



DCU / GATEWAY SOLUTIONS

The DCU/GATEWAY Solution is an intelligent device with built-in RS232, RS485 and RF modules to acquire data from clusters of energy meters or MFMs using inbuilt Modbus/DLMS Software's. It also equipped with GSM/GPRS module to transmit the data to the remote data acquisition server. DCU is based on an ARM Cortex-A5 processor having 512MB of DDR2 memory and expandable NAND Flash memory up to 2GB. Edge/ Sensor data can be stored locally using the onboard SD card option. The cloud interface is LTE with a 2G/3G fallback.

FEATURES

- ◇ SANDS DCU for AMR-AMI solutions is an optimized concept based on different communication interfaces Like RS232, RS485, RJ45, LPRF (ZigBee), GSM/GPRS
- ◇ Simple and compact design for easy installations
- ◇ Support for DLMS and Modbus meters
- ◇ Inbuilt battery-backed RTC
- ◇ Automatic over the air configuration and firmware updates (FOTA)
- ◇ Standalone AMR performance & Automatic profile download at specified intervals
- ◇ Compatible with various standard existing meters directly interfaced
- ◇ Real-time tampering & outage alerts/notifications to MDAS server / Mobile phones of concern in-charges In the field through SMS
- ◇ Automatic GPRS connection (no AT commands required) and watchdog for reliable Communication
- ◇ Compatible with all standard 2G/3G/4G SIM cards
- ◇ In-built power supply (single-phase/three-phase) with battery backup
- ◇ Communication to central server via GSM/GPRS & Ethernet
- ◇ Inbuilt SD card for backup data storage
- ◇ Supports JSON, text, CSV, ASCII, binary file formats
- ◇ Easy web interface for web configuration
- ◇ USB over Ethernet interface for wired configuration / debugging
- ◇ Remote configuration using SSH client with secured public / static IP address
- ◇ Inbuilt data storage to store data on network outage, stores up-to 8GB data – which is approx. 60 days meter data
- ◇ Two-way communication, facilitating monitoring, controlling and administration
- ◇ Protection against harsh environment, EMI-EMC, Surge
- ◇ Simultaneous data access from multiple nodes
- ◇ Built-in Encryption for data security
- ◇ It can be used as IoT Gateway

Applications

- ◇ Automatic Meter readings (Electricity, Gas, Water meters)
- ◇ Power Distribution and automatic load control
- ◇ Energy Auditing
- ◇ Home automation Tariff Switching and automatic load control
- ◇ Tariff Switching and automatic load control
- ◇ Industrial Automation



TECHNICAL SPECIFICATION

HARDWARE & SOFTWARE

- ◇ Operating System: Linux v4.1
- ◇ 32bit ARM CORTEX A5 processor, Speed Upto 512Mhz
- ◇ 256MB DDR2 RAM, 512MB Flash (optional up to 512MB DDR2 RAM / 2GB FLASH)
- ◇ USB: 2.0, Other: Ethernet 10/100 Mbps, RS232
- ◇ Time Synchronization - MDAS Server, GPRS network, GPS (optional), SNTP
- ◇ LED Indications: Network, Power and RF Data Communication
- ◇ Built-in Encryption for data security
- ◇ Inbuilt Real Time Clock with battery backup
- ◇ Connectivity: 4G fallback to 3G/2G
- ◇ External SD storage up to 16GB/32GB

COMMUNICATION INTERFACES

- ◇ Communication – Wireless (GPRS)
- ◇ TCP/IP based communication over Ethernet
- ◇ Protocol for Communication – DCU to MDAS: TCP/IP based socket communication/FTP
- ◇ DCU to Meter: MODBUS/DLMS/Legacy protocols

NETWORK INTERFACES

- ◇ 3/1.8v SIM Interface
- ◇ Internal SIM card holder
- ◇ Accepts standard SIM card/Micro
- ◇ TCP/IP Server, TCP/IP Client, UDP, HTTP, FTP, PPP, CURL, DHCP etc

EMI/EMC SPECIFICATIONS

- ◇ Surge Immunity as per IEC 61000-4-5
- ◇ Fast Transient Burst as per IEC 61000-4-4
- ◇ Electrostatic Discharge as per IEC 61000-4-2

POWER SUPPLY

- ◇ 100 V -270 V (AC/DC)
- ◇ Over current protection
- ◇ Power reverse polarity protection

ENVIRONMENTAL

- ◇ Temperature: -10 °C to +70 °C
- ◇ Operating Humidity < 95%, Non-Condensing

Prices are subject to actual requirements, contact sales for pricing

Product development is continuous process- Specification Subject to change
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