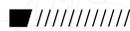




# HYDROLOGY APPLICATIONS



**EXTREME ENVIRONMENTS  
EXTREMELY RELIABLE**



## ABOUT FTS

FTS began in 1980 with a focus on the fire weather meteorological niche.

Since then FTS has become a leading manufacturer of remote environmental monitoring solutions including systems, instrumentation and communications technology for the Hydrology, Fire Weather and Meteorology industries.

Our equipment forms the backbone of some of the world's most sophisticated and demanding environment monitoring networks. Our mission is to make our customers successful in their efforts to monitor, record, and analyze changes in the natural environment.

## FTS CORE COMPETENCIES

### Critical data delivery

We understand applications that require data from your remote stations no matter what.

### Remote deployment

Partly by beginning in British Columbia, Canada, and partly from the nature of the industry and the need for massive spatial coverage, we have learned the challenges of continuously monitoring the weather in very remote locations. Lack of infrastructure and inaccessibility (or an extremely high cost of physically getting to stations) are obstacles that we have tremendous experience overcoming.

### Extreme environments

We also know all about the hazards faced by high tech equipment for scientific data collection in the wilderness. We understand how to design products and systems for locations where grizzly bears, lightning strikes, hurricanes, extreme heat or extreme cold are realities.

### Scientific-grade accuracy

Many decisions are made based on the quality of data that is measured. We understand the importance of accuracy as much as our customers, who make decisions daily that involve thousands or millions of dollars and affect public safety.

### Operational simplicity

Our experience in environmental monitoring has taught us the importance of keeping systems simple to install, simple to operate and simple to maintain. We've come to realize that anyone who works with environmental monitoring equipment, no matter how skilled, wants complexity eliminated. Not only does it make their job easier, it saves money from reduced training costs and increases reliability, by eliminating errors.

## Technical Support

FTS was founded on a single guiding principle: to make our customers successful in their efforts to monitor, record and analyze ongoing changes in the natural environment. This involves providing customers with exceptional service and support.

We understand that sometimes things don't work as intended. When that happens, we'll have your back. All our products are backed by our extensive documentation and lifetime technical support. You can reach us via email or phone, and you'll always be speaking to a real person. Our dedication to customer service is at the heart of everything we do, and we stand by every one of our solutions.

Our technical services team is equipped to provide a wide array of custom solutions, including network management services and rental programs. For more information and to see how we can assist you, visit [ftsinc.com](https://ftsinc.com) and click on "Support" in the main menu.

## MAINTENANCE PROGRAMS

While you can always send in your equipment to us for service and repair, we offer several paid programs designed to minimize your downtime and make maintenance easier and simpler.

### Annual Onsite Maintenance

A comprehensive maintenance program for your entire system that includes an annual visit by an FTS-trained technician, annual sensor exchange, field validation and calibration, full record-keeping, priority emergency support and more, all with one goal in mind - to keep you up and running.

### Factory Exchange Service

Peace of mind for your sensors - FTS will send exchange sensors annually along with a host of benefits including priority emergency support to ensure that your sensors are always within desired specifications.

### Return to Factory

Let us take care of your equipment for you. This program allows you to send your sensors to us for annual maintenance, which includes refurbishment and calibration as well as priority emergency support.



# HYDROMET

Hydrometeorology is the study of water and energy transferred between the land surface and the lower atmosphere.

Hydrometeorological monitoring networks are composed of sensors collecting rainfall, temperature, wind, barometric pressure, and other data that are used by forecasting models to produce flash flood guidance and threat information. Hydrometeorological monitoring networks and associated communications are critical to the success of any flash flood early warning system.

The purpose of sensor networks is to provide accurate, real-time hydrometeorological measurements to facilitate bias adjustment of radar and satellite precipitation estimates, provide rainfall input to hydrologic and flash flood models, and support general weather forecasts and flash flood forecasts.



