



Product:

Itronix fex21

Application:

Data collection field workers

Itronix Solution:

- *Data stored on compact flash cards can be transmitted wirelessly or via a PC's serial port*
- *On-going support and maintenance of all fex21 units to keep the USDA's field workers connected*

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Itronix designs, manufactures and deploys mission-critical wireless, rugged computing solutions that maximize the productivity of mobile workers.

For more than 15 years, Itronix has worked extensively in the utilities industry. Today, the company works with roughly 90% of the largest utilities in the United States, as well as organizations in the commercial field services, telecommunications, government, public safety and EMS markets.

More information about Itronix and its products are available at www.itronix.com

Itronix Case Study:

USDA Forest Service

Overview: *Connecting with the great outdoors*

The USDA Forest Service encompasses 191 million acres of land, an area roughly equivalent to the size of Texas. Each year, the Forest Service sends hundreds of full-time and seasonal workers into the federal wilderness of Washington and Oregon to convert information about trees, vegetation, streams, and rivers into usable data.

Through surveys, inventories, field estimates, and even tedious hand-counting, foresters and field technicians capture and quantify the changing environmental landscape. This information is used for timber management, fish inventories, land sales, water quality and much more. The importance of this data requires state-of-the-art ruggedized handheld computer devices.

Problem: *Big trees, big rivers, big challenges*

Many Forest Service workers are away from civilization for days—even weeks at a time—sleeping outdoors and subjecting their computers, to rain, dust, heat, mud, and even drops onto rocks or into waterways.

Art Clinton, director of field data acquisition for the United States Department of Agriculture's Forest Service/Region Six, is one of the people at the forefront of supplying computers in the field. It is his job to evaluate, purchase, package, maintain, and upgrade the hundreds of handheld portable computers used throughout the Forest Service's Pacific Northwest region.

"Our handheld devices are subjected to a high degree of punishment," Clinton commented. "They've been dropped off bluffs, submerged in mountain streams, even carried 150 feet high into trees to record insect counts."

Clinton said the Forest Service needed a mobile computing solution that would withstand the harsh environmental conditions. "At any temperature, under any environmental condition these units have to be able to take it," he stated.

The Itronix Solution:

Forest Service employees rely on computers every day as a forest management tool. At the same time, they need a PC that can withstand any type of weather element, is lightweight, able to collect and transfer data from the field, maintain battery life and handle punishment.

The Itronix fex21, a unit engineered to handle rough outdoor treatment, was the ideal PC for the USDA Forest Service. At just 28 ounces (batteries included) and possessing a shock-resistant, waterproof case, the fex21 is the perfect solution for long-term field use.

The fex21 protects against water, heat, cold, dust, direct sunlight, vibration, and electronic discharge, and is also the first handheld to meet military standard drop and seal specifications. The unit also allows for up to sixteen hours of use before recharging. Many of the fex21's have been retrofitted with battery packs that accommodate 4 AA batteries, allowing forestry workers to simply insert fresh batteries at the beginning of a day's work.

Results:

Currently, the USDA Forest Service, including Region Six, a massive area encompassing 19 national Forests, one National Grassland, and a National Scenic Area, uses 400 fex21 Handheld PCs. Also included in this region is the Mount St. Helens National Volcanic Monument, the site of the most violent volcanic eruption in U.S. history.

The fex21 has entered another phase of the Forest Service's data collection duties – one that wasn't originally considered. Development of an in-house application called the Electronic Road Log data collection system, or ERL, the USDA Forest Service has taken technology to a new level. The software, in conjunction with the fex21 handheld, registers road location, distance, and condition data, giving engineers an accurate picture of the district's infrastructure. The agency reports that its novel use of field PCs has been a key to determining priorities for future road construction and maintenance.