Field Collection System with Itron Mobile

Itron's latest generation mobile data collection system
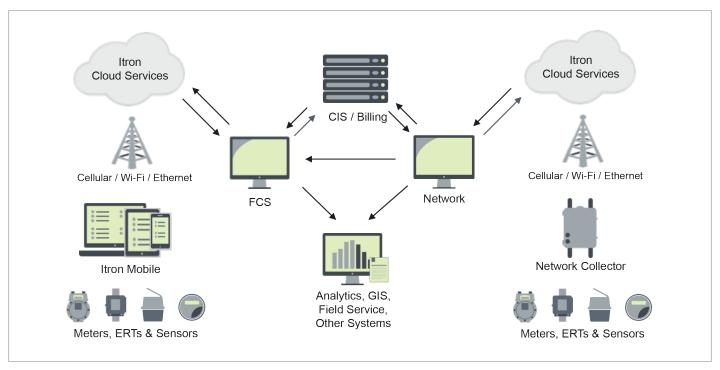
Itron Mobile Laptop

Field Collection System (FCS) with Itron Mobile is a data collection system designed specifically for today's utilities. FCS is a state-of-the-art, open-architecture software that integrates with Itron networks, existing billing systems and data analytics systems for flexible data sharing and management capabilities.

Itron Mobile is a meter data collection tool kit designed for today's mobile employee that allows companies to get the most value and efficiency from their field workforce while also enhancing employee safety. Itron Mobile enables laptop, tablet and smartphone meter reading and data collection in a flexible, affordable system that keeps you connected to your mobile workforce throughout the workday.

FCS and Itron Mobile combine all the best features from decades of experience with innovative new features that will fulfill your mobile data collection needs, now and in the future.

Field Collection System and Itron Mobile in a Hybrid Network Deployment

ARCHITECTURE

The FCS application server software imports and assigns routes to mobile devices, manages data collected in the field and exports data to billing and analytics systems. When in a hybrid configuration with a data collection network, FCS imports billing reads and applies those to meters then dispatches the unprocessed meters to the mobile workforce. The Itron Mobile app provides field employees with an efficient means for collecting meter reads and other valuable data, and performing related work in the field, using a wide variety of mobile devices.

Flexibility

FCS is off-the-shelf software that is highly configurable, allowing the utility to adjust the business rules for office and field processes. The Itron Mobile app operates on Android™, Apple® iOS and Windows® 10 platforms, allowing the company to choose the best mobile device for each employee whether that is a smartphone, tablet or laptop.

Security

The FCS security system simplifies user and password management by leveraging Microsoft Active Directory. Role-based security allows office and field managers to easily oversee operational rights of groups and individual users. Data is encrypted as it travels between the FCS database and the Itron Mobile devices, ensuring privacy.

Database

FCS stores system parameters, routes and statistics in a relational database. FCS supports Oracle® and Microsoft SQL Server® databases. These open database systems allow utilities to mine the data in the FCS database to satisfy a variety of business needs.

Reports

Over 40 standard reports and templates are available along with the tools and ability to customize reports according to specific business needs.

Automation

The integrated Unattended scheduling system reduces office work requirements by using flexible and intelligent tasks to perform work automatically at any time of day. Job status notifications improve reaction times and reduce time spent monitoring the system.

Integration

FCS interfaces seamlessly to existing customer information and billing systems using XML, CSV, Premierplus4 and MV-RS® import/export file interfaces. A variety of other interfaces link FCS directly to powerful applications such as Itron Security Manager, RouteSmart®, MV-90 xi, Itron Enterprise Edition™ and Itron Analytics to provide an easy migration path to value-added outcomes that are required as business needs evolve.

ITRON MOBILE

Accurate, Efficient and Safe Data Collection

Itron Mobile is a meter data collection toolkit designed for today's mobile employee. The app allows for manual and automated data collection using a variety of device types.

