

927

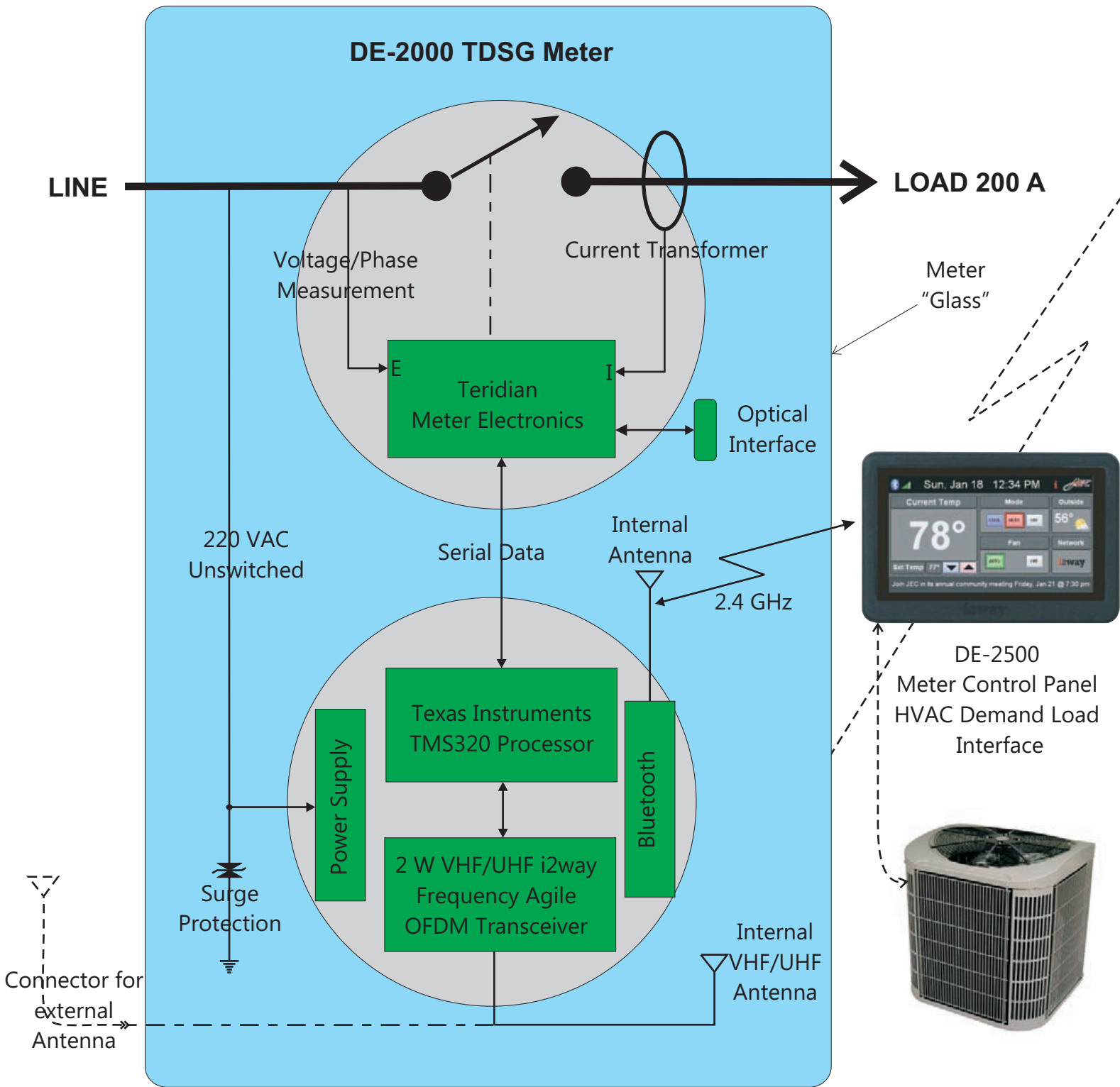
**⚠ DANGER ⚡** HAZARD OF ELECTRICAL SHOCK. CONTACT WILL CAUSE SEVERE INJURY OR DEATH. TURN OFF AND LOCK OUT POWER TO THIS DEVICE BEFORE SERVICING.



Model **DE-2000** Patent Pending  
Trunked Digital Smart Grid  
**FORM 2S CL200 240V 5 W 60 Hz TA=30 Kh 7.2**  
02-985-1250  
i2way Corporation  
FCC ID: D4VDS-039K

**AW** CIRCLE A-W PRODUCTS CO.  
MODESTO, CALIFORNIA  
PORTLAND, OREGON  
RANPRICOP TYPE 3R  
**UL** UNDERWRITERS LABORATORIES  
LISTED METER SOCKET  
ISSUE NO. 4-1994

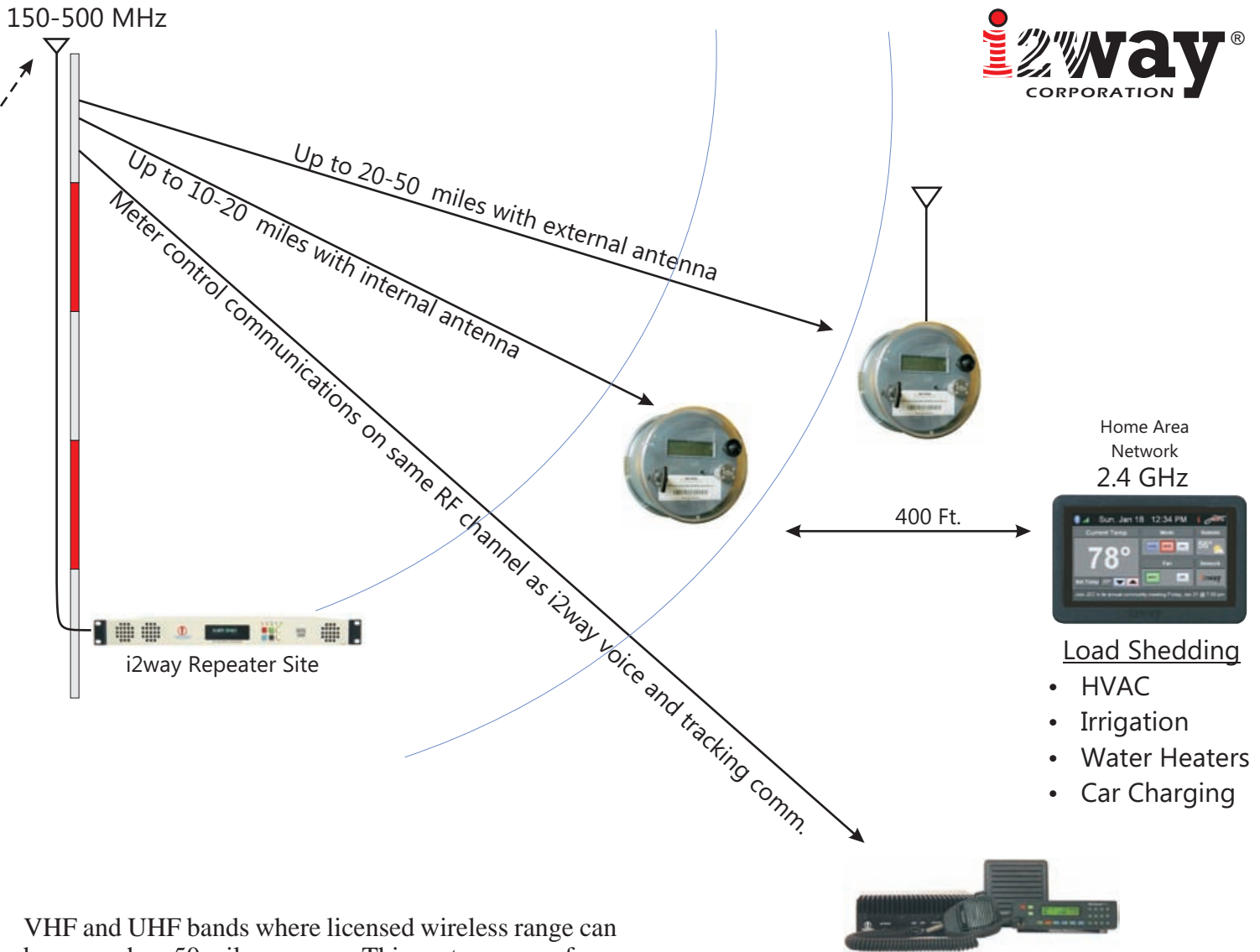
# TDSG DE-2000 Service Disconnect Wireless Meter



