



Battery Operated Modbus 4G Data Logger



5..7..10 years



Application:

- Water Meter Telemetry System
- Gas / Water Pipeline Monitoring
- Agricultural / Farm Remote Tracking
- River/Reservoir Level Monitoring
- City Sewage Management System
- Oil / Water Tank Level Monitoring



Low Power Data Logger with sleep mode

Turn off power output in sleep mode to save power

Continuous operation for 5~10 years with battery

Packet Data of multiple records in one upload

Internal power output for sensors

Programmable data logging and upload interval

Upload Data via GPRS and SMS on schedule

Analog channel and RS232/485 Modbus

Solar Power option



GSX8-LTE-MB

IoT Modbus LTE Data Logger

Channels

- 2 x temperature, 1 x humidity channel
- 2 x A/D Channels , 2 x Pulse Inputs, 2 x Digital Inputs, 1 x Relay Output
- 5, 12 or 24V DC Output (off in sleep mode)

Power Source: 6 ~ 9VDC
Battery or Solar Power

Power Consumption:

Sleep Mode 5uA
Standby 10mA
Data Upload 300mA (Sensor not included)

Temperature Channel:

Sensor: DS18B20
Range: -55 ~ 125 °C
Accuracy: +/- 0.5 °C

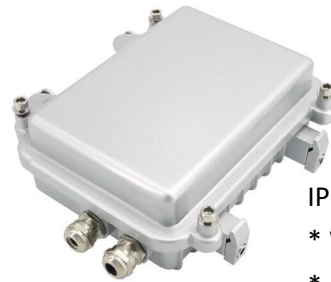
Temperature Humidity Channel:

Sensor: HTU21
Range: -25 ~ 125 °C, 1 ~ 100% RH
Accuracy: +/- 0.3 °C, +/- 5% RH

Analog Channel:

AD Converter: 16 bit high precision
Signal Type: 4 ~ 20mA
Impedance: 250Ω [current type input]
Accuracy: 2.5/ 4096=0.00061 (0.061%)

Low Power Consumption & Sleep Mode



IP67 Aluminum Case
* Waterproof
* 180 x 140 x 70 mm

Internal Power Output: 5, 12 or 24VDC, 100mA
Auto off in sleep mode

Digital Input: Dry contact, triggered level > 20ms

Pulse Input: Pulse Frequency , time lapse > 20ms
Max. 40 pulses per second
Max. 99999999 pulses

Relay Output: Max. DC24V @3A,
Max. AC120V @3A

RS485 Modbus:

Data Registers: 8 x floating points, 8 x integers
Modbus Device Address: programmable
Data Registers Address: programmable

Features

- * Programmable high/low alert level of all inputs in each channel
- * Alarm Data via GPRS and SMS - programmable SMS alarm text
- * Programmable Data Upload Interval (1 min ~ 24 hours)
- * Programmable Data Logging Interval (5 min ~ 60 min)
- * Support both live data and historical data upload
- * Live data and logged data can be retrieved via USB, SMS or 4G
- * Support Dynamic Domain Name or Fixed IP
- * Support UDP, TCP, MQTT protocol data transmission
- * Packet Data protocol uploads multiple logged data in one record to save power
- * Logging Interval: 1hr, Upload Interval: 24hrs, all 24 records will be uploaded in one packet each day
- * Local Configuration by PC Setup software via USB port, Remote Configuration by SMS or GPRS
- * 4MB Non-volatile Memory storing average 300 days period of data or 60000 records



GSX8-LS-4G

Low Power Modbus 4G Data Logger

Channels

- 1 x temperature, 1 x humidity channel
- 2 x A/D Channels , 4 x Pulse Inputs, 4 x Digital Inputs
- 3.3, 5, 12, 24V DC Output (off in sleep mode)

Power Source: 6 ~ 9VDC
Battery or Solar Power

Power Consumption:

Sleep Mode	10uA
Standby	10mA
Data Upload	300mA (Sensor not included)

Temperature Channel:

Sensor: DS18B20
Range: -55 ~ 125 °C
Accuracy: +/- 0.5 °C

Temperature Humidity Channel:

Sensor: HTU21
Range: -25 ~ 125 °C, 1 ~ 100% RH
Accuracy: +/- 0.3 °C, +/- 5% RH

Analog Channel:

AD Converter: 16 bit high precision
Signal Type: 4 ~ 20mA
Impedance: 250Ω [current type input]
Accuracy: 2.5/ 4096=0.00061 (0.061%)