Flexible and Affordable

The Itron Mobile app is available for Android, Apple iOS and Windows 10 and can run on smartphones, tablets or laptops. This unmatched variety of choices allows the company to choose the best and most affordable device for each employee.

Connected

The mobile workforce can be online throughout the day. Data synchronization uses any Internet connection (cellular, Wi-Fi, or Ethernet) from anywhere the mobile user has an Internet connection: at home, in the office or in the field.

Safe and Efficient

Itron Mobile is designed to get the user to the meter as safely and quickly as possible. Codes and messages associate each meter with location tips and hazardous conditions. Codes and messages can be added to the main display, called up when desired, or pop-up at the start or end of the work order along with audio and vibration alerts. Mapping is available to all users to help get them to the meters as quickly as possible. Meters are displayed on the map and reflect the priority and status of each meter.

Data Collection

In one app, Itron Mobile includes keyed data entry for visual reads and walk-by and drive-by modes for advanced automated meter reading (AMR). Data is stored instantly and safely in device memory and periodically sent to the company data center using Itron cloud communications.

Anyone equipped with an Itron Mobile device can collect meter reads and other valuable information about company assets and perform a variety of other field activities needed by the company.

Visual Meter Reading

At the heart of Itron Mobile is visual meter reading perfected during Itron's 40 years of experience. A robust read validation process provides an accurate and certified reading to ensure accurate billing. Each read is compared to high and low limits defined for that meter. For any read that is outside the limits, the user completes one or more validation tasks as defined by the company's business rules.

Asset Management

Itron Mobile can be used to collect data to improve company operations and fulfill regulatory requirements including photos, surveys, GPS coordinates and more. Get the most from your mobile workforce by also managing basic field service activities such as investigations, meter exchanges, maintenance, and service disconnect and connect, which can be completed manually or remotely.

ADVANCED ENDPOINT COMMUNICATIONS

Since inventing automated meter reading in the 1980s, Itron has shipped over 100 million AMR/AMI endpoints. Itron AMR can be deployed selectively on hard-to-read meters, in select regions or across the entire population and easily migrated to AMI, providing a safe and smart investment. Itron AMR ensures accuracy, significantly increases efficiency and improves employee safety by eliminating exposure to hazardous conditions.
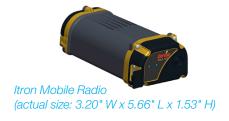
Itron Advanced AMR Radios

Itron radio technology has evolved with the rapidly changing needs of the industry. Walk-by data collection is performed with the compact Itron Mobile Radio that uses

Bluetooth® to connect to a variety of mobile devices. Drive-by data collection uses a Windows 10 laptop or tablet with the vehicle-mounted MC3 radio. Itron radios support wake-up and bubble-up endpoints and include full two-way wireless communications for Itron's latest generation advanced AMR endpoints.

Advanced AMR Endpoints

Itron's latest generation endpoints provide capabilities typically seen only with expensive AMI solutions. Itron Mobile makes these endpoints available at the low cost of AMR. Itron Mobile can collect time-synchronized interval data, electric time-of-use reads, acoustic leak sensor data, cathodic protection reads and more. Remote disconnect and connect are available for electricity, gas and water using encrypted two-way communications. Any employee with Itron Mobile can perform these tasks, freeing up highly skilled employees to perform more complex work. Given this broad data set and system flexibility, Itron Mobile with Advanced AMR can significantly improve operational efficiency, customer service and system integrity.

*Itron Mobile Radio
(actual size: 3.20" W x 5.66" L x 1.53" H)*

*Itron MC3 Radio
(actual size: 13" W x 11.25" L x 2.75" H)*

OUTCOMES

FCS and Itron Mobile begin by delivering accurate and certified meter reads for billing. Special reads, such as move-in/move-out and check reads are completed automatically using out-of-route AMR readings. Customer service is improved with interval data, photos and survey data to supplement what the customer service rep knows about the customer and their usage. Conservation programs are enabled using interval data and leak detection. Disconnect and connect tasks are optimized by using the meter reading workforce and through remote dis/reconnect endpoints. Regulatory requirements and asset management needs are met using surveys, photos and GPS coordinate collection. Investigations are completed quickly with photographic evidence and interval data history.

