

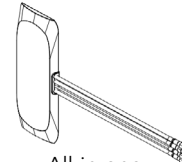
XALT Battery Viewer

Introducing the XALT Battery Viewer

Maximizing up-time and performance of your electrified vehicle requires a new approach to system monitoring. The XALT Battery Viewer (XBV) telematics system consists of a control unit and an all-in-one antenna that allows you to access data that has been consolidated for easy viewing from virtually any electronic device that can be connected to a web-based portal. Save time and money over previous, more manually intensive monitoring methods and tools with the XBV.



Telematics Control Unit (TCU)



All-in-one Antenna



XALT Battery Viewer (XBV) Portal

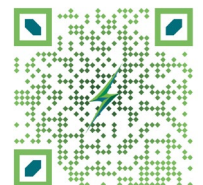
Features

- Multiple connectivity options (2G, 3G, 4G, WiFi)
- Easily integrated into new designs or existing systems
- Adhesive mount antenna for quick and non-intrusive installation
- Robust electrical and mechanical design
- Wide range of operating voltages
- Supports multiple CAN baud rates
- Historical location tracking and Geo-fence capabilities
- Diagnostic reporting capabilities
- Generate reports and view logs
- Automatically generates emails and/or text messages to be notified of battery system status

Advantages

- Access to any of your battery systems in applications world-wide through the XBV Portal
- Intuitive dashboards to view all critical battery system information
- Monitor the status all of your battery systems simultaneously on one interactive map.
- Data gives companies the ability to provide a prognostic approach to servicing end-customers' applications.
- Reduces down-time by knowing when to schedule service and being able to respond quickly to system issues.

Characteristic	Specification
Operating Voltage	6.5 VDC to 32VDC
Operating Temperature	-40°C to 70°C
CAN	x2 Channels/J1939 29-bit
Supported Baud Rates	250k, 500k, 1,000kbps
WiFi Connectivity	802.11b/g/n (2.4GHz)
Cellular Connectivity	4G LTE, 3G, 2G
Antenna	All-in-one (GPS, WiFi, Cellular)
Electrical Robustness	ISO 16750-2 ISO 7637-2
Mechanical Shock	50G, 11ms, half-sine pulse, 100 cycles in each of 6 directions
Mechanical Vibration	27.8 m/s ² RMS (~2.84 Grms), 10-2,000 Hz, 8 hours in each of 3 axes
Ingress Protection	IP67



XALT Battery Viewer

XALT Battery Viewer Dashboards

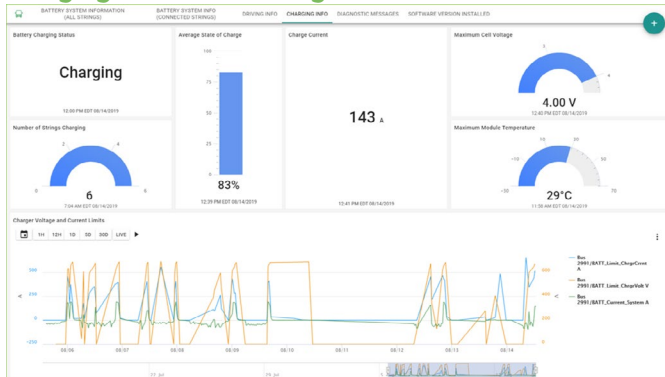
System Wide Overview Dashboard



A selection of a variety of dashboards are available. The system wide overview dashboard will display:

- Max and Min Cell Voltages
- Max and Min Module Temperatures
- Max and Min String Voltages
- Cell Voltage Deltas
- Module Temperature Deltas
- Locations of Min and Max Values
- All strings in the system or just strings that are currently connected

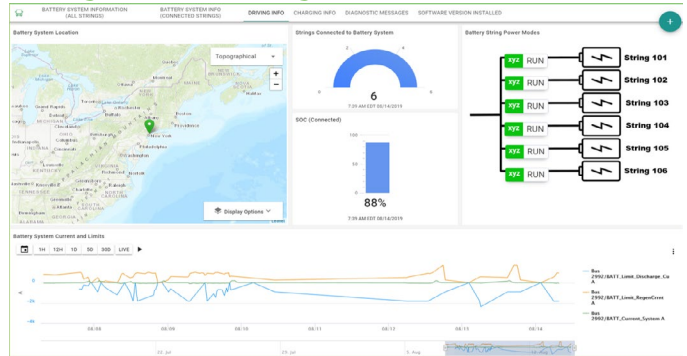
Charging Status Monitoring



Charging status monitoring dashboard includes important information regarding:

- Charging Status
- State of Charge
- Charge Current Charting
- Charger Voltage and Current Limit Monitoring
- Maximum Cell Voltage
- Maximum Module Temperature

Driving Status Monitoring



The driving status monitoring dashboard included pertinent information including:

- Number of Connected Strings
- State of Charge
- Battery System Current Charting
- Discharge and Regen Limit Monitoring
- Status of Each Battery String

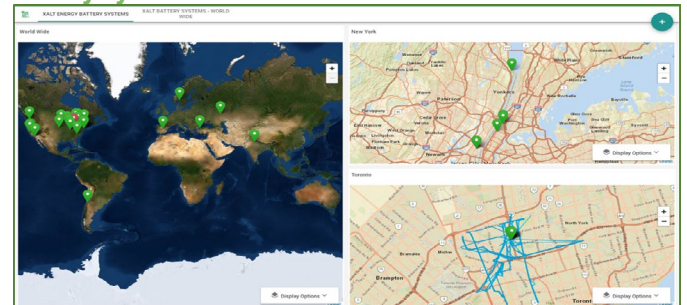
Diagnostic Messages

Diagnostic Messages (DM1)	Search		
Subject Parameter Number (SPN) ↓	Failure Mode Identifier (FMI)	Occurrence Number	
516129	19	1	
516125	0	1	

The diagnostic messages dashboard will provide:

- Diagnostic Identifier
- Number of Occurrences

Battery System Location



Battery system location dashboard provides details with:

- Battery Status Indication
- Multiple Map View Options
- Historical Location Trail View Options