Low Power Consumption & Sleep Mode

IP68 PVC Case
* Waterproof
* 190 x Ø 120mm



LCD Panel

Live Device Status
4 AD Channels Data
Mobile Network Connection Status

Internal Power Output: 3.3, 5, 12, 24VDC, 100mA
Auto off in sleep mode

Digital Input: Dry contact, triggered level > 20ms

Pulse Input: Pulse Frequency , time lapse > 20ms
Max. 40 pulses per second
Max. 99999999 pulses

RS485 & RS232 Modbus:

Data Registers: 4 x floating points, 4 x integers
Modbus Device Address: programmable
Data Registers Address: programmable

Features

- * Programmable high/low alert level of all inputs in each channel
- * Alarm Data via GPRS and SMS - programmable SMS alarm text
- * Programmable Data Upload Interval (5 min ~ 24 hours)
- * Programmable Data Logging Interval (5 min ~ 60 min)
- * Support both live data and historical data upload
- * Live device status and data display on LCD
- * Live data and logged data can be retrieved via RS232, SMS or 4G
- * Packet Data protocol uploads multiple logged data in one record to save power
- * Logging Interval: 1hr, Upload Interval: 24hrs, all 24 records will be uploaded in one packet each day
- * Local Configuration by PC Setup software via RS232, Remote Configuration by SMS or GPRS
- * Support Dynamic Domain Name or Fixed IP
- * Support UDP, TCP protocol data transmission
- * 4MB Non-volatile Memory storing average 300 days period of data or 60000 records



Application

Solar Power 4G Data Logger

- * Built-in Solar Panel Controller
 - * Internal 3 or 6Ah Li-ion Rechargeable Battery
 - * Average 30 days operation by battery only
 - * Direct connection to solar panel
 - * Automatic switch to battery power when losing sunlight
 - * Automatic recharge battery on sunlight
 - * Low Power Sleep Mode < @10uA, 12VDC
- [GSX8-LTE-C]
- * Suitable for rural sites with adequate sunlight
 - * IP67 Aluminum waterproof crash proof enclosure
 - * Aluminum Casing, 280 x 199 x 90 mm
 - * Solar Panel is not included in package



Weather Station Package

Solar Powered 4G Data Logger

- * Wind Direction / Speed Transducer
- * Temperature & Humidity Sensors
- * Rain Gauge Tip Bucket
- * CO2, Pressure, UV Transducer



GPRS Data Logger & Modbus Flow Meter



- * supports Modbus interface
- * It powers the flow meter with its internal power
- * Battery support average 5~10 years operation
- * 8 floating points and 8 integer registers—user programmable mapping
- * Elster EK220, Corus PTZ Modbus support
- * IP67, IP68 water proof or ATEX housing

4G Data Logger & Ultrasonic Flow Meter



GSX8-LTE-AX

188 x 120 x 78 mm

ATEX Certified (EEx d IIB T6) Casing

- ◆ Optional ATEX enclosure
- ◆ Compatible to most famous brands of flow meter
- ◆ Remote Monitoring of Flow Meter Reading
- ◆ RS485 Modbus Interface with Ultrasonic Water/Gas Meter
- ◆ User selectable data registers addresses

Examples of sensors measured by AD or Pulse channels :

- ◆ Wind Speed/Direction Transducer
- ◆ Rain Gauge, Ultrasonic Water Meter
- ◆ Pressure Gauge, Ultrasonic Level Transducer



