HYNDS
SMARTERWATER

Itron

Technical Guide SIT1.5

Cyble 5

Multi-connectivity RF Module for IoT LoRaWAN and Sigfox data collection.

The Cyble 5 is a unique solution helping utilities engage in the ongoing digitalization of their water and gas distribution networks. Designed to transform mechanical meters into communication data points, Cyble 5 enables IoT data collection using LoRaWAN or Sigfox networks allowing for improved billing efficiency, customer service and more.

FEATURES AND BENEFITS

Designed for the field.

Easy to connect through a clip-on design with no wiring or wall mounting required, Cyble 5 is compact with an integrated antenna allowing for use in a wide range of existing meter box installations.

Robust under severe conditions.

Conceived to resist water, contaminants, corrosion, rough handling, and temperature cycling for a preserved reliability over time. Adaptable to water and gas environment, Cyble 5 is also IP68.

Fine-tuned by decades of industry expertise.

Cyble's patented technology ensures a perfect correlation between the mechanical meter register and the digital index for sustained accuracy. Compatible with Itron's Cyble-ready range of mechanical water meters & c-Series gas meters.

Interoperable with open standards
(LoRaWAN/Sigfox)

INTEROPERABLE WITH OPEN-STANDARDS.

With out-of-the-box connectivity options, Cyble 5 modules operate with open standard IoT network protocols (LoRaWAN /Sigfox).
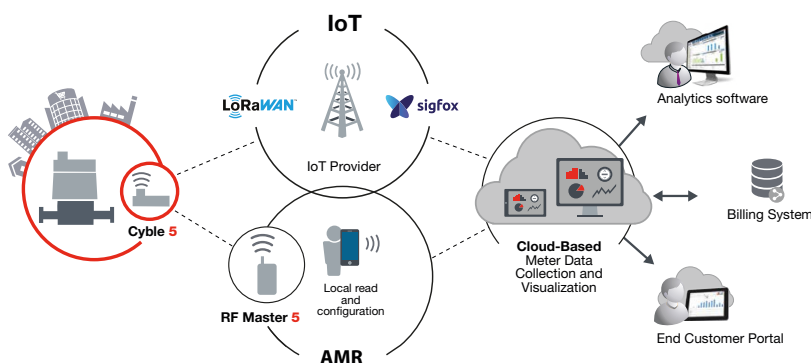
LoRaWAN **sigfox**

IoT Networks (LoRaWAN™ or Sigfox®)
Connect smart water meters to networks dedicated to the Internet of Things (IoT) using LoRaWAN™ or Sigfox® technologies.

Wireless read and configuration
Wirelessly read and configure Cyble 5 on the spot using Itron's RF Master 5.

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EXTENDED DATA SET FOR WATER AND GAS UTILITIES

Supporting digital transformation, Cyble 5 helps utilities engage in their key operational challenges by transforming data collection through IoT. Delivering timely, relevant, and extensive sets of data in water and gas, Cyble 5 allows for a better understanding of resource use and improved customer relationships.

Billing Index & Consumption Data Logging

Daily billing and custom billing functions along with precise consumption data logging up to 15min resolution

Flow Distribution

Precise monitoring of the distribution flow

Backflow / Reverse Flow

Detection and quantification of backflow to help assess water quality and/or sanitary risk

Alerts

Alarms are generated when important events are detected, such as:

» Leakage at customer side
» Tamper, blocked meter, reversed meter
» Backflow, peak flow
» Oversize/undersize
» Temperature high, temperature low

Diagnostics

Good system performance is ensured via monitoring of:

» Battery level
» Configuration settings
» Clock synchronization in LoRaWAN

Technical Specifications

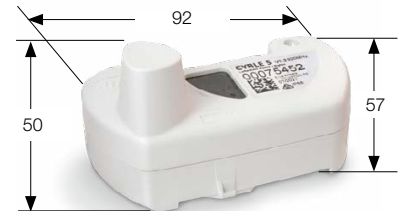| Radio Frequency Features	
Protocol	LoRaWAN™AS923, Sigfox® RC4, proprietary Mobile AMR
Modulation	CSS (LoRa®), BPSK (Sigfox®), FSK
Frequency carrier	915-928 MHz
Radiated power	≤ 25 mW (LoRa®, Sigfox® RC4), ≤ 3 mW (Mobile AMR)
Battery lifetime	Up to 14 years*

Functional Specifications	
Power source	Lithium batteries
Protection	IP 68
Relative humidity	0 to 100% - submersible
Operating temperature**	-10°C / +55C***
Accidental temperature	-20°C / +70°C

* in standard conditions of use and temperature, theoretical lifetime without guarantee, depends on connectivity mode and reporting interval.
** Under normal applications with the specified reference operating conditions.
*** Operation: +5°C to +35°C / Storage: +5°C to +35°C / Transport: Min -20°C (<24 hours continuous), Max. +70°C (<24 hours continuous), / Min. operational temperature: -10°C (< 15 days/years) / Max operational temperature: +55°C (<15 days/years).

Dimensions (mm)

Aquadis+ equipped with the Cyble 5 module

Compliance

» IP68 certified according to EN 60529
» AS/NZS 62368-1
» AS/NZS 4268
» AS/NZS CISPR32
» EN 300 220, EN 300 328, FCC Part 15

Connectivity Certifications

» LoRaWAN R1.0.2
» Sigfox V2.6.0

TD8 equipped with the Cyble 5 module

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measure to manage, measure to act

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