MASTER METER

allegro™

BASE STATION AND REPEATER

AMI 2-Way Fixed Network

The Allegro Advanced Metering Infrastructure (AMI) Network is comprised of a long range radio base station, peripheral repeaters to extend range into low population geographies, and individual meter endpoint transceivers.

Master Meter's Allegro AMI system is a robust RF communication network that interfaces between a water utility and their residential and business customers. The tower based system operates in the licensed 450MHz – 470MHz frequency spectrum offering superior reliability and extensive geographic reach.

The plug-and-play nature of the system means that installation is easy and intuitive as the Endpoints and repeaters will automatically match the base station's pre-programmed frequency pairs and with the backhaul connected via cellular network, interval data will be transmitted along a reliable and stable path.

The 2-way system offers a rich set of security features and is end-to-end upgradable. Also, the proprietary RF protocol incorporates a time-synced system to alleviate network RF collision while providing time-stamped data. The result is the most effective and dependable AMI network available.

Intelligent Interface

The Allegro platform is an intelligent interface to the myriad of systems that utility managers operate today. A comprehensive set of data is collected from the endpoint and transmitted back to the backhaul destination for integration into Customer Information Systems (CIS), Supervisory Control and Data Acquisition Systems (SCADA), Geographic Information Systems (GIS), Enterprise Billing Systems, and various Customer Relationship Management (CRM) software suites. The result is an intelligent water system with actionable high-resolution data analytics capable of supporting any operational need.

Features and Benefits

- Two-way communications
- Time-Synchronized readings
- Multiple backhaul options
- Over-the-air programming / remote firmware updates
- Extensive geographic reach
- End-to-End security
- 15 minute usage / consumption data
- Highest system reliability
- Low RF interference
- Data and events are time stamped
- FCC Compliance
- Highest Tx/Rx link budget
- AMR to AMI Migratable
- Extended lifetime
- Data Storage for redundant transmissions
- UPS Battery Backup
- NEMA weatherproof enclosure options

▸ IMPROVED CUSTOMER SERVICE

Customer perception is increasingly a topic of concern for water utilities. The combination of todays most advanced AMI system and a powerful MDMA software suite results in:

- On demand reads
- Improve billing accuracy
- Interactive customer budgeting
- The ability to forecast consumption
- Immediate tamper and theft detection
- Leak Alerts
- Informed rate-based programs
- Customer incentive programs

▸ SUPERVISORY CONTROL

The Allegro system not only provides end-to-end visibility for the water utility, but it also provides multiple dimensions of systems integration to responsibly manage assets and infrastructure from a single interface.

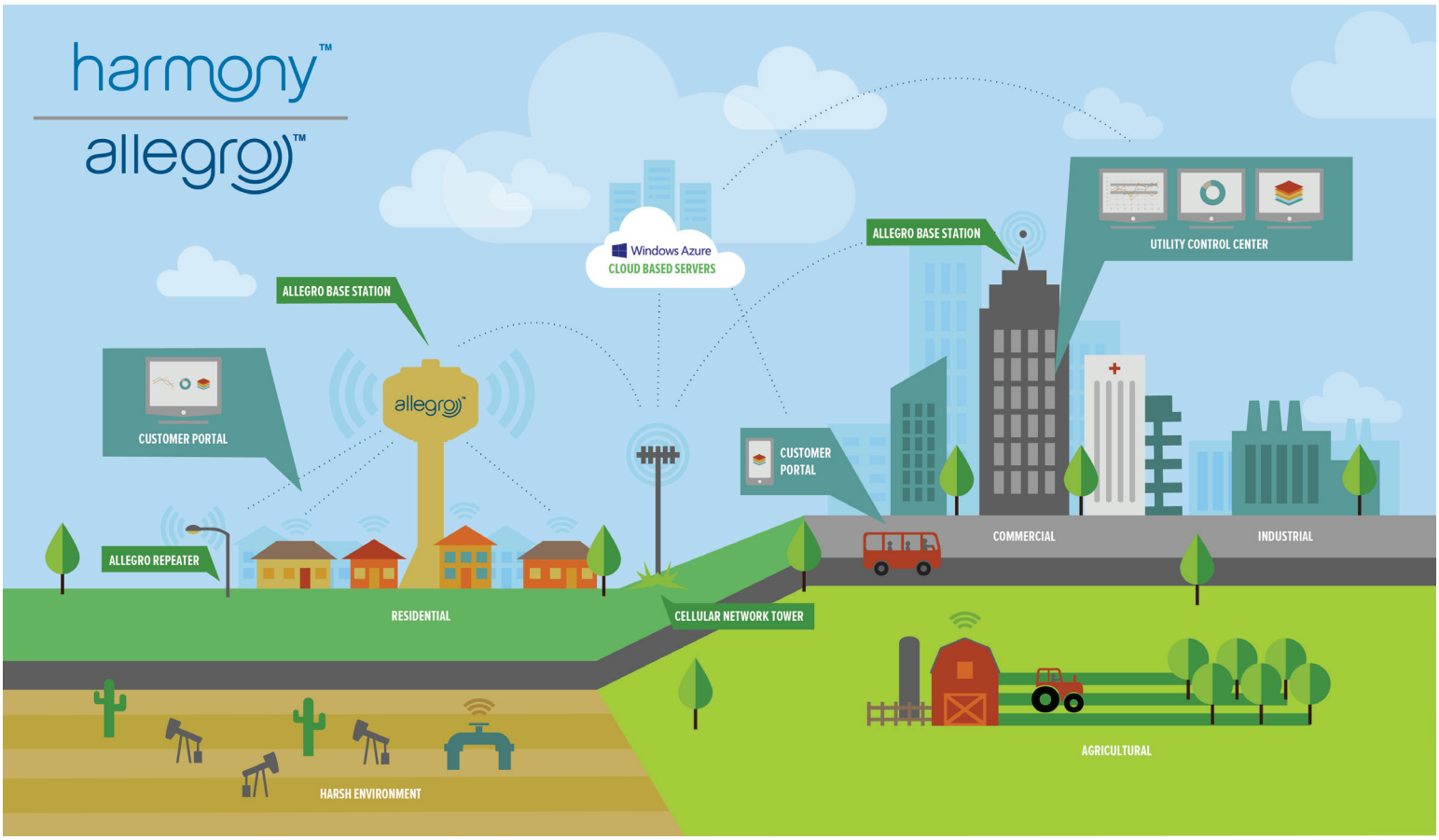
Allegro offers:

