

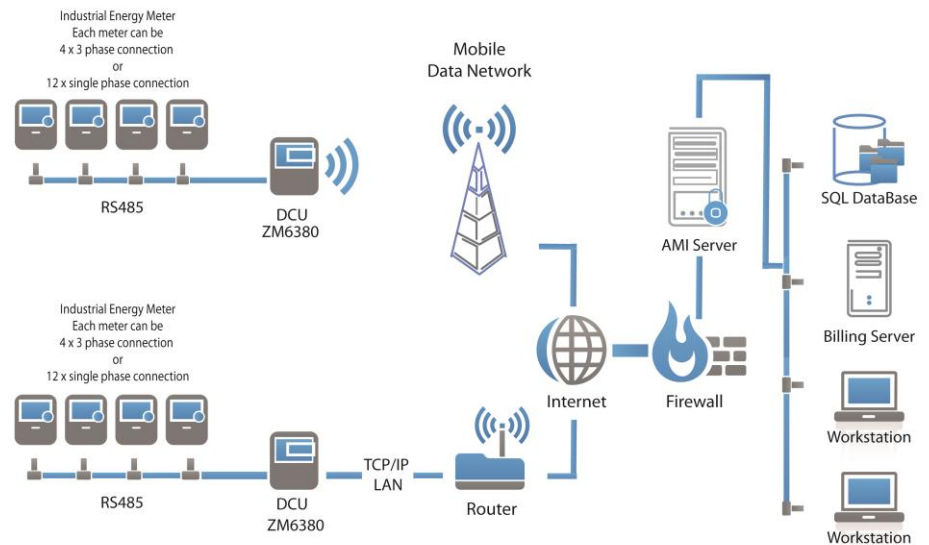


ZM6300 Energy Monitoring System

ENERGY MONITORING SYSTEM

A COST EFFECTIVE ENERGY MONITORING SYSTEM TO RECORD ENERGY CONSUMPTION OF SHOPPING MALL, HOSPITAL, HOTEL, ETC.

The ZM6300 is a low cost energy monitoring system to collect the real time data of energy consumption for users to do the planning on power plant development, energy savings, etc. The system contains a number of 3-phase industrial energy meters, a data concentrator (DCU) and a PC or a server connected via broadband, or mobile data network. Software is developed in the PC or Server for presenting and analysing the data collected.



Specification of key system components

Data Concentrator Unit



Key Features

- Embedded Debian Linux platform
- APIs available for customer applications development
- Industrial grade design with watchdog monitoring
- Support IEC62056-21 (formerly IEC 61107) meter protocol & Modbus
- Support LAN, RS232, RS485, UHF Short Range Radio Data (optional), 3G mobile data (optional)
- Isolated RS232 and RS485 interfaces
- On-board SD card for backup data storage
- Real-time clock
- LED indicators for field diagnosis & testing
- Simple design for easy field installation
- Supplied with a wall-mount casing graded in IP53

Technical Specification

Processor and memory

MCU	: Sitara AM3358BZCZ100, 1GHZ, processor.
SDRAM Memory	: 512MB DDR3L, 800MHz
Onboard Flash	: 4GB, 8bit Embedded MMC
Operating System	: Debian Linux

Data Communication

RS232/RS485 (local and WAN)

Data Rate : 2.4kbps – 115.2 kbps

Ethernet LAN

Standard : IEEE802.3

Data Rate : 10Mbps to 100Mbps

Connector : RJ45

Electrical

Power supply : 220Vac \pm 5%

Connection : Double-screw terminal

Mechanical

Dimensions : 235 mm x 166 mm x 85 mm

Weight : approx. 1500g

Environmental

Operating Temperature : -20°C – +85°C

Storage Temperature : -65°C – +150°C

Compliance

ROHS and CE

Industrial Energy Meter



Technical Specification

Rated current	Direct: 5(63) Or 5(6)A via CT	Connection mode	3-phase 4-wire
Rated voltage	AC 220V ph-N or 120V ph-N (Optional)	Pulse output	2 channels (Settable for kWh or kvarh)
Frequency	50/60Hz (Optional), range: 47~65Hz	Starting Current	0.4%Ib (direct connect), 0.2%Ib (via CT)
Burden	<2W	Power Frequency withstand voltage	2kV
Power supply	Self supply (Note: RS485 won't work, when connect 1 phase,) For 220Vac (L-N), range: 184~276Vac For 120Vac (L-N), range: 96~144V	Accuracy	kWh accuracy: class 1.0
Communication	RS485 serial, Modbus-RTU Baud rate: 2400, 4800, 9600 Address: 1~247	Pulse constant	1000
Environment	Operating temperature: -20℃~ +55 ℃ Storage temperature: -40℃~ +70 ℃ Humidity: 5%~95% non-condensing	Dimension	72*100*65mm
		Standard (EMC)	Electrostatic discharge immunity test IEC 61000-4-2, Level 4 Radiated immunity test IEC 61000-4-3, Level 3 Electrical fast transient/burst immunity test IEC 61000-4-4, Level 4 Surge immunity test (1, 2/50μs~8/20μs) IEC 61000-4-5, Level 4 Conducted emission EN55022, Class B Radiated emission EN55022, Class B

	Parameter	Accuracy	Resolution	Measuring Range
Display data, can also be read via MODBUS	Voltage	0.2%	0.01V	For 220Vac (L-N), range: 184~276Vac For 120Vac (L-N), range: 96~144V
	Current	0.2%	0.001A	Direct: 5(63), Via CT: 5(6)A
	Active power	0.5%	0.1W	0~1MW
	Power factor	0.5%	0.001	-1.000~+1.000
	Frequency	0.01	0.01Hz	47~65Hz
	Active energy	Class 1	0.1kWh	0~9999999.9 kWh
	Reactive energy	Class 2	0.1kvarh	0~9999999.9 kvarh
only can be read via MODBUS	Reactive power	1.0%	0.1Var	0~1Mvar
	Apparent power	0.5%	0.1VA	0~1MVA