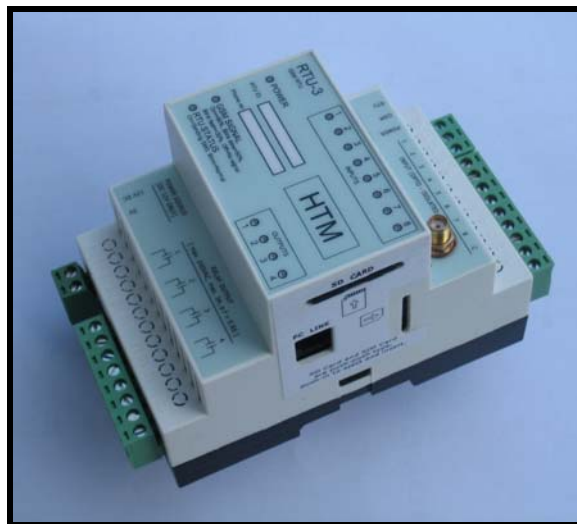| HTM	RTU3 GSM/SMS TELEMETRY RTU

FEATURES

- ❖ Simple remote control via handphone
- ❖ Notification of events via SMS
- ❖ Automation of control system
- ❖ Low power consumption
- ❖ Suitable for solar power supply
- ❖ Low cost and reliable
- ❖ Flexible & programmable I/O
- ❖ Failsafe control feature
- ❖ Varieties of digital & analog inputs & outputs

INTRODUCTION

HTM RTU3 is a GSM/SMS based telemetry RTU that utilize the commonly available GSM network for the transmission of data through SMS format. It has been proven reliable and widely accepted as the simplest way of data transmission without heavy budget. It is specifically designed as an alternative to conventional signal & control cables for the remote control and monitoring of pumps, valves and any other equipment.

Three versions of HTM RTU3 telemetry RTU are available for different combinations of analog & digital input & output channels. Basic system consists of a stand alone RTU for the capture of process data and notify designated parties through pre-programmed events. Users can also update process data in the field by sending sms through hand phones. HTM RTU3 can also be used as stand alone automatic control system by installing two RTUs at different locations. Pre-programmed automated sms will be sent between the two RTUs to achieve the automatic control. In addition, a network of HTM RTU3 can be linked up to form a remote control SCADA system through third party SCADA software. All RTU3 units are housed in IP25 DIN rail mounted enclosures. Due to its low power consumption, HTM RTU3 RTUs are suitable for mounting at remote areas and powered by solar panel.

APPLICATIONS

HTM RTU3 are suitable for the transmission of any instrument data using 4-20mA, digital on/off signals either by event initiated or via user interrogations. Data collected can be transferred and output through another RTU or hand phone automatically. The data can also be retrieved through hand phone via SMS messages.

Typical applications of HTM RTU3 telemetry RTU include remote monitoring and control of pumping stations, traffic lights, unmanned machine rooms, weather stations, substations etc without using any physical hard wire. The unit can also be used to replace long control cables between pumping stations and reservoirs for automated pump control and transmission of level data over unlimited distance.

Due to the nature of GSM network, monitoring & control of HTM RTU3 signals can be carried out practically from any part of the world.

In a network system, there is no network master and any station can communicate with every other stations. Any input at any station can be linked to output at any station using a simple configuration program. All data transmitted are in programmable SMS messages.
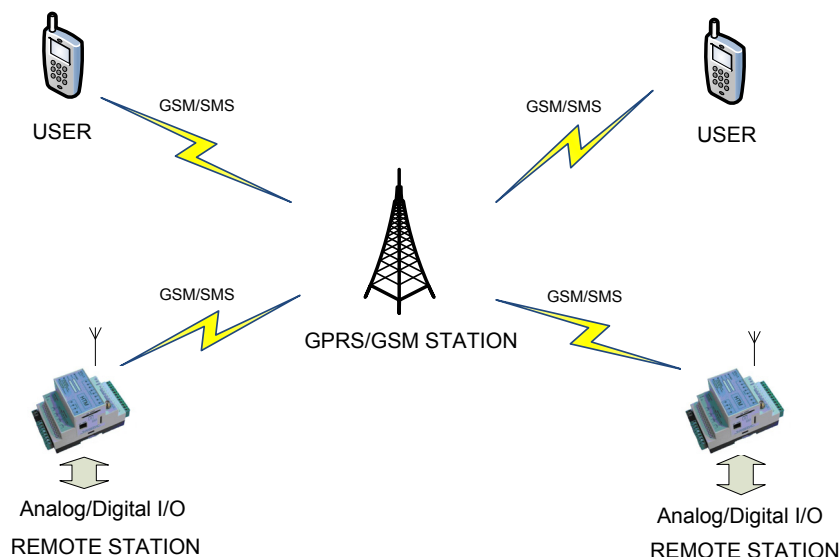
SPECIFICATIONS

Models available: RTU3.1, RTU3.3, RTU3.5
Microcontroller: LM3S6965
Internal memory: 256K with 32K SRAM
Data storage: 1 GB SD card (Max 2GB)
Operating frequency: 900/1800MHz
Operating class: 900MHz: Class 3
                          1800MHz: Class 1
Transmitting power: 900MHz: 2W (peak)
                          1800MHz: 1W (peak)
Receiving Sensitivity:900MHz: -107dBm
                          1800MHz: -106dBm
Operating temperature range: -20°C to 60°C
Humidity: 0-99%RH
Status display: LED
Antenna connection: SMA
Analog input (AI): 4-20mA differential or single
                          ended
Analog output (AO): 4-20mA isolated

Analog accuracy: 12 Bit
Digital input (DI): Opto isolated, suitable for volt-
                          free contact
Digital output (DO): N/O Relay contact rated 2A
                          @240VAC
Programming method: PC-Link via RJ11 socket
                          or Over The Air through
                          hand phone
Data transmission format: GSM/SMS
EMC compliance: IEC 60101-1, 2, 3, 4, 5
Enclosure: IP25
Enclosure materials: PVC
Mounting: DIN rail
Dimensions (mm): 70 X 75 X 130 (mm)
Power supply: DC9 to 36V
Power consumption: Idle: 50mA
                          Transmitting: 100mA
Antennae type: Single pole with magnetic base

Input/Output Table

Model	RTU3.1	RTU3.3	RTU3.5
Analog Inputs (Differential)	0	2	0
Analog Inputs (Single Ended)	0	2	2
Analog Outputs	0	0	2
Digital Inputs (Optically Isolated)	8	4	4
Digital Outputs (Relay Outputs)	4	4	4

TYPICAL APPLICATIONS

USER — GSM/SMS — GSM/SMS — USER

GPRS/GSM STATION

GSM/SMS — GSM/SMS

Analog/Digital I/O
REMOTE STATION

Analog/Digital I/O
REMOTE STATION