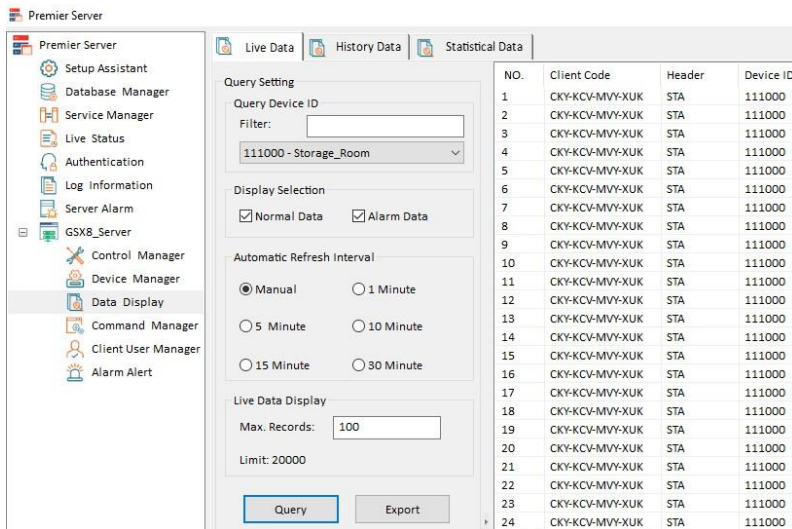
Model Selection

Model Selection	GSX8-LTE-MB	GSX8-LTE-PV	GSX8-LTE-ATX	GSX8-LTE-C	GSX8-LS-4G	GSX8-LSA-4G
Aluminum Waterproof	IP67	—	ATEX	IP67	—	IP67
PVC Waterproof	—	IP65	—	—	IP68	—
LCD Display	—	—	—	—	4 x 16 char	—
High Capacity Battery	10A	20A	10A	—	20A	20A
Low Power Sleep Mode	✓	✓	✓	✓	✓	✓
Low Voltage Alert	✓	✓	✓	✓	✓	✓
Solar Panel Controller	—	—	—	✓	—	—
3Ah Rechargeable Battery	—	—	—	✓	—	—
Built-in power output	3, 12VDC or 3, 24VDC [default]				3, 5, 12, 24VDC	
AD Channel	2				2	
Pulse Channel	2				4	
Alarm Input (DI)	2				4	
Relay Output (DO)	2				0	
Modbus Device Support	✓				✓	
Modbus Interface	RS485				Both RS232 & RS485	
Modbus Meter support	Programmable Addresses & Read Command				Programmable	
Floating Point Registers	8				4	
Integer Registers	8				4	
Temperature Channel	2				1	
Humidity Channel	1				0	
Internal Memory	4MB				4MB	
Logging Records	~60000				~60000	
SMS Alarm Text	User programmable text				User programmable text	
Local Setup	USB-C port				RS232 port	
Data Logging Interval	5 ~ 60 minutes					
Data Upload Interval	1 minute ~ 24 hours					
Data Upload	On Schedule / Alarm Triggered / Manual Check by SMS or GPRS					
IP Connection	Dynamic / Fixed					
Protocol	UDP / TCP					
Data Transmission	GPRS / SMS					
SMS & GPRS Alarm	Triggered on high/low level in AD, DI or Modbus Data					
Remote Command	Support remote command via SMS or GPRS					
Quectel 4G Module	4G LTE - US, Europe, Optional Worldwide					
NB-IoT Module	NB-IoT [European, US] (GSX8-LNB only)					
Bundled Software Free	Standard Edition					
Setup Software	Local (USB port or RS232) & Remote (4G Modem GS460)					
Centre Software	Data Receiving Software, support txt database, max. 99 data loggers					
Optional Software	Premier Server Client Software Package					

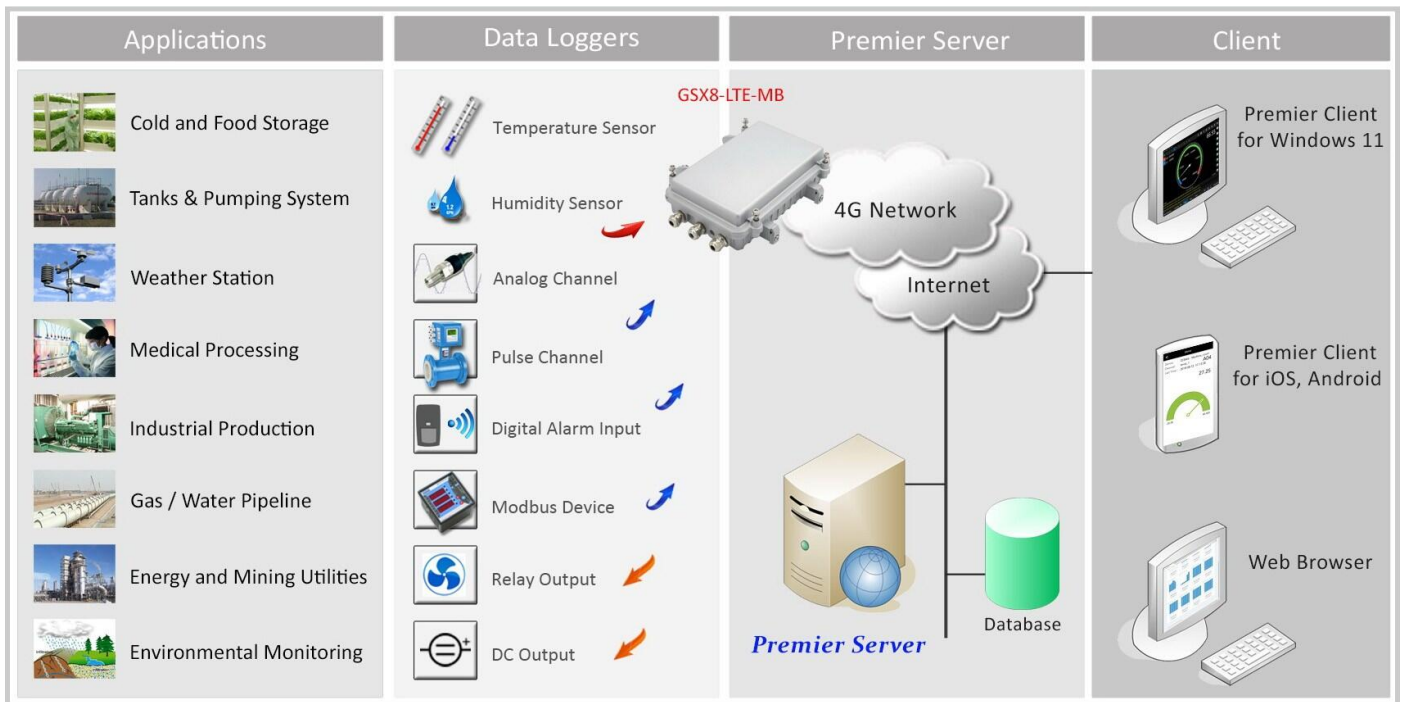
Premier Server & Client (Paid Add-on)

