



The G-4500 RTU is an intelligent Active GPRS Remote Terminal Unit which is built-in the specific firmware in G-4500 series. It is designed for communicating with Modbus RTU devices and provides active data transmission via GPRS connection. Except for the Modbus RTU's data, the built-in I/O and GPS data also can be transferred to RTU Center software by the defined period or DI/AI trigger. With the built-in redundancy communication paths of GPRS and Ethernet in G-4500 RTU, the data would be guaranteed to transfer to host. Furthermore, G-4500 RTU provides simple I/O linkage control and the built-in I/O recorders in SD card.

We also provide M2M RTU center software with friendly Graphic interface to manage the GPRS RTU products easily. Users can monitor the I/O data and status of GPRS RTU devise by the interface on PC. By using the M2M RTU API tool and M2M RTU center software, any remote monitoring system can be achieved easily and efficiently. For SCADA system, the M2M.OPC server is provided to connect to SCADA by OPC interface.

➢ Easy to Establish GPRS Network Applications

Applying the G-4500 RTU and M2M RTU center software, the dynamic IP addresses can be managed between them. The remote GPRS RTU product would connect to M2M RTU Center automatically. Therefore, all remote GPRS RTU devices can be managed by the single centralized M2M GPRS RTU Center software with a fixed IP address.

➢ Active data transmission

The G-4500 RTU devices with active I/O transmission mechanism can raise the communication. Unlike the traditional poll communication, G-4500 RTU would transfer the data by the defined time, DI trigger or AI hi/lo alarm. In addition to improve the way of communication, that can also reduce the AP effort.

➢ Redundant communication paths in GPRS and Ethernet

There are GPRS and Ethernet communication interfaces in G-4500 RTU. Through the setting in G-4500 RTU Utility, you can set the primary and backup paths to communicate with M2M RTU Center. When the primary path is failed, G-4500 RTU can use the backup path to communicate to M2M RTU Center to ensure the data can transfer to PC. That can raise the reliability of communication effectively.

➢ Active data transmission

The G-4500 RTU is built-in Modbus RTU protocol. That can make any Modbus RTU device connect to G-4500 RTU. By the way of G-4500 RTU, Modbus RTU devices can be used in GPRS remote system.

➢ Simple Local I/O link Control

There are I/O built-in GPRS RTU devices of ICP DAS. Therefore, these products can be the GPRS I/O devices. Expect for these local I/O data can be sent to the host PC, the I/O link function of them help users to do the simple control in local field. For example: the DI trigger or high/low AI alarm can driver the DO channel.

➢ **Built-in I/O Data** Logging

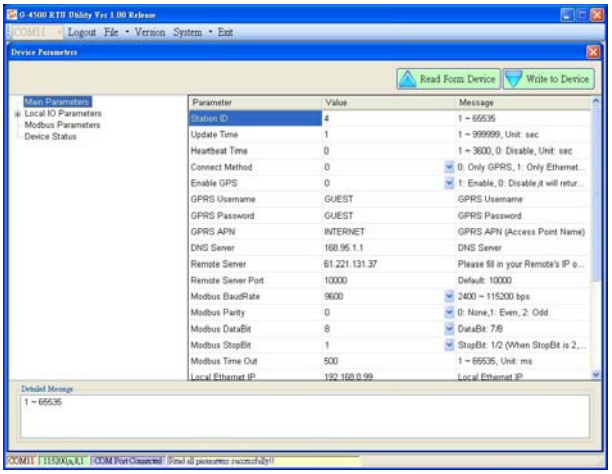
The GPRS RTU products provide an external SD interface. Users can set which built-in I/O need to record in SD memory card for one day in a single file.

Features

- Automatic/continuous GPRS Link Management
- Support Modbus RTU protocol to connect to Max 10 Modbus RTU devices via RS-485 port.
- Support M2M OPC server for SCADA system.
- Easy-to-use API tool for users to develop their applications by various program development tools
- Built-in I/O make GPRS RTU be the GPRS I/O devices.
- Support LCD display in G-4500D-SIM340, G-4500PD-SIM340
- I/O and GPS data recorded in SD card (Max 2 GB space)
- Ethernet and GPRS redundant communication paths
- Local I/O linkage function to make the simple local control

G-4500 RTU Utility

GUI tool, provide users to easily set up and diagnosis G-4500 RTU.
For detail information and downloading the software, please refer to:
http://ftp.icpdas.com/pub/cd/usbcd/napdos/m2m/rtu/g-4500_rtu/software/utility

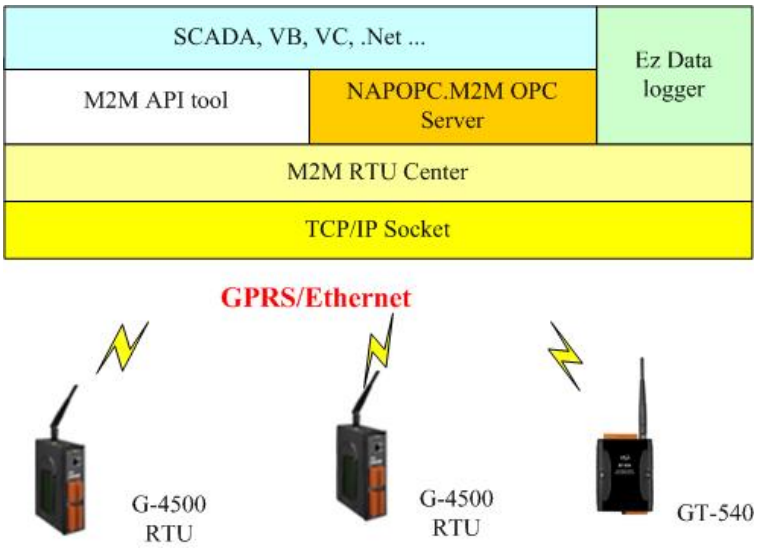


Product for G-4500 RTU

Product Type	Description
G-4500-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller (RoHS)
G-4500D-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller with LCD display (RoHS)
G-4500P-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller with GPS function (RoHS)
G-4500PD-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller with LCD display and GPS function (RoHS)
G-4500-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller (RoHS)
G-4500D-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with LCD display (RoHS)
G-4500P-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with GPS function (RoHS)
G-4500PD-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with LCD display and GPS function (RoHS)
GD-4500P-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with GPS function (RoHS)

