



## CPM 6000 Key Features

- Enables devices other than electricity meters to integrate into Echelon's proven three-tier smart metering and grid system
- Complete OSGP implementation
- Supports remote firmware upgrades and reconfiguration
- M-bus master interface supports up to 4 M-bus devices
- 2 pulse inputs for reading gas or water meters
- 16 channel data logging and load profiling
- Control signals for time-based and on-demand direct load control
- Comprehensive event, outage, and informational logging

## Transform Your Product into a Smart Grid Sensing and Control Point

More than just a communications chip, Echelon's CPM 6000 Control Point Module is an embeddable control and communications subsystem that enables any device connected to the low voltage grid to become a sensing and control point within the smart grid quickly and cost-effectively. Extend the smart grid beyond the meter to include devices such as power quality sensors, network gateways, load control modules, solar inverters, and electric vehicle chargers. The CPM 6000 includes complete implementations of the ETSI TS 103 908 Power Line Telecommunications (PLT) BPSK Narrow Band Power Line Channel for Smart Metering Applications and the ETSI GS OSG 001 Open Smart Grid Protocol (OSGP) specifications for guaranteed interoperability with one of the most widely deployed smart grid platforms worldwide.

## Reduce Development Time, Expense and Risk

The CPM 6000 is an integral sub-system within Echelon's Energy Control Networking Platform, providing a complete solution with field-proven reliability, scalability, and end-to-end security without the associated development time, risk, or expense. Open interfaces at the enterprise, edge and field enable you to build differentiated offerings and value-added solutions. A wide array of I/O interfaces support easy integration to your smart grid device and provide the ability to gateway to other devices and systems. Through the secure Multipurpose Expansion Port (MEP) serial interface your device can read and write OSGP data and events that are reliably delivered end-to-end to the enterprise. A built-in M-bus master interface supports up to four M-bus slave devices. Two configurable pulse inputs can be used to read gas, water or other meters with pulse outputs. Seven digital outputs report status and can be used to drive LEDs or other control logic.

## Expand Your Opportunity with a Proven, Market-Leading Smart Grid System

Millions of smart meters and other smart grid devices deployed in some of the toughest environments worldwide delivering daily communications rates of 99.7 – 100% can give your customers confidence that the systems you build and deploy will work reliably on day one and for years into the future. The CPM 6000 implements both the ETSI TS 103 908 high-performance narrow band power line (PL) and the ETSI GS OSG 001 smart grid device application layer protocol – two proven, published specifications that ensure your products are fully interoperable with any OSGP based systems from vendors around the world.

## Specifications

### Network Communication

CENELEC A-band-compliant power line communication (with user-provided external coupling circuit) complies with ETSI TS 103 908 Power Line Telecommunications (PLT) BPSK Narrow Band Power Line Channel for Smart Metering Applications. Application layer compatible with the ETSI GS OSG 001 Open Smart Grid Protocol.

### Power Input

12V +/- 10% DC @ 70 mA typical, 350 mA while communicating. External 3V lithium battery is required (2.5V minimum, 3.6V maximum).

### Integration Connector

48 pins (24x2), 2mm pitch, meant for soldering.

### I/O interface (TTL-level only)

1 M-bus master interface that can manage up to 4 slave devices.

1 MEP serial interface to connect to devices with a serial interface.

2 pulse inputs for reading gas or water meters.

2 digital inputs for push button with pre-assigned functionality:

- M-bus auto discovery start or finish.
- Demand response event override.

1 set of digital outputs to drive a control relay.

1 tamper switch input.

7 status LED drive signals:

- M-bus auto-discovery mode.
- M-bus 1 device assigned.
- M-bus 2 device assigned.

- M-bus 3 device assigned.
- M-bus 4 device assigned.
- MEP device registered.
- PL communication signal received.

1 set of signals for optical port interface.

1 set of disconnect control signals.

### Real-Time Clock

Real-time clock accurate per IEC 62052-21/62054-21 to +/- 0.5 seconds per day.

### Temperature

Specified operating range: -40° C to +85° C  
Specified storage range: -40° C to +85° C

### Humidity

<= 95% RH non-condensing.

### Board Dimensions

68mm x 38mm. Designed for use in commonly available 4M DIN housing.

All specifications subject to change without notice