- Remote system monitoring
- Priority alarm support
- Self diagnostics
- Remote firmware upgrades
- IP-addressable infrastructure

Architecture

The simplicity found in nature inspired the overarching architectural design for Allegro and Harmony. Maximizing Allegro's RF footprint through efficient use and design of network components, while synchronizing communication between endpoint and collector result in today's most cost-effective AMI system available. Together, Allegro and Harmony allow the utility to analyze, manage, and precisely account for system-wide water consumption, and at the same time empower the rate payer to responsibly and confidently make informed decisions about their personal usage.

AMI is evolving, and Allegro and Harmony is the next big thing.



Contact Us

Master Meter, Inc
101 Regency Parkway
Mansfield, TX 76063

Phone: 800.765.6518
Fax: 817.842.8100
innovate@mastermeter.com

Moving at The Speed of Technology

Master Meter is intent on driving new and innovative ways to manage the vast amount of data flooding into Smart Cities and Utilities. We're a high-service solutions provider specializing in advanced metering, data delivery, and Utility Intelligence (UI) software and our portfolio of new and innovative technology continues to grow in support of a dynamic and rapidly changing global water market. Mindful of a tight and very finite water supply, Master Meter is here to support your conservation efforts, ensuring ample supply for generations to come. Join us.

Specifications

Physical Characteristics		Base Station	Repeater
Dimensions	Height x Width x Depth (in)	35.43" x 43.31" x 11.81	7.87" x 5.91" x 2.36"
Weight		209.44 lbs.	3.31 lbs.
Mounting	Mounting Options	Cabinet or Rack Mount	Pole Mount
Environment		**Base Station**	**Repeater**
Temperature	Operating Temperature	-14° F to 122° F	-14° F to 122° F
Humidity	Maximum Humidity at 65° C	95%	95%
Radio		**Base Station**	**Repeater**
Frequency Band	Licensed Spectrum	450-470MHz	450-470MHz
Rx Sensitivity	Receiver Sensitivity	-120dBm	-120dBm
Tx Output Strength	Transmitter Output Power	45dBm	34dBm
Bandwidth	Channel Bandwidth	6KHz	-
Backhaul Options (WAN)		**Base Station**	**Repeater**
WAN	3G Cellular	Yes	-
Capacity		**Base Station**	**Repeater**
Endpoints	Number of Endpoints Served	50000	1000
Repeaters	Number of Repeaters Served	100	-
Capacity of Read Storage	At 10K Endpoints, 1 Hour Reads	30 Days	-
Power		**Base Station**	**Repeater**
Consumption	Power Consumption	1.5KW	2A
Source Voltage	Input Voltage	110VAC - 240VAC	3.6V
Surge Protection	Cabinet Surge Protection	Internal	Internal
Regulations		**Base Station**	**Repeater**
Cellular Modem	PTCRB, Carrier specific:	AT&T, Sprint, Verizon, Bell Mobility, Telus, Jasper, Vodaphone	-
	FCC Certified	Yes	Yes
	UL, Industry Canada, CE	Yes	-