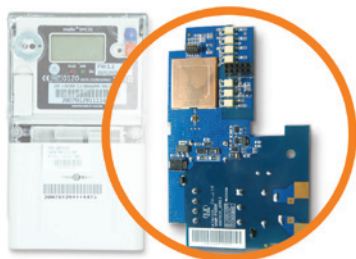# Wireless Electricity Meter Interface Unit Family

AiMiR 2.4GHz AMI Communications Network

Description

Wireless Meter Interface Units (MIUs) are part of Nuri Telecom's family of end-to-end AiMiR Advanced Metering Infrastructure (AMI) connectivity solutions. They transform standalone smart electricity meters into an integral part of the Smart Grid network.

Smart electric meters embedded with Nuri MIU communicate utilization data and power quality information to a utility over Nuri's AiMiR AMI network. AiMiR is a two-way wireless mesh Local Area Network to an AiMiR gateway. The gateway communicates the data directly to the AiMiR Head End Server located at the utility data center over a commercially available two-way data communication network.

This networking arrangement allows utilities to take advantage of a wide range of cutting-edge Smart Grid applications, including advanced metering, outage and restoration detection, demand response, innovative tariffs, remote connect and disconnect, and other major ones.
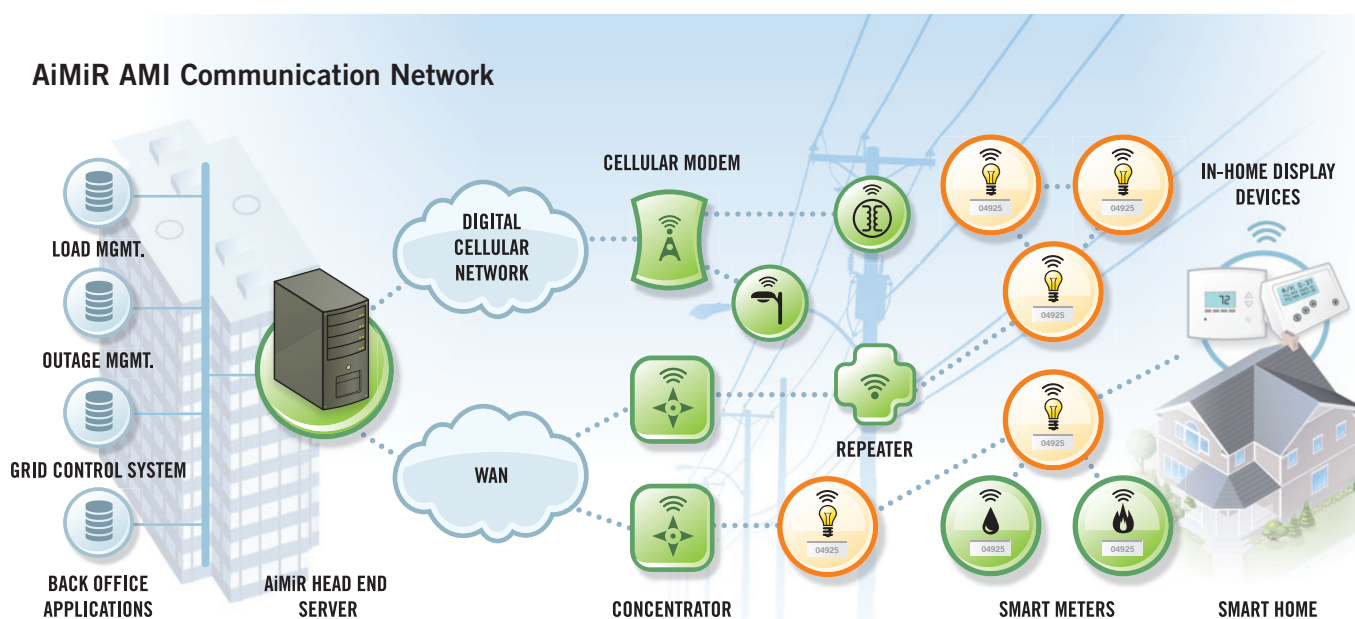
Nuri's MIU-equipped smart electricity meters make networking simple, easy to deploy, and provide utilities with true connectivity.

Nuri offers a variety of form fit MIUs for a broad range of smart electric meters from the industry's leading manufacturers. In the unlikely event, a particular MIU isn't available for a meter a utility company selects, Nuri can design it in collaboration with the meter manufacturer within a short period of time.

Features & Benefits

- **Enables smart meters for two-way wireless communications**
- **Connects smart meters in a wireless mesh Local Area Network**
- **Based on open, standards-based design**
- **Supports high 250 kbps data rate**
- **Provides secure, real-time, advanced metering and smart grid information**
- **Sends power outage/restoration notification**
- **Provides "Over-the-air" upgrades and meter programming**
- **Supports wide range of smart meters from leading meter manufacturers**

AiMiR AMI Communication Network

LOAD MGMT.

OUTAGE MGMT.

GRID CONTROL SYSTEM

BACK OFFICE APPLICATIONS

AiMiR HEAD END SERVER

DIGITAL CELLULAR NETWORK

WAN

CELLULAR MODEM

REPEATER

CONCENTRATOR

SMART METERS

IN-HOME DISPLAY DEVICES

SMART HOME

| Utility Data Center | Backhaul Communication Services | AiMiR Wireless Advanced Metering Infrastructure | Home Area Network |

MIU Specifications

Communications

Frequency Range	2.4GHz–2.48GHz
Technology	DSSS
Data Rate	250kbps
Transmit Power	100mW
Receiver Sensitivity	<-100dBm

Physical Interface

Meter Interface	Serial or infrared
Antenna	2dBi dipole (optional extension antenna)

Networking/Security

Encryption	128-bit AES
IDs and Channels	PAN ID, 64-bit IEEE MAC, 16 channels
ZigBee	ZigBee Pro
Standard	IEEE 802.15.4

Environmental

Operating Voltage	176VAC-264VAC, 50/60Hz
Operating Temperature	-40°C to +70°C
Power Consumption	1W (max)
Humidity	10% to 95%, non-condensing
RoHS	Compliant

Regulatory Approvals

IEC, ANSI	Compliant

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End-to-End AMI Solution

Nuri in collaboration with its technology partners and system integrators offers utilities end-to-end, turnkey AMI delivery models including performance guarantees:

Components of AiMiR Communication Network

Electric Meters*

Gas Meters*

Water Meters*

AiMiR Concentrator
Connects AMI network to utility monitoring site

AiMiR Repeater
Extends AMI network range to cover larger areas

Digital Cellular Modem
GSM/GPRS, CDMA

AiMiR Software Suite
Network mgmt, advanced metering and Smart Grid Applications

Digital Cellular Modem Rack System
GSM, CDMA

*Nuri technology-equipped meters supplied by meter manufacturers.

Full Range of Professional Services

- AMI Solution Architect
- Network Deployment
- Network Operations
- Integration of AMI Solutions with Existing IT, Operations and Asset Management Processes

Smart Meters Supported

Electric		Gas	Water
Aidon	GE	Actaris	Several Korean Brands
Elster	Kamstrup	Elster/Kromschroeder	
EDMI	KEPCO	Several Korean Brands	

For a complete up-to-date list of meters supported, please contact us.