



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

WebGate® TotalPoint™ Meter Interface Module Integrated with the Sensus™ iCON™ Residential Meter

ZigBee-based Mesh Networking Standards

WebGate TotalPoint Meter Interface Modules (MIMs) utilize IEEE 802.15.4 and ZigBee wireless networking standards to create a robust mesh network specifically designed to support the advanced metering and load management applications for next generation AMI programs. Located under-the-glass of the Sensus iCON, TotalPoint MIM's operate as full function ZigBee devices creating a two-way mesh network with automatic routing and self healing properties.

Advanced Metering and Load Management Applications

Total Point MIMs enable not only traditional electric metering applications, such as automated retrieval of kWh consumption, billing and interval data, and tamper detection, but also offers a wide range of options targeted at other utility applications. Voltage monitoring, remote disconnect and reconnect, and advanced load management through remote thermostat control are all supported by the WebGate TotalPoint System. WebGate MIMs also enable connections to water and gas meters by short-hop wireless communication achieving multi-utility AMI with a single network.

Data collection and Command & Control

Data acquired by TotalPoint MIMs is collected by strategically positioned TotalPoint Gateways and then backhauled by any available IP-based network. All network management and command and control functionality is seamlessly handled muNet's WebBot™ Central Control Web-based software.



WebGate TotalPoint Meter
Interface Module

WebGate TotalPoint MIM Features

- Integrated under the glass of the Sensus iCON meter
- Full support for IEEE 802.15.4 and ZigBee protocols
- Acquires time stamped interval metering data
- Stores data in non-volatile memory
- Full two-way communication capability
- Instant on-demand reading capability
- Demand information
- Optional features:
 - Records data from water and gas meters via wireless connections
 - Controls a 200 Amp power disconnect switch
 - Advanced load management via remote thermostat control
- Collects voltage measurements

Metrology

Family of Sensus iCON residential meters

- Accuracy exceeds ANSI C12.20 (Class 0.2)
- kWh energy measurement, net metering, voltage monitoring
- Inversion proof
- ANSI compliance in performance and design




WebGate TotalPoint MIM Specifications

Physical Specifications	ZigBee Specifications
<p>Meter Height</p> <ul style="list-style-type: none"> ▪ 3" without remote disconnect option ▪ 6" with remote disconnect option 	<p>RF Characteristics</p> <ul style="list-style-type: none"> ▪ 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 MIM Options

<p>200 Amp Disconnect Switch Control</p> <ul style="list-style-type: none"> • Current: 200A rating • Relay type: Latching • Options: Power reset button, LED <p>Wireless Water and Gas Meter Link</p> <ul style="list-style-type: none"> • RF Option: Datamatic® FIREFLY® • Operates at 902-928 MHz ISM Band <p>Wired Water and Gas Meter Link</p> <ul style="list-style-type: none"> • Encoder types: TouchRead, ProRead, or 	<p>Voltage Sensor - Metrology Based</p> <ul style="list-style-type: none"> • Type: Recent, Maximum, Minimum, Average • Range: <ul style="list-style-type: none"> 2S Meter : 192 -- 288 volts * 12S Meter: 96 – 144 volts • Accuracy: +/- 2% 	<p>muNet TotalPoint Load Management Supports full range of muNet Demand-Side Management Applications</p> <p>Thermostat</p> <ul style="list-style-type: none"> • Dimensions : 5.5" W x 3.75" H x 1.1" D • Power: 24 VAC • Programming: 5-1-1 programming for heating and cooling <p>Discrete Load Switch</p> <ul style="list-style-type: none"> • 240 VAC at 20 Amp Max
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Metrology Specifications

<p>Power Requirements</p> <ul style="list-style-type: none"> • Voltage Rating: 2S 240V, 12S 120V • Frequency: 60 Hz <p>Accuracy</p> <ul style="list-style-type: none"> • Exceeds Accuracy Class 0.2 <p>Burden</p> <ul style="list-style-type: none"> • Power Supply < 0.8 watts/7.9VA @ 240VAC • Voltage Circuit per phase: 0.03 watts @ 240VAC • Current circuit per phase 0.1 milliohms Typical @ 25°C <p>LCD Display</p> <ul style="list-style-type: none"> • Six-digit liquid crystal display • Data digit height: 0.4 • Simulated mechanical disk emulation • Power flow indicator • kWh display with segment check option 	<p>Operating Environment</p> <ul style="list-style-type: none"> • Temperature: -40° to +85°C • Humidity: 0% to 95% non-condensing • Transient / Surge Suppression: EN61000-4-4:1995 & EN61000-4-5:1995, exceed voltage and current surge requirements per Category 4 <p>Complies with Industry Standards</p> <ul style="list-style-type: none"> • ANSI C12.1 – 2001, ANSI C12.10 – 1997, • ANSI C37.90.1 – 1989 • FCC Part 15 <p>Characteristic Data</p> <ul style="list-style-type: none"> • Starting Watts: 5 • Temperature Rise Specifications: Meets ANSI C12.1 Section 4.7.2.9 <p>Tamper Detection Options</p> <ul style="list-style-type: none"> • If meter is reversed in socket, energy is added • Tamper message can alternate with kWh reading 	<p>Models</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Service</th> <th style="text-align: left;">Class</th> <th style="text-align: left;">Form</th> </tr> </thead> <tbody> <tr> <td>3-wire</td> <td>200, 320</td> <td>2S</td> </tr> <tr> <td>3-wire</td> <td>200</td> <td>12S</td> </tr> </tbody> </table> <p>Call about other Forms</p> <div style="text-align: center; margin-top: 20px;">  </div> <p style="text-align: center; margin-top: 10px;">WebGate Total Point MIM shown with 200 Amp remote disconnect relay</p>	Service	Class	Form	3-wire	200, 320	2S	3-wire	200	12S
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