# Indoor Energy Metering Solutions by BPL — DACTRAN



**CCU** ↔ **MIU** ↔ **METER**

**MIU** ↔ **METER**

**MIU** ↔ **METER**

GSM/ GPRS network   VSAT network   PSTN network

SERVER          CLIENT PCs

## DACTRAN SYSTEM FEATURES

- Remote substation energy meter reading.
- Reads Different make / model three Phase tri vector meters.
- Meter data push & pull mode of operation.
- Meter data collection, aggregation, archiving & reporting.
- Internal Memory to have Meter Data backup.
- Provision to have Data backup on USB drive
- Remote sub station device control.
- Supports VSAT/PSTN/GSM/GPRS  Links
- Centralized System configuration.
- Embedded substation equipment for deployment Flexibility & Expandability.
- 4 part Modular Architecture (HUB, MIU, CCU and CSS).
- 48VDC / 220VAC Powered station Modules.
- Two Level Password Controlled Access

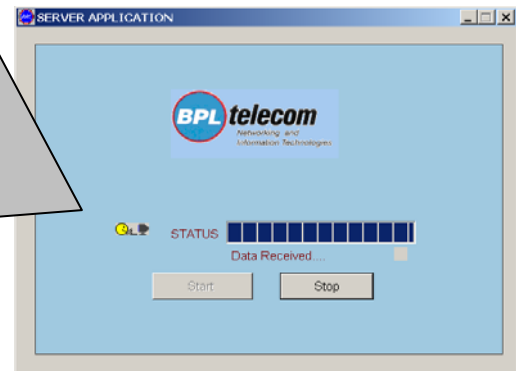# Indoor Energy Metering Solutions by BPL

# DACTRAN
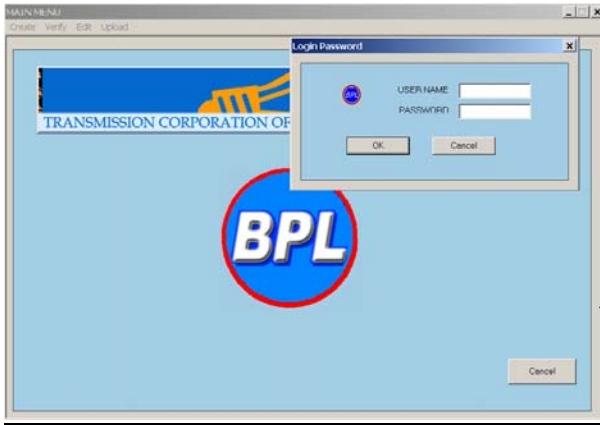
## CONFIGURATION MANAGER

- GUI based management console.
- Password protected data entry system.
- Administrator control.
- Facilities for updation, verification and validation of configuration data.
- Provision for adding new users.
- Provision for changing password.
- Programmable station parameters.
- Remote/local access to CCU for control.

## DATA MANAGER

- Simultaneous Data Collection from multiple locations.
- Hierarchical data organization.
- Date/Time stamped data.
- CSV (Comma Separated Value) format for data:
- Energy parameters
- Active power (lead/lag)
- Reactive power (lead/lag)
- Apparent power (lead/lag)
- Frequency
- Power factor
- Instantaneous voltages (ryb)
- Instantaneous currents (ryb)..etc
- Perform mathematical computations (CTPT) on data
- Alarm trigger based on data analyses
- Password protected Closure of service.

## VIEW MANAGER

- Client applications for real time data viewing.
- User selection of Station Name and corresponding Meter Id for display
- Displays most recent fetched data from meter
- Auto Refresh feature
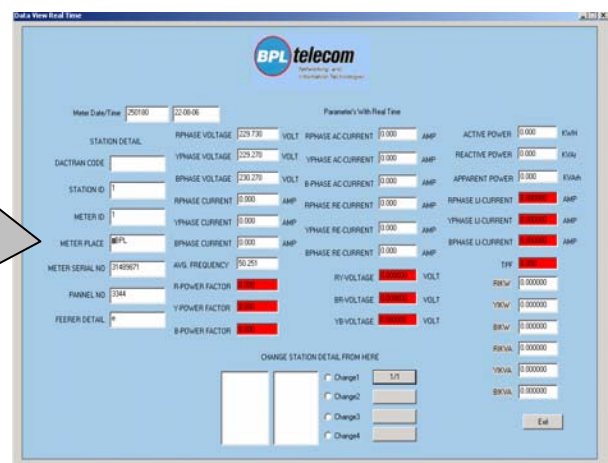
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# DACTRAN