Cloud Service Hosting ready

Premier Server Software



- ◆ Receiving data via LAN Internet & SMS remotely
- ◆ Display of live data and devices status in real time
- ◆ Maintaining the record database in xml files
- ◆ Maintaining the database of GPRS data loggers identities and properties
- ◆ Display status of server, data loggers and clients
- ◆ Interface for user development and application
- ◆ Alert user via TCP / Email / SMS
- ◆ Grouping of user/client/email/SMS phone numbers
- ◆ Client software support
- ◆ Support MySQL / SQL / Oracle Databases

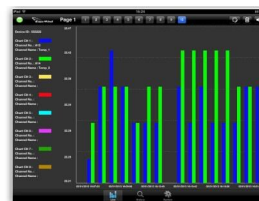
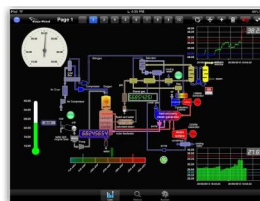


Premier Client App (Win11, iOS, Android)

- ◆ Downloading live or historical data from Server
- ◆ Real time monitoring of a number of data loggers
- ◆ Data trend review
- ◆ Web based Client
- ◆ Alert users when any channel is too high/low
- ◆ Alert users on screen and buzzer
- ◆ Alert customers via email or SMS
- ◆ 5 modes of data display



NO.	Client Code	Header	Device ID
1	CKY-KCV-MVY-XUK	STA	111000
2	CKY-KCV-MVY-XUK	STA	111000
3	CKY-KCV-MVY-XUK	STA	111000
4	CKY-KCV-MVY-XUK	STA	111000
5	CKY-KCV-MVY-XUK	STA	111000
6	CKY-KCV-MVY-XUK	STA	111000
7	CKY-KCV-MVY-XUK	STA	111000
8	CKY-KCV-MVY-XUK	STA	111000
9	CKY-KCV-MVY-XUK	STA	111000
10	CKY-KCV-MVY-XUK	STA	111000
11	CKY-KCV-MVY-XUK	STA	111000
12	CKY-KCV-MVY-XUK	STA	111000
13	CKY-KCV-MVY-XUK	STA	111000
14	CKY-KCV-MVY-XUK	STA	111000
15	CKY-KCV-MVY-XUK	STA	111000
16	CKY-KCV-MVY-XUK	STA	111000
17	CKY-KCV-MVY-XUK	STA	111000
18	CKY-KCV-MVY-XUK	STA	111000
19	CKY-KCV-MVY-XUK	STA	111000
20	CKY-KCV-MVY-XUK	STA	111000
21	CKY-KCV-MVY-XUK	STA	111000
22	CKY-KCV-MVY-XUK	STA	111000
23	CKY-KCV-MVY-XUK	STA	111000
24	CKY-KCV-MVY-XUK	STA	111000



SPLIT

Meter & Chart View
2x2, 3x3

DATA LIST

Listing of
devices and channels

HMI

Human Machine
Interface

CHART

Comparison of
channels & devices

Dashboard

64 Channels
Single Screen Display