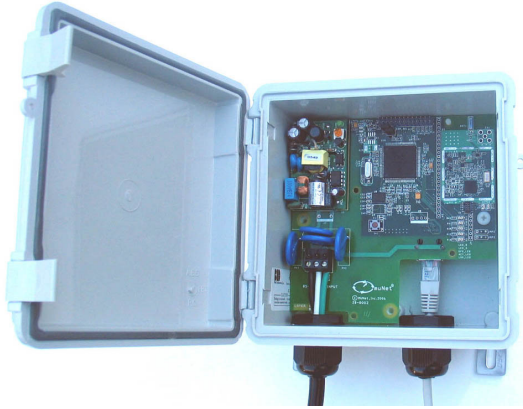




Powering utility applications with  
Open Standards  
Including IP and 802.15.4/Zigbee

## WebGate® TotalPoint™ Gateway Creating the WebGate IP Extension Network



### Always-on Two-way Mesh Network

The WebGate TotalPoint Gateway plays a key role in meter data collection, system security, and the creation of the WebGate IP Extension Network. TotalPoint Gateways create the WebGate IP Extension Network by establishing a standards-based IEEE 802.15.4 and ZigBee mesh network LAN for meter communication and data collection from TotalPoint Meter Interface Modules (MIMs).

### Data Collection & Network Management

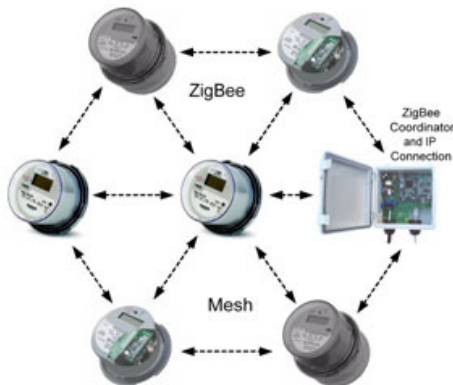
In addition to acting as ZigBee coordinators and “trust centers” for the IP Extension Network, WebGate TotalPoint Gateways responsibilities include data mirroring, network status monitoring, and exception report forwarding.

### Backhaul data over any IP Network

WebGate TotalPoint Gateways can connect to any IP-based Broadband network for meter data backhaul and real-time command and control. WAN options include WiFi, Broadband Over Powerline, Cable Modem, Ethernet, Direct Fiber and more.

## WebGate® TotalPoint Gateway Features

### WebGate TotalPoint Topology



- Supports residential and commercial and industrial metering applications
- Enables advanced load management via direct relay and thermostat control
- All System components hold metering data in non-volatile memory
- Full range of security and encryption options including 128-bit AES encryption
- Time Client to RFC868/SNTP/NTP Servers
- SNMP v1.0 and v2.0
- DHCP or Static IP Addressing

## WebGate TotalPoint Gateway Specifications

### Physical Specifications

#### Operating Environment

- Temperature: -40° to +85°C
- Humidity: 0% to 95% non-condensing
- Transient / Surge Suppression
- 85 VAC to 255 VAC Power Input

#### Complies with Industry Standards

- FCC Part 15

### ZigBee Specifications

#### RF Characteristics

- Data Rate: 250kbps
- Frequency: 2400 MHz to 2483.5 MHz, 16-5 MHz channels
- RX Sensitivity: -95 dBm nominal
- Adj Channel Rejection (15.4): >35db
- Alt Channel Rejection (15.4): >40db
- 802.11g Rejection (+10/-10 MHz): >40db
- TX Power: -32dbm to +20dbm (100mW)

# WebGate TotalPoint Gateway WAN Connectivity Options

## Ethernet/Fiber Direct

### Ethernet Specifications

#### Standards

- IEEE 802.3
- IEEE 802.3x Full-duplex flow control support

#### Data Rate

- 10/100 Base-T Ethernet (Connects directly to UTP)

#### LED's

- Link, Speed, Duplex

#### Applications/Network Compatibility

- UTP Ethernet to Hub/Router/LAN connection
- Fiber Media Converter
- DSL
- Motorola Canopy

## Cable Modem (HFC)

### Cable Modem Specifications

#### DOCSIS Cable Modem

- Standard: DOCSIS 2.0
- Physical speed: Supports maximum DOCSIS transfer rates
- LEDs: Power, Cable, Upstream/Downstream/Online

#### Receiver

- Demodulation technique: 64QAM, 158QAM, 256QAM
- Bandwidth: 6MHz
- Frequency range: 112-858MHz agile, 62.5KHz steps
- Input Signal Level: -15dBmV to +15dBmV

#### Transmitter

- Modulation technique: QPSK, 16, 32, 64, 128 QAM
- Bandwidth: 200, 400, 800, 1600, 3200, 6400 KHz
- Frequency range: 5MHz to 42MHz agile, in 1Hz steps
- Output signal level: +8 to +58dBmV (QPSK), +8 to +55dBmV (16QAM)

## Broadband Over Powerline- HomePlug

### HomePlug Specifications

#### Standards

- IEEE 802.3
- IEEE 802.3u
- HomePlug 1.0

#### Data Rate

- Up to 14 Mbhs

#### LED's

- Power; Powerline: Link, Activity; Ethernet: Link, Activity

## Broadband Over Powerline- DS2

### DS2 Specifications

#### Standards

- IEEE 802.3
- IEEE 802.3u
- DS2

#### DS2 Chipsets

- 9001, 9010

#### Data Rate

- Up to 200 Mbps

#### LED's

- Power; Powerline: Link, Activity; Ethernet: Link, Activity

## WiFi

### WiFi Specifications

#### WiFi – IEEE 802.11b Compliant Design Standard

- Chip Set: GSV / Intersil Prism III
- Data Rate:: 11, 5.5, 2, 1 Mbps (CCK, DQPSK, DBPSK) Auto rate control
- Channels: 11 Channels for US / CA ( center frequency: 2412 to 2462 MHz)

#### Receiver

- Sensitivity: -84dBm at 11Mbps

#### Transmitter

- Output Power:
  - Min: 16dBm (39.8mW).
  - Typ: 18dBm (63.1mW).
  - Max:20dBm (100mW)

#### Other

- Security: 64bit/128bit WEP key, MAC filtering, supports hidden ESSID
- Inquire about WiMAX Solutions
- Inquire about solutions for 802.11g/a Standards

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