



Altronix®

# Lithium Iron Phosphate Battery Benefits



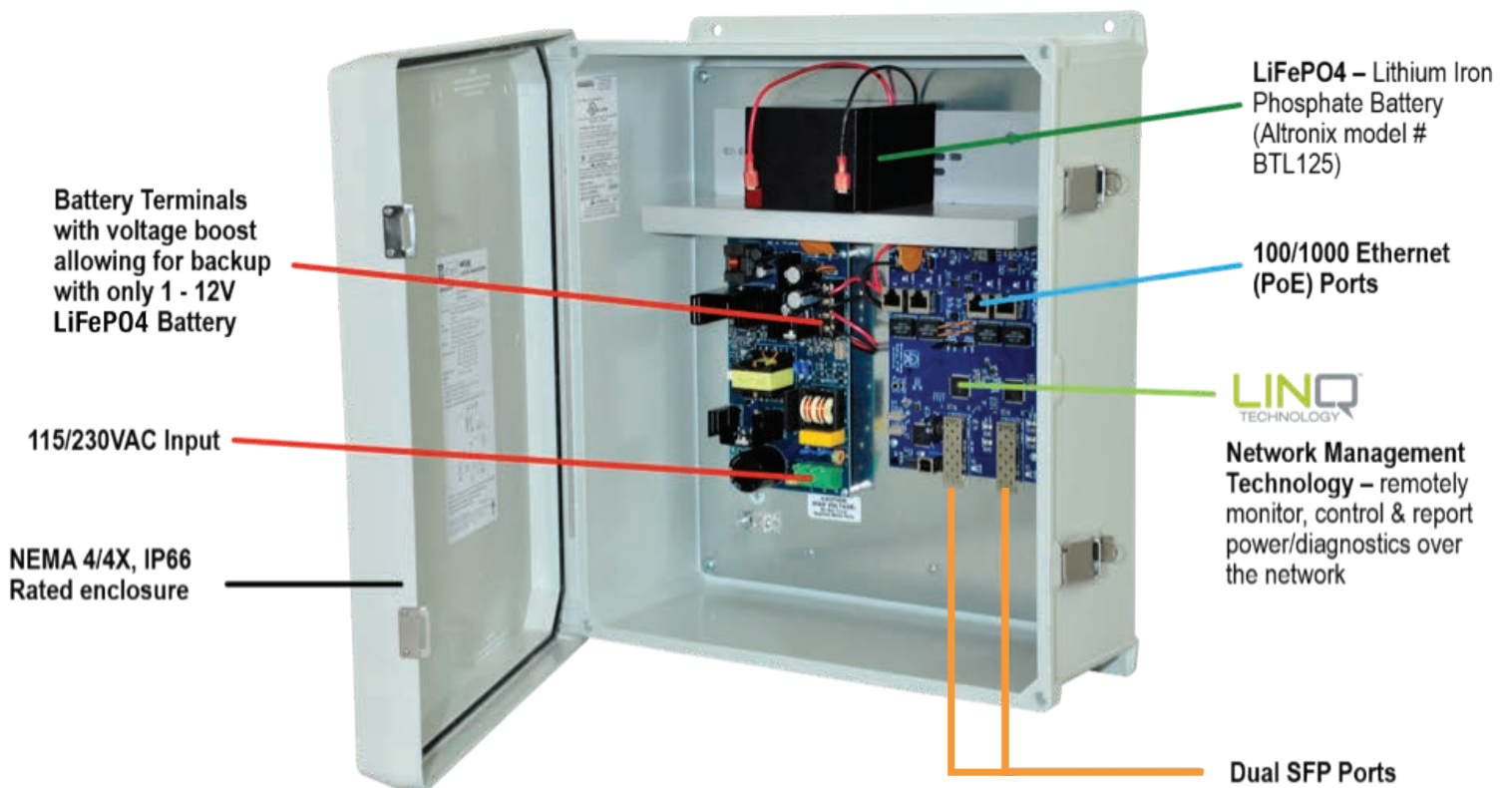
Technology Brief

# Lithium Iron Phosphate Battery Benefits

The new NetWay Spectrum series by Altronix takes fiber and power to a new level. The latest series of outdoor hardened Ethernet PoE switches are designed with a battery charging circuit optimized for Lithium Iron Phosphate batteries to provide superior back-up capabilities. Units can be deployed in remote perimeter applications with conventional single or multi-mode fiber and comes housed in a NEMA4, IP66 rated outdoor enclosure with an integral battery shelf to accommodate back-up batