QD-1000

Data Logger cum
Remote Terminal Unit
With GSM/GPRS, GPS and Ethernet

Salient Features

- 8 High accuracy Analog Inputs (4-20mA or 0-10V)
- 8 Digital Inputs and 8 Digital Outputs
- RS232 and RS485 ports for data acquisition
- Optional SDI and HART Communication ports
- 16x2 OLED display with 3x3 keypad
- Upto 64 MB serial Flash and Upto 16K FRAM
- Upto 32GB SD card and USB pen Drive support
- Inbuilt GPS (Optional)
- Supports TCP, HTTP and FTP protocols for data communication
- Supports MQTT protocol for telemetry applications
- Configurable automation Logic for digital outputs
- External Watchdog timer

Functional Features

- Data Capturing
  - Monitor analogue and digital inputs and log captured data
  - Monitor serial ports and log data received at the serial port.
  - Act as a master device and capture data from one or more devices connected to RS232/RS485 ports.
  - Supports standard protocols like MODBUS or proprietary protocols for master slave communication.
  - Firmware can be customised to support proprietary protocols
- Data Logging
  - Highly reliable serial flash which can store up to 64 MB of data
  - SD card which can store up to 32 GB of data.
  - Store data for different intervals in different files in SD card
  - Copy data to external USB drive
- Automation, Remote Control and Remote Monitoring
  - Simple configurable logic for each Digital Output based on time, week day,Analog input values and status of Digital Inputs/Outputs
  - Remote operation of Digital Outputs using SMS Commands or commands from server using MQTT or HTTP/TCP responses
  - Generation of alerts on changes of Digital Inputs/Outputs and/or when crossing threshold limits of Analog Values
  - Sending SMS messages to one or more numbers and/or messages to Server on each alerts
- Data Communication
  - Communicate data to the external world through Ethernet port or through GSM/GPRS network.
  - Supports various protocols like TCP/IP, HTTP, FTP etc
  - Supports MQTT protocol which is a common standard for M2M communications.
- Configuration
  - Windows utility to configure the logger through serial port
  - Configure through browser by connecting it to a LAN or directory to the PC through Ethernet port
  - Configure parameters by simple SMS commands from Authorised Numbers
  - If MQTT protocol is used, configuration by publishing configuration messages.
- Other Important Features
  - Over the air updation of the firmware through GSM/GPRS network
  - Software updation from USB pen drive
  - External watch dog timer in case of firmware crash

Hardware Specifications

- ARM Cortex M4 Processor with
  - 120 MHz clock speed :150 DMIPS performance
  - 1MB Flash and 256KB single-cycle System SRAM
  - 6KB of EEPROM
  - 10/100 Ethernet MAC and PHY with IEEE 1588 PTP hardware support
  - Watchdog timer
- Storage
  - 16MB Serial Flash (Expandable upto 64MB)
  - 2KB FRAM (Expandable upto 16KB)
  - SD Card upto 32 GB
  - USB OTG Compatible to standard USB Pen drives
- Analog Ports
  - 8 Number of Delta Sigma Analog inputs with 24 bit resolution
  - Option to configure for 4-20mA , 0-5 Volts or 0-10 Volts sensor inputs
  - Option for using high tolerance resistors for 4-20mA for higher accuracy
- Digital Inputs.Outputs
  - 8 Number of Digital Inputs
  - 8 Number of Digital Outputs
- Communication Ports
  - 10/100 Ethernet(MAC) Port,PHY with IEEEE 1588 PTP hardware support
  - Two RS232 ports
  - One RS485 Port
  - One USB port
  - One SDI Port (Optional)
  - One Hart Port (Optional)
  - One CAN port (Optional)
  - Ethernet port
- 16 x 2 OLED display
- 3 x 3 Keypad
- GSM/GPRS Module Specifications
  - Built in ARM processor with Opencpu support
  - GSM 850/900/1800/1900MHz GPRS Class 10
  - Operating Temperature：-40 ~ +85c
  - Sensibility：-109dBm(850/900MHz); -108dBm(1800/1900MHz)
  - Sleep mode for low power consumption
- GPS Specifications
  - Ublox Max-7 Module
  - 56 Channels,GPS L1C/A,SBAS L1C/A,QZSS L1C/A
  - Cold Start 30 s, Warm Start :28 s, Hot Start :1s ,Aided Starts 5 s,

Applications

- Weather Station Monitoring
- Enviroment Monitoring
- Industrial Automation
- Remote Monitoring for Windmills

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