



R900® GATEWAY v3

The R900® Gateway v3 (Gateway) makes migration from mobile AMR to fixed network AMI easier than ever before. Meter reading performance is improved over prior-generation Gateways with cutting-edge, software-defined radio (SDR) technology. This new SDR technology is capable of processing eight readings simultaneously, 360 readings per second, and increases the number of RF channels from one to 50. Reading range is also vastly improved, reducing the number of Gateways required to cover your specific geography.



The Gateway system is compatible with Neptune's N_SIGHT™ R900® host software and obtains readings from Neptune R900® meter interface units (MIUs). The Gateway then stores the meter reading data and transmits the information via a cellular or Ethernet modem to an FTP site, which is linked to the N_SIGHT software. The Gateway units can operate with either an AC power supply or solar panel.

The billing function is facilitated through the N_SIGHT R900 software package. As billing routes are downloaded to N_SIGHT R900, the software can poll the database of readings received from the Gateway for applicable accounts on the billing route. Relevant data is then uploaded through the existing interface to the billing software. This data flow eliminates the need for two file transfers with the utility's CIS/billing software and allows for easy migration of N_SIGHT R900 customers from mobile AMR to fixed network AMI.

An R900-based system allows a mix-and-match approach. Gateways can provide full-scale fixed network AMI, or a mobile AMR system could be used for single-family residential subdivisions that require one monthly read for billing purposes. Targeted fixed network AMI could be utilized for applications requiring more frequent reads, say, Commercial and Industrial (C&I) meters. By combining systems, you can create the perfect solution for the unique challenges your utility faces.

KEY FEATURES

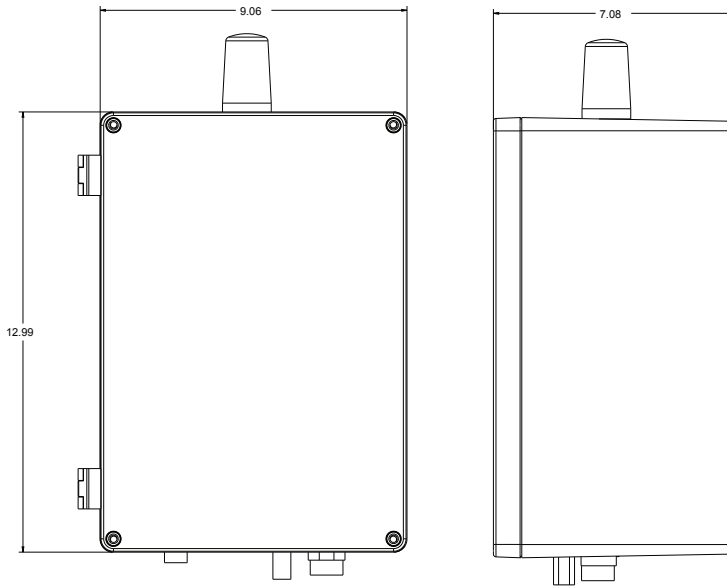
- Enables migration from mobile AMR to fixed network AMI
- High-performance, software-defined radio (SDR) technology
- Multi-carrier CDMA/GSM cellular modem
- Supports E-CoderPLUS advanced features
- Easily installed AC- and solar-powered configurations
- Compatible with N_SIGHT R900 host software
- Up to three (3) days of battery backup
- USB flash drive backup data retrieval

KEY BENEFITS

- Reduces meter reading costs
- Utilizes existing R900 assets
- Accommodates changes to backhaul cell service provider without changing modem
- Capable of receiving daily, hourly, and up to 15-minute readings depending on the R900 MIU configuration
- Leak, tamper, and reverse flow flags from E-Coder®*
- Final reads for move-ins/move-outs which eliminate truck rolls for off-cycle reads
- Improves customer service capabilities
- Provides usage/consumption analysis to address high water bill complaints to eliminate truck rolls
- Reduces water loss
- Maximizes revenue generation
- Improves cash flow

*when connected to a second generation R900 or later

Utilities want to know that their investment in the R900 will allow them to take advantage of new meter reading technologies and provide them the option of migrating from a mobile AMR to a fixed network AMI system. Based on results from a propagation study, Neptune will determine the location of Gateways to allow an R900 customer to begin reading their system with the Gateway and gain even more efficiency improvements than with mobile data collection. The Gateway can take your system to fixed network with no change in your installed R900 MIUs.



SPECIFICATIONS

- Receiver
 - 910-920 MHz
 - 50 channels
 - Processes 8 readings simultaneously
 - Processes 360 readings per second
 - Capable of handling up to 25,000 R900s
- Installation Options
 - Rooftop
 - Pole (2" – 16" diameter)
 - Wall
 - Water towers
 - Street lights
- Power Consumption
 - 5.3W (with hourly synchronization)
- Power Supplies
 - 100-140 VAC
 - 130W Solar
 - 220W Solar
- Battery Backup
 - AC version - UPS provides 8 hours battery backup
 - Solar version - 3-day battery backup
- Backhaul Options
 - Multi-carrier cellular modem
 - EVDO Rev A (CDMA)
 - 1xEVDO Rev 0 (CDMA)
 - 1xRTT (CDMA)
 - UMTS/HSPA (GSM)
 - EDGE/GPRS (GSM)
 - Ethernet
 - Private LAN compatibility via Ethernet connection
- Environmental
 - NEMA 4X enclosure
 - Operating temperature: -22°F to +140°F (-30°C to +60°C)
 - Storage temperature: -40°F to +158°F (-40°C to +85°C)
 - 0-95% non-condensing humidity

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