EASY WIRELESS METER ENABLEMENT FOR REAL-TIME DATA COLLECTION
The eleven-x MIU-X [Meter Interface Unit] quickly and easily converts standalone mechanical meters to “smart” wireless meters utilizing standard registers. The MIU-X collects the registers from the existing mechanical meter and communicates the usage data directly over a LoRaWAN™ network to the utility data center.

Compatible with many current metering solutions, the eleven-x MIU-X enables AMR [automatic meter reading] with your existing meters. There is no need for sole-source proprietary network connectivity, so customer service options remain flexible without any long-term or limiting commitments. The MIU-X can be configured remotely with no programming needed, making wireless data collection easy with existing meters.

REAL-TIME DATA = IMPROVED WORKFLOWS AND A BETTER CUSTOMER EXPERIENCE
Real-time data allows organizations an easy and efficient way to provide enhanced customer service and a better overall customer experience while reducing operational costs. Save time and money by eliminating costly wiring, estimated reads and drive-by or manual data collection while offering your customers accurate billing with an invoice that matches their meter registers.

LOW TOTAL COST OF OWNERSHIP
Enable streamlined operations and improved service capabilities with real-time usage data collection without upfront meter replacement costs. Save time and money by eliminating costly wiring and electrical requirements. Remove the need and costs associated with complex and customer-intrusive installations or upgrades, and manual or drive-by data collection.

Installation of the MIU-X is a simple process that can be completed in a matter of minutes saving money, time and resources. The MIU-X offers long battery life (>10 years), low connectivity fees and near-zero maintenance costs resulting in a low total cost of ownership.

Enabling AMR with Existing Meters:
• Enabling real-time data communication
• Retrofit current in-field unconnected meters
• Avoid expensive “rip and replace” projects
• Reduce operational costs
• Improved meter reading frequency
• Eliminates:
  o Estimated reads
  o Running electrical to the meter
  o Drive-by or manual data collection
• Remote configurability:
  o In-field updates
  o Programmable meter reads
• Low total cost of ownership:
  o Low connectivity fees
  o Near-zero maintenance
  o >10-year battery life
• Simple 3-step installation process
• Secure two-way wireless communications:
  o AES-128 encryption
  o Device Authentication
• Supports a wide range of meters

eleven-x.com/solutions
## TECHNICAL SPECIFICATIONS

### Communications
- **Communication Protocol**: LoRaWAN™ 1.0.1
- **Device Class**: Class A
- **Frequency**: 902-928 MHz – North American Standard ISM Band
- **Transmit Power**: Up to 20dBm

### Mechanical
- **Enclosure**: Ruggedized enclosure
- **Antenna**: Internal
- **Ingress Rating**: IP67 – waterproof | dustproof
- **Mounting**: Wall Mounting

### Security
- **AES-128 encryption**
- **Tamper Detection**

### Provisioning
- **Secured key injection and key exchange**
- **Key management with join server**
- **NFC provisioning support [optional]**
- **Infield or backoffice secure provisioning**

### Environments
- **Operating Ambient**: -30°C to 60°C
- **Components**: rated at a minimum of -30°C to 85°C
- **Battery**: >10-year battery life
- **Battery Capacity**: 3.6V, 7200mAh

### Warranty
- **1 year**

### Certifications
- **LoRaWAN**
- **FCC Part 15.247**
- **ISED RSS-247**

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**FOR MORE INFORMATION:**
web: [www.eleven-x.com](http://www.eleven-x.com) | email: collaborate@eleven-x.com

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**About eleven-x Inc.**

eleven-x operates Canada’s first and only coast-to-coast public low power network that enables the promise of Smart Cities, Buildings, Campuses, and Enterprise IoT applications. Supporting the use of low cost battery powered sensors, the LoRaWAN™ based network addresses many Internet of Things [IoT] use cases where requirements include wireless connectivity, devices that require long battery life, no maintenance and a low total cost of ownership.