**The DE-2000 Wireless TDSG Service Disconnect Meter combines a VHF/UHF long range digital trunked radio transceiver with an integrated System On A Chip Precision Electric Metering Processor. The radio uses a 16-bit Texas Instruments Digital Signal Processor with 1 GB of non-volatile memory. The meter processor is a Teridian SoC featuring a 32-bit computation engine and precision 22-bit delta sigma analog to digital convertor allowing precise single phase metering.**

The meter can operate in a fully autonomous traditional mode, but is complimented by a wireless remote "front panel", the DE-2500 Wireless Energy Manager, which brings demand load control of HVAC and other loads under the remote management of the utility.

The DE-2000 meter is specifically designed to overcome the provisioning challenges of rural utilities with long distances between customers and substations. The wireless TDSG system's "back haul" operates in the



VHF and UHF bands where licensed wireless range can be as much as 50 miles or more. This vast coverage from centralized radio towers requires no communications build-out on distribution lines. Digital Trunking provides near-broadband performance allowing short interval data (5 minutes) polling and many additional enhanced features such as electronic customer invoice delivery, digital payment from the customer location, remote provisioning of service connect/disconnect, routine and emergency messaging to customers, and much more. Firmware upgrades and DE-2500 applications may be uploaded over-the-air at any time. Since the DE-2500 uses the Android operating system, third party software developers and the utility can develop compatible applications.

Compatibility with legacy manual meter reading is maintained with a conventional optical interface conforming to ANSI C121.18/19-2006 standards. A massive 1 GB non-volatile memory archives several years of readings and setup. A 100 mw Bluetooth LE Long Range radio communicates with the companion DE-2500 Energy Manager and other components on the

Home Area Network. The unit can support up to 16 remote DE-2500 Energy manager to support multi-zone HVAC systems.

The i2way TDSG format employs 256 bit AES encryption so system data and operational security is assured. The wide area VHF and UHF channels are available worldwide and in many areas, such as North America, are available on an exclusive, licensed basis.

In addition to the companion DE-2500 Energy manager, additional optional accessories are available for electric vehicle charging manager, load management of other devices such as irrigation pumps and water heaters, and support of Bluetooth and Zigbee-equipped appliances.

The i2way D-Trak Mapping Program displays the location of DE-2000 Meters when meters are installed using the Quixote Portable Radio. The radio's internal GPS receiver provides the i2way TDSG system with the accurate location of each customer meter socket.

## Specifications

Data rate to meter (12.5 kHz channel)	10,000 or 20,000 bps
Number of channels	32 per i2way TDSG trunking standard
Over the air encryption	256 bit key Advanced Encryption Standard
Modulation	Orthogonal Frequency-Division Multiplexing
Frequency Band	150-470 MHz, 6.25 or 12.5 kHz bandwidth
Wide Area Internal Antenna Gain	0 dBi folded dipole
Transmit Power Output	2 watts
Typical Transmit Duration	100 ms
Receive level required, minimum	-115 dBm
Meter non-volatile memory	1 GB
Storage capacity (5 minute interval data)	> 3 years data capacity
Meter mains power, 220 VAC 50-60 Hz	3 watts
RF link to LMS Load Management Switch	2.4 GHz ISM band
Wireless range to DE-2500/Thermostat	400 meters Clear LOS
Number of DE-2500 units per meter	16
Measurement Accuracy	0.1%, 10ppm/°C
Line Voltage	110/220 V Single Phase
Line Frequency	50 or 60 Hz
Maximum Current	200 Amps
Service Connect/Disconnect Current	200 Amps
Disconnect Provisioning	Remote
Customer Reconnect Confirmation	On-meter "Cap Sense" button or DE-2500
Meter Phase Compensation	±7°
Software Provisioning/Upgrade	Over The Air
Meter Electronics Surge Protection	Metal Oxide Varistor
Ability to relay voice messages to DE-2500	Yes



*i2way D-Trak Mapping Program  
with live meter location display*

### **i2way Corporation**

#### *Subsidiaries:*

i2way Australasia Pty Ltd (Australia)

i2way Canada Inc. (Canada)

i2way UK Ltd (United Kingdom)

