

Pre-Paid Meter and CIS



The Digital "PrePay" Electric Collar (P2EC)

offers the next level of support to address the emerging need of providing safe management of high risk electric customers. The P2EC uses the existing wireless infrastructure of the cellular networks to provide two-way communications from a central command and control center to the residential electric customer.

The P2EC is a Collar-based sub-meter that monitors power consumption at a customer's location. The usage is fed into an imbedded processor which manages the usage rate based the power consumption. The onboard intelligence in the processor collects and monitors the power consumption based on 15-minute read intervals. The processor calculates the estimated power remaining every 5 seconds and sends alerts to Command and Control for customer notification.

P2EC has the ability to assist the smallest to the largest electric providers with managing the cost associated with High Risk Electric Customers.

DEPLOYMENT SIMPLICITY

Using industry leading technology, the Collar is independent of any utility or TDU's proprietary infrastructure. With its "Plug-n-Play" functionality, it can be installed and operational within minutes.

NATIONAL NETWORK OF PAYMENT LOCATIONS; INTERNET AND PHONE PAYMENT OPTIONS

By leveraging our extensive relationships with payment processing partners through our Middleware Interface and Pre-Payment Module, customers' payments can be made 24 / 7 at thousands of statewide locations. In addition, payments can be made via the Internet or a standard or cellular phone.

USAGE AND POWER BALANCE NOTIFICATIONS

To support the timely sales of electrical power, the Collar will send alerts via standard Email, Cellular Text messages or automated phone calls. This allows customers to instantly receive updated information on the status of their Usage and Power Balance.

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FEATURES

- Remote control of electric meters without the need of proprietary infrastructures.
- Download extensive rate structures on a customer basis including TOU, variable rates, fixed, and "FIFO."
- Totally "stand alone" Plug-n-Play with real-time reads and remote capability, including standard 15-minute data acquisition and reporting.
- Completely internet-based with no software or office computer hardware systems required.
- Weather emergency by-pass included.
- National access to payment locations for "recharging" of power at current rates.
- ANSI Standards Submeter for accurate usage and cost management.
- Industry standard connection for quick installation.
- No capital outlay; revenue sharing programs available.

SPECIFICATIONS

- 128 X 64 LCD
- Remote Initiation of Disconnect/ Reconnect
- 200 Amp Disconnect
- Multi Band Cellular Radio
- Integrated SIM
- ANSI Standard Sub Meter
- ZigBee Radio for Home Area Network Support (HAN)
- Available In-Home Display
- ANSI C12x Certification
- Industry Standard Packet Encryption
- -30 to +85° C operational range
- Revenue Grade Metering

Communications Cellular

- GSM + GPRS class 10
- Quad band 850/900/1800/1900
- Real Time Clock with Calendar
- Integrated SIM
- SPI and I2C Interfaces
- Two Analog to Digital Converters
- RoHS Compliant
- Interfaces (not all used in collar)
- Power Supply
- Serial Link
- Analogue audio
- PCM audio
- SIM Card
- Keyboard
- USB 2.0 Slave
- Approvals R&TTE, CE, GCF, FCC, PTCRB, China RTE.
- 100 Pin I/O connector

Processor

- ARM 946 /DSP
- 26-104 mHz
- Up to 88 MIPS in active GSM Stack
- Set and Reset Latching time 20ms Max.

ZigBee

- Supports Utility Private HAN
- 2.4 GHz
- IEEE 802.15.4 Compliant
- 100mW
- T/R Switch
- 128kB Flash Memory
- 5kB of SRAM Memory
- AES Encryption Accelerator
- 32.768kHz Crystal

Display

- 5 Line 128 X 64 Dot Backlit LCD
- Screen Size 50 X 24 MM
- -20° to 70° C Operating Temperature
- 6:00 Viewing Angle
- Polarizer: Transflective, Positive

Multifunction Metering IC

- IEC 60687/61036/61268 and IEC 62053-21/-22/-23 High Accuracy Standards
- Active, reactive and apparent energy, sampled waveform, current and voltage rms
- Less than 0.1% error in active energy measurement over a dynamic range of 1000 to 1 @ 25° C



- On Chip Programmable threshold for line voltage surge and SAG and PSU supervisory
- Digital calibration for power, phase and input offset
- On Chip temperature sensor
- SPI compatible serial interface
- Pulse output with programmable frequency

Disconnect Relay

- Max. Switching Voltage 440VAC
- Max. Switching Current 200A
- Max. Switching Power 55400VA/5600W
- ANSI C12.1 Compliant
- RoHS Compliant
- 4kV Dielectric Strength
- Switching Power up to 55.4kW

Housing

- One-piece injection-molded UL recognized polycarbonate shell
- Patented Safety Shield prevents accidental contact with energized components and assures proper alignment of blades
- Pre-Molded Slots for Circuit board mounting
- Optional sealing ring available

Patents Pending