Improved Data Security

Itron Mobile employs data encryption and advanced user authentication, as well as role-based functional security. User authentication is required prior to accessing any data. Data access is limited based on the company's organizational structure and position of individual employees. Upper-level managers may view all data, while other employees see only data relevant to their office. Additionally, Itron's latest generation of radio-based endpoints can be operated in an enhanced security mode where radio transmissions are encrypted and authenticated, enhancing security for the company and their customers.

Reduced Costs

Itron Mobile operates on a variety of mobile devices, allowing the company to select the most cost-efficient device whether that be a smartphone, tablet or laptop. In many cases the employee may already have a compatible device. With the ability to set more than 400 processing options, companies can deploy FCS without costly internal IT or third-party software customizations.

Increased Operational Efficiency

Modern mobile devices allow for a variety of connection options and the Itron Cloud enables secure data transfer using any Internet connection. Employees no longer have to report to the office to load and unload data and can spend more time completing productive work. Data transfer throughout the day allows the supervisors to monitor completed work and reassign employees where they are needed most. Automated meter reading is significantly faster and more reliable than manual meter reading, reducing the number of resources devoted to meter reading and reducing the number of attempts to access meters blocked by locked gates, dogs and other obstacles. Enhanced FCS reports provide managers multiple export formats and data

that is automatically summed by office and cycle. FCS collects, stores and matches out-of-route reads to unprocessed meters, reducing work dispatched to the field by exploiting reads already collected. When combined with datalogging, telemetry and other capabilities, FCS and Itron Mobile reduce special trips to the field and give the mobile employee time to perform more valuable work.

Increased Field Safety

Account and meter-specific information can be proactively displayed on the collection devices to provide updates or cautions to mobile employees. Employees can be notified of this critical information using audible tones or through vibration for noisy environments (for the hearing impaired) and to avoid potentially alerting dogs to their presence. With location tips and mapping on all devices, Itron Mobile enables the employee to find assets efficiently. When used with Itron's wireless endpoints, Itron Mobile enhances employee safety by significantly reducing encounters with potential obstacles such as dogs and irate customers, which is especially important when reading meters and disconnecting services.

OUTCOMES *(continued)*

Cloud Connected

The Itron Cloud enables employee connectivity from any Itron Mobile device using any Internet connection. Data is encrypted during transfer between FCS and the mobile device. User authentication is managed by Azure Active Directory and Itron Identity Services, enabling access to multiple apps from a single user account. Updates are enabled through the cloud to provide rapid benefit from app improvements. The Itron Mobile architecture enables new services such as mobile workforce location. Itron's product experts manage and operate the cloud to provide the highest level of reliability.

Guaranteed Investments

FCS and Itron Mobile guarantee that your investments in Itron technologies will be protected. FCS is compatible with the FC300 handheld computer, allowing the company to continue using those assets alongside Itron's latest mobile technologies. Using Itron Mobile or the FC300SR, the company can operate all models of Itron's industry-leading AMR and telemetry endpoints. Itron's advanced endpoints provide all the traditional benefits of AMR while expanding benefits to include what commonly requires an AMI system. When a full AMI system is needed, Itron's endpoints are easily migrated. The mobile system continues to supplement the AMI system as needed, providing the cycle-based

billing interface and contingency reads for opt-out customers and outlying meters. This unique combination of backwards compatibility and migration features enables the company to get the most from investments made in the past, exploit new technology now and perfectly position the company for the future. Itron's commitment to the scalability and extensibility of our software means that no matter where your business is with respect to AMR, AMI or smart grid adoption, Itron's solutions can take you where you want to go.

Join us in creating a more **resourceful world**.
To learn more visit **itron.com**

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