## STATION C&M MANAGER

- Act as control and monitoring terminal
- Monitor & Control digital i/p, analog i/p and digital o/p channels of station remotely.
- Password protected data entry system for digital o/p channel.
- Error& Activity Logs.
- Graphical Component like Digital Display for Digital i/p & o/p.
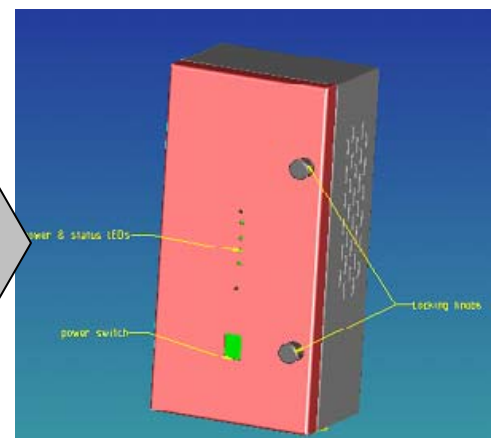- Error Messages displayed on the GUI.
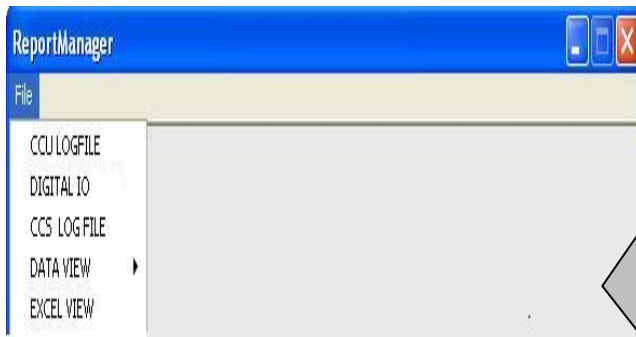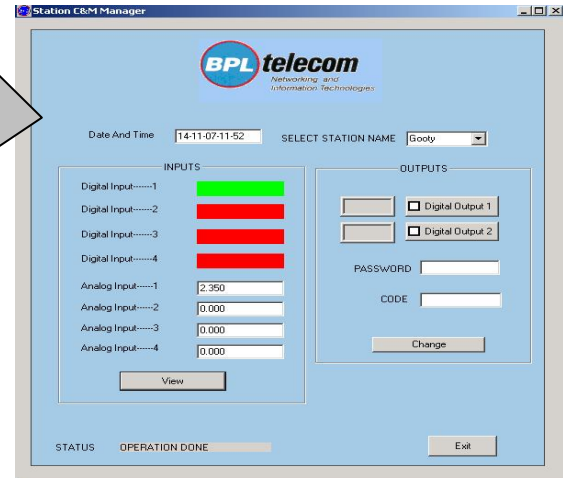
## REPORT MANAGER

- Invoked only from server machine
- View system log files for analysis:
- CCU Log file generated by CCU card
- Digital I/O log file generated by Station C&M Manager (client)
- CSS Log file generated by various modules like data manager, view manager etc
- View CSV files generated by data manager
- View Data of a particular meter of any particular station that is generated by Data Manager between two given dates.
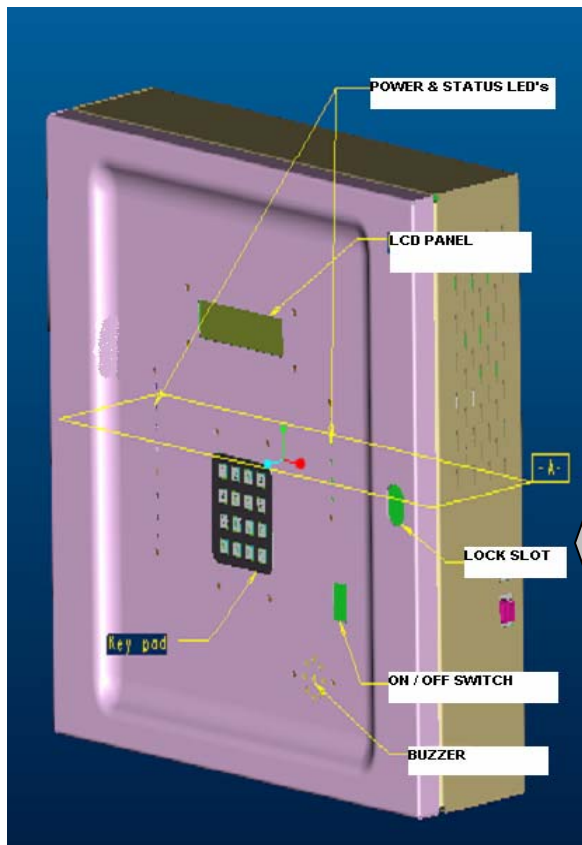- Report Print Facility

## MIU FEATURES

- **8 bit Flash MCU.**
- **Protocol converter firmware to match Multi vendor energy meters**
- **Supports optical communication port.**
- **1 RS232 PORT.**
- **1 RS485 PORT.**
- **4 Diagnostics LED's.**
- **Powered from 48VDC/230VAC**
- **Metallic wall mountable Enclosure.**
- **Analog & Digital Inputs & Digital O/ps**

Labels on image: POWER & STATUS LED's, LCD PANEL, Key pad, LOCK SLOT, ON / OFF SWITCH, BUZZER

## CCU FEATURES

### Hardware

- 32 Bit ARM 920T Controller
- FLASH ROM
- SDRAM.
- 2 RS232 PORTS.
- 1 USB Device Port
  - Support USB Printer
  - Support USB Pen drive
- 1 RS485 PORT.
- 1 Ethernet port.
- 4 digital input port.
- 2 digital output port.
- 16 X 2 LCD Display.
- 4 X 4 Key board with Password protected access.
- 9 Diagnostics LED's.
- Built in DC-DC Converter (48V, 5A).
- Metallic wall mountable Enclosure.

### Software

- Linux OS
- Support Modbus Protocol on MIU interface.
- MIU Configuration on power up.
- Supports for PC console for firmware down load, configuration & Debugging.
- Supports addressing of upto 32 MIUs.
- Support GSM/GPRS ,PSTN Modem communication.