Please refer to chapter 2 of manual to know how to upload G-4500 RTU firmware to G-4500 series.
http://ftp.icpdas.com/pub/cd/usbcd/napdos/m2m/rtu/rtu_center/manual/

Software solutions for G-4500 RTU



➢ M2M RTU management software- M2M RTU Center

The M2M RTU Center provided by ICP DAS is a M2M (Machine to Machine) management software that has a strong core technology for handling data and lets the user save the trouble of dealing with large IO data.

For detail information and downloading the software, please refer to:
http://ftp.icpdas.com/pub/cd/usbcd/napdos/m2m/rtu/rtu_center

➢ M2M RTU SDK- M2M RTU API

ICP DAS M2M RTU Library is a software tool package for M2M RTU products. It provides the seamless connection with M2M RTU products (G-4500 RTU, GT-540…) of ICP DAS for the user-designed system. With the APIs in this library, programmer can access M2M RTU devices by public software development environments, like VC, VB, BCB, visual studio.Net… It is easy to integrate these GPRS RTU devices to various applications including real the remote data, database management system.

For detail information and downloading the software, please refer to:
http://ftp.icpdas.com/pub/cd/usbcd/napdos/m2m/rtu/m2m_rtu_win32_api

➢ OPC server for RTU series of ICP DAS- NAPOPC.M2M DA Server

ICP DAS NAPOPC.M2M DA Server is an OPC software package operated as an OPC driver of a HMI or SCADA system. It provides seamless connection with GPRS RTU products (G-4500 RTU, GT-540…) from ICP DAS to SCADA system (InduSoft, Wonderware, iFix, Citec, LabView and etc) following OPC 1.0, OPC 2.0 Data Access Standards.

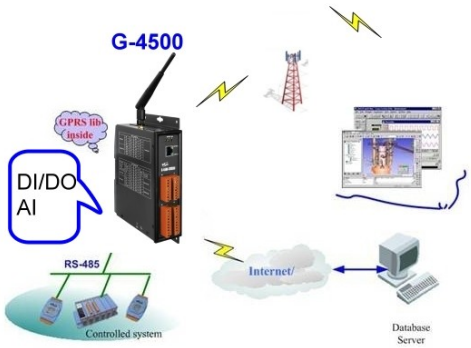
For detail information and downloading the software, please refer to:
http://ftp.icpdas.com/pub/cd/usbcd/napdos/m2m/rtu/napopc.m2m

➢ EzDatalogger

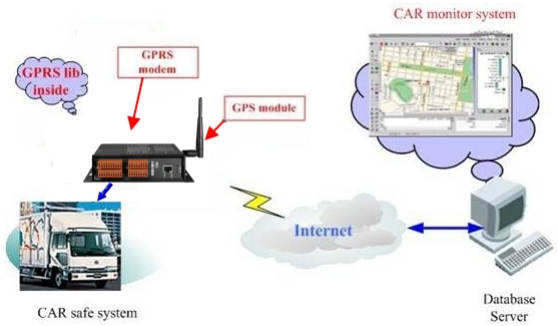
EZ Data Logger is a small data logger software. It can be applied to small remote I/O system. With its user-friendly interface, users can quickly and easily build a data logger software without any programming skill. EZ Data Logger support G-4500 RTU form version 4.3.1

For the detail and downloaded from:
http://www.icpdas.com/products/Software/ez_data_logger/ez_data_logger.html

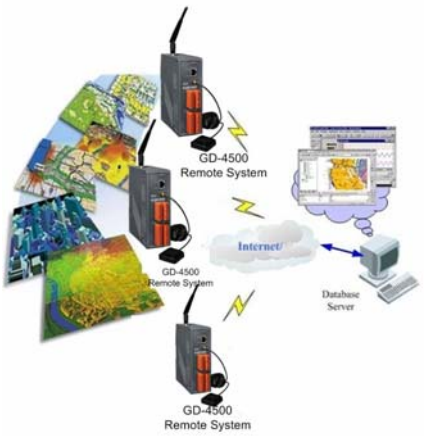
Applications



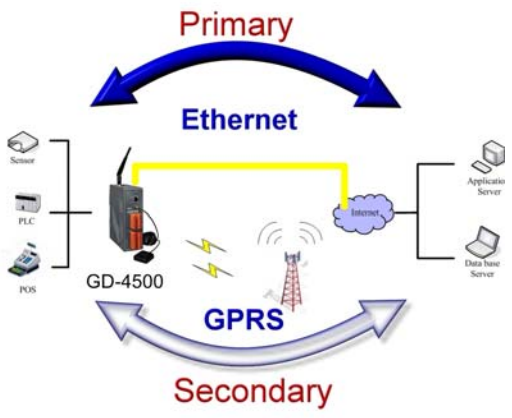
Remote Control/Car Monitoring System



Car Monitoring System



GIS system



Redundant Communication System