



WIRELESS TANK MONITORING FOR REAL-TIME DATA COLLECTION

TIU-X – Wireless Tank Monitoring Interface Unit

EASY, REMOTE TANK MONITORING for REAL-TIME DATA COLLECTION

Wireless tank monitoring allows distributors and organizations the opportunity to increase operational efficiencies, reduce costs and eliminate “run-outs” or emergency call-outs with optimized route planning. However, until now, the ability to monitor tanks wirelessly to collect real-time data has been somewhat limited because of the high costs associated with the service. And for those who have developed wireless solutions, the reliance on costly cellular or satellite network connections has impacted their overall value.

The eleven-x TIU-X enables wireless low power LoRaWAN-based connectivity by retrofitting with your existing devices. Compatible with most current tank monitoring solutions, the TIU-X easily connects to devices and can be configured remotely with no programming needed, making wireless remote tank level monitoring and real-time data communication easy and more cost effective.

REAL-TIME DATA = IMPROVED WORKFLOWS

Real-time data acquisition and communication offers organizations an efficient way to provide focussed customer service at a low total cost of ownership. Improve your customer’s experience while streamlining operations, reducing costs while potentially uncovering new revenue generating opportunities.

LOW TOTAL COST OF OWNERSHIP

The eleven-x TIU-X enables the use of current level monitoring devices while eliminating the need to rely on expensive satellite and/or cellular network connectivity. Utilizing low power LoRaWAN wireless network connectivity, the TIU-X reduces operational costs and can also help with additional savings on fuel costs, staff time and wear and tear on vehicles.

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

eleven-x TIU-X BENEFITS:

- Enables real-time data communication
- Retrofit current in-field tanks or use on new ones
- Eliminates need for expensive satellite or cellular connectivity
- Reduces operational costs
- Eliminates:
 - Manual tank readings
 - Emergency deliveries
 - Run-outs
- In-field updates
- Low total cost of ownership:
 - Low connectivity fees
 - Near-zero maintenance
 - >10-year battery life
- Simple 3-step installation process
- Secure two-way wireless communications:
 - AES-128 encryption
 - Device Authentication
- Supports a wide range of tanks types and models



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
Temperature

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
Storage Ambient	-30°C to 85°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

FOR MORE INFORMATION:

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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.

