

Data Concentrator Unit

M61-01

PRODUCT INFORMATION

M61-01 is a smart data concentrator that collects consumption data from energy meters assigned to it and monitor live meter readings in Cloud using a Cloud Server.

It is a Linux based DCU with RF 6LoWPAN, Zigbee and PLCC.



KEY FEATURES

- Built in DLMS Client
- Manages up to 1000 meters node on (RF1-6LoWPAN, RF2-Zigbee and PLCC)
- Detects fault of device and log data and alerts to Cloud/MDAS
- Alerts during power outages and back battery for 10 days
- During no network, the data is stored up to 45 to 60 days of meter data
- Inbuilt Local Server and Scripts for Monitoring and Configuring system
- Meter Protocol Supported: DLMS over RF and PLCC, Modbus (ASCII and RTU), Custom Protocol for Legacy Meter
- Meter Interface 6LoWPAN, Zigbee, PLCC Isolated RS232 and RS485
- MDAS/Cloud Interfaces: 3G, 4G, HSPA+, GSM, GPRS, 10/100 Ethernet, Wi-Fi
- Meter data: Instantaneous Parameters, Load Survey, Tamper, Energies, etc.
- USB Plug and Play based Data Backup
- LED indicators for field diagnosis and testing
- Unit is suitable for poll/wall/rack mounting

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DATA CONCENTRATOR UNIT

SPECIFICATIONS



VOLTAGE

- Rated Voltage: 120-270V AC at 50Hz

POWER CONSUMPTION

- Voltage circuit: 12W

ENVIRONMENTAL

- Normal Operating Temp: -30°C to +70°C
- Relative Humidity: 20-90% RH non Condensing

COMMUNICATION INTERFACE

- RF (865MHz to 920MHz)
- GSM (2G/3G)
- PLCC (FCC/Cenelec_A)
- WLAN
- RS485
- RS232

BATTERY

- External battery: 4.8V
- Capacity: 700mAh
- Battery life: 5 years

DATA STORAGE

- 4GB of non-volatile memory
- Life of data: 5 years

STORAGE CAPACITY

- Storage capacity: 16/32GB
- Daily energy data: 96 readings
- Monthly data: 3750 readings
- Hourly energy data: 4 readings
- Record of events: 24 readings per day

MAIN PANEL DISPLAY

- LCD Display dimension: (60mm x 60mm)
LCD Display (Pixel): 160 x 160 pixels

LED OUTPUT

- Battery Charging
- Power Supply Fault
- PLCC Power
- PLCC Transmission
- GPRS Status
- GPRS Net
- LAN Link
- LAN Act

PARAMETERS SETTING

- Network communication parameter
- Meter reading parameter

FUNCTION

- RS485 data collection
- RF-6LoWPAN communication
- PLCC communication
- GPRS uplink channel
- Data reporting initiatively

SECURITY

- Top cover seal: 2 factory sealable screws
- Terminal cover seal: 2 field sealable screws
- Modem cover seal: 1 field sealable screw

TERMINAL TYPE

- Fixed type terminals

PHYSICAL PARAMETERS

- Dimension: 290mm x 180mm x 95mm
- Weight: 1250 g.
- Mounting Type: Projection

HARDWARE

- Processor-Renesas RZ A1H
- Linux 4.9 Latest Kernel based System
- Single Core ARM Cortex A9 @ 400MHz
- Open VG1.1 2D graphics accelerator
- SD-RAM: 128 MB
- EMMC Flash: 1 GB (Expandable)
- NOR Flash: 1 GB (Expandable)
- Internal Local Server on JAVA

6LOWPAN, RADIO MODULE, 28 DBM

High Performance, 920-925MHz Transceiver Module Consuming Industry's lowest Power, integrated with Renesas RL78/G1H, complying IEEE 802.15.4 e/g Standards, developed for 6LoWPAN (IPV6 over Wireless Personal Area Network)

- Renesas RL78/G1H, 16 bit MCU with integrated sub GHz Transceiver
- 2FSK/4FSK with support for data rates 50/100/200kbps
- Factory calibrated High TX Power of up to 28 dBm and RX Antenna diversity
- Industry's lowest power consumption in standby mode (6mA at 3.3V)
- Simple UART interface for easy OEM integration

MDAS-CLOUD CONNECTION PROTOCOL

- Direct Amazon Web Service (AWS) IoT with MQTT protocol
- MQTT & TLS 1.2
- HTTP/HTTPS Connection
- TLS 1.2/SSL encryption
- AWS Lambda integration to Cloud UI
- Custom Cloud Support
- RS232: 9600bps, 8E1



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