



# Flood Warning (ALERT)

Real-time Monitoring and Control Systems



Campbell Scientific designs and builds standard ALERT, ALERT2, hybrid ALERT, and customized flood-warning systems. This includes a turn-key transmitter packaged in a traditional ALERT-style canister for standpipe installation. The dataloggers at the heart of our systems

have been proven over decades in the harshest, most remote conditions. You can add our systems to an existing network of stations, or we can customize a system for your unique application.

## MAJOR SYSTEMS

	Measurements	Datalogger	Power	Communications	Description
<b>ALERT100</b> ALERT Flood Warning System 	Pulse Count, SDI-12, 0 to 5 V, 4 to 20 mA	none	12 or 24 Ah rechargeable battery	ALERT via licensed frequency radio	Rugged, low cost, turnkey system for basic ALERT-style standpipe installation. This system is field configurable.
<b>ALERT200</b> ALERT Flood Warning System 	Pulse Count, SDI-12, 0 to 5 V, 4 to 20 mA	none	12 or 24 Ah rechargeable battery	ALERT2 via licensed frequency radio	Identical to the ALERT100, but programmed to use the ALERT2 protocol.
<b>ALERT110</b> ALERT Flood Warning System 	Pulse Count, SDI-12, 0 to 5 V, 4 to 20 mA, Digital I/O, Low Level AC, Bridge	CR800	12 or 24 Ah rechargeable battery	ALERT via licensed frequency radio (other options available)	Rugged, turn-key system is designed for ALERT-style standpipe installations. This system is field configurable and fully programmable.
<b>ALERT210</b> ALERT Flood Warning System 	Pulse Count, SDI-12, 0 to 5 V, 4 to 20 mA, Digital I/O, Low Level AC, Bridge	CR800	12 or 24 Ah rechargeable battery	ALERT2 via licensed frequency radio (other options available)	Identical to the ALERT110, but programmed to use the ALERT2 protocol.

## Custom Systems

Many of our systems can be customized. Tell us what you need and we'll help you configure a system that meets your exact requirements.



## ALERT/ALERT2 Solutions

Our ALERT solutions match all standard ALERT protocols. Our dataloggers, proven in thousands of applications world-wide, provide multiple types of inputs (pulse, analog, SDI-12, and others), which allows use of almost any type of water level sensor including pressure transducers, shaft encoders, bubblers, and radarsensors. Onboard algorithms can calculate hourly and daily minimums, maximums, averages, totals, flow, or any other statistical value. These values can be stored on-board the station, providing a backup of data. A solar panel can charge the battery for extended unattended monitoring.

Additional sensors to measure soil moisture, water quality, or meteorological conditions can easily be integrated. We can upgrade older stations, even those from other manufacturers, with new Campbell Scientific hardware, saving you money ([www.campbellsci.com/alert-retrofit](http://www.campbellsci.com/alert-retrofit)).



## Custom Flood Warning Solutions

Campbell Scientific can help design and build custom hardware packages that meet your exact needs. Any of our standard systems can be modified to take advantage of other forms of telemetry and use various communications protocols. Other common forms of telemetry are:

- › Digital VHF/UHF Radios
- › License-Free 900 MHz Radios
- › Satellite (GOES, BGAN, OrbComm, Iridium)
- › Cellular
- › Ethernet / Wi-Fi

Additionally our dataloggers support a variety of communication protocols, such as:

- › ALERT/ALERT2
- › Modbus
- › PakBus
- › DNP3
- › TCP/IP
- › SDI-12

With such a large variety of telemetry options and communication protocols to choose from, we can help you develop a custom solution that fits your budget and meets your needs.

## Customized Flood Warning Network Using LoggerNet Software

Based on the application, Campbell Scientific's LoggerNet software may be an alternative solution for collecting and displaying data from a flood warning network. LoggerNet allows users to quickly and efficiently collect data from flood warning stations over a variety of telemetry options (cellular, satellite, TCP/IP, terrestrial radio,

etc.). Campbell Scientific software also allows for two-way communications with stations allowing for remote administration and command/control functionality. Data collected by LoggerNet can be stored locally or shared with clients through a variety of means including email, FTP and HTML, and SQL database.

## Other Resources and Options

To meet customer needs, other resources and communications options can be combined with flood warning systems. Commonly, local governments will combine resources to obtain the best possible system. In other situations, federal agencies can be involved to increase system coverage and robustness, and even help with the budget. For

example, satellite transmitters can be added to stations to provide automated data archival through the National Weather Service (NOAA/NESDIS) and the US Geological Survey. Multiple purpose data collection systems bring to bear the resources and expertise of environmental data experts.

