

# Itron Cellular 500W Module

Itron Cellular 500W Modules are IPv4 endpoints designed to operate on Itron's cellular solution. Featuring a compact design, industry-leading battery life, firmware download, and technology designed to adapt and grow with your business, the Itron Cellular 500W Module can help you streamline your operations and maximize your resources today.

## INTRODUCTION

Itron Cellular 500W Modules offer advanced bi-directional communications designed specifically for Itron's cellular solution as well as Itron's industry-leading ChoiceConnect™ solutions. The Itron Cellular 500W Module enables easy migration from mobile to network operations as your business needs evolve. The ability to perform firmware downloads over the network allows the utility to ensure they have the latest features available without needing to visit each service point. With Itron's supported communications technology, network and mobile systems can be deployed side-by-side in hybrid configurations to ensure maximum efficiency and reliability in both high- and low-density meter populations.

The Itron Cellular 500W Module is available in two housing designs, supporting both water pit and remote installations. Both pit and remote housings support encoder and pulser register types with a single endpoint. Itron's auto-sensing technology allows the Itron Cellular 500W Modules to detect what register model it is attached to, removing the need to program the endpoint at installation. Itron Cellular 500W Modules include an integral connector port and a telemetry port standard. The telemetry port enables the use of Itron's acoustic leak sensor and third-party remote disconnect valves.

## SUPERIOR PERFORMANCE

The Itron Cellular 500W Module utilizes narrowband, low-power wide area cellular (LTE-M Cat-M1) and RF transmission to minimize interference, improve range, and

deliver higher read integrity. The module transmits smaller and more efficient data transitions in less time, lowering the cost of communications. Peak radiated power is less than 250 milliwatts.

## RELIABILITY

The electronics in the Itron Cellular 500W Module are fully encapsulated within a specially formulated potting material. This protects the module's components from water, contaminants, corrosion, rough handling and temperature cycling. With its straightforward, rugged design, the Itron Cellular 500W Module uses significantly fewer components than most competing products, resulting in greater reliability. The advanced, integrated antenna operates effectively in a wide range of meter box installations. The Itron Cellular 500W Module offers peace of mind with a 20-year prorated warranty.

LOWER COST OF OWNERSHIP

The Itron Cellular 500W Module features industry-leading battery life, ensuring your meter data collection investment achieves substantially better financial returns than competing solutions with batteries that typically last only 10 to 12 years. With the advancements in leak, reverse flow (absolute encoder version only), and tamper detection, the Itron Cellular 500W Module necessitates fewer field investigations and lower expenditures for customer and field service. The Itron Cellular 500W Module includes a low-battery alarm that helps utilities to plan and manage module replacements in the field.

LEAK MANAGEMENT

Non-revenue water management is critical to any water utility's success. Modules can be paired with Itron's Leak Sensor, which collects and analyzes changes in pipe acoustics. This data indicates probable leaks in the distribution system environment to detect both new and pre-existing leaks automatically. Leak Sensor technology, coupled with the module's internal customer-side leak detection algorithm and the option to compare data from groups of the utility's

production meters, provides the utility with a highly accurate picture of the overall health of the water distribution system.

Extended Meter Alarms

The Itron Cellular 500W Module can relay the extended meter alarms provided by new solid state and electronic meters. These alarms include:

- » Empty pipe
- » Temperature
- » High flow
- » Meter low battery
- » Meter tampering
- » Reverse flow
- » Zero consumption

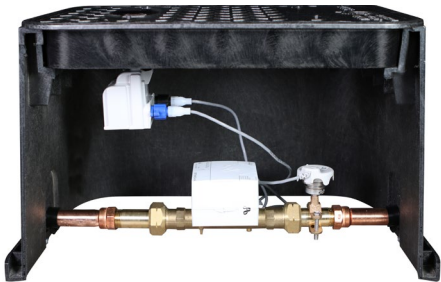
Approved IoT Reading Systems Offer Full Bi-directional Communication Capability

- » Temetra® solution
- » OpenWay® Collection Manager
- » Performance Manager
- » Action Manager
- » Itron Security Manager (ISM)
- » Network Manager

Mounting Options

Itron Cellular 500W Modules have a compact housing and features specifically designed for water pit mounting options.

- » This solution requires RF-friendly lids. Support for concrete lids is investigated on a per-installation basis. Steel-lids are not supported/recommended.
- » Rod-mount on a ½ inch diameter fiberglass or other non-metallic rods.
- » Through-the-lid mounting with a pre-drilled 1.75-inch hole and up to 2.5-inch maximum lid thickness.
- » Direct-mount to any flat surface with screw kit.
- » Wall-mount for installation to the side of residence or building using screw kit.
- » Pipe-mount for installation on pipe sizes from ¾-inch to 4-inch pipes.



Functional Specifications	Pit Module	Remote Module	Features	
Dimensions	4.5 in. (height) 3.9 in. (base diameter) 1.7 in. (top diameter) 9.6 oz. (weight)	4.5 in. (height) 5.05 in. (width) 3 in. (depth) 9.6 oz. (weight)	Data Logging	Network mode: Standard 15-minute interval within the last 40 days.  Mobile mode: Any hourly reading within the last 40 days.
Network Mode	LTE-M cellular network	LTE-M cellular network	Meter Compatibility	The Itron Cellular 500W Module is compatible with water meters from leading water manufacturers such as Badger, Honeywell, Diehl, Master Meter, Neptune, Kamstrup, and Sensus.
Mobile Mode	ISM Band, 908-924 MHz	ISM Band, 908-924 MHz		
Operating Temperature	-20° C to +60° C	-40° C to +70° C		
Storage Temperature	-40° C to +75° C for a maximum of 1,000 hours	-40° C to +75° C for a maximum of 1,000 hours		
Humidity Limits	0 to 100% (submersible)	0 to 100% (submersible)		
Power Source	Single "D" cell Lithium Thionyl Chloride battery	Single "D" cell Lithium Thionyl Chloride battery		

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