## SENSORS USED FOR THIS APPLICATION



**PRESSURE TRANSDUCER**



**RADAR STAGE SENSOR**



**FTS BUBBLER**

## DATA MOBILIZATION FOR ANY APPLICATION

### LT1 SYSTEM

- Reliable, compact, and affordable
- Local storage ensures data integrity
- Cellular or Satellite telemetry options

### FTS360 APP

- Bluetooth connection to LT1
- Local configuration of sensors and telemetry
- iPhone and Android





**IN-SITU AQUATROLL 600**



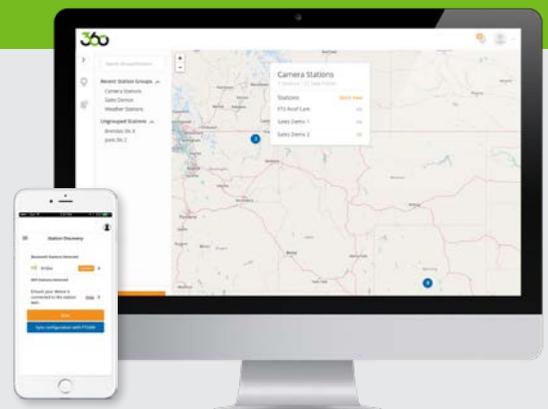
**GMX500**



**LAMBRECHT RAIN[E]**

## FTS360 APP

- Remote configuration
- Data monitoring and graphing
- Alerting by email, text, and social media
- API for data passthrough to your platform



## FLOOD FORECASTING

The accuracy of a weather radar decreases with range, so a regional or national radar network is often designed to achieve an acceptable coverage at a reasonable cost, perhaps, focused on areas with the highest rainfall or flood related risks. For flood warning and forecasting applications, another option is to use a denser network of affordable real-time rain gages to infill gaps in the main radar network in areas of interest such as major cities.

If the rain gage network is of sufficient density and quality, radar estimates of rainfall may also be adjusted to take account of rain gauge measurements, to correct for low level and other affects missed by the radar itself.



## SENSORS USED FOR THIS APPLICATION



**GMX500**



**LAMBRECHT RAIN[E]**



**PRESSURE TRANSDUCER**



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# LANDSLIDE MONITORING

Landslides often occur in response to heavy or prolonged rainfall. On hillsides, gravity is constantly working to pull the soil and rock downslope, and rainfall infiltrating into the ground changes the forces or stresses acting on those hillside materials. If the changes in stress are large enough to overcome the strength of the hillside materials, a landslide occurs.

The link between heavy or prolonged rainfall and shallow landslides has been known for decades and began to be quantified in the late 1970s. With no monitoring instruments, however, the only data that existed were from rain gauges that might be several miles from the landslides, and observations or eye-witness accounts of when landslides occurred.

Monitoring with instruments provides better data on how much rainfall is causing landslides and when they are occurring. More importantly, monitoring also helps scientists learn how water is moving in the hillside before and during a landslide. Knowing what water is doing in hillslopes before and during landslides can lead to better tools for predicting when landslides might occur.



## SENSORS USED FOR THIS APPLICATION



**GMX500**



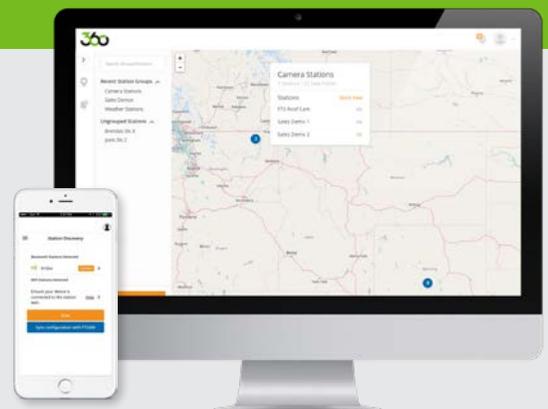
**LAMBRECHT RAIN[E]**



**SOIL MOISTURE AND TEMPERATURE SENSOR**

## FTS360 APP

- Remote configuration
- Data monitoring and graphing
- Alerting by email, text, and social media
- API for data passthrough to your platform





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## OUR MISSION

To make our customers successful in their efforts to monitor, record, and analyze changes in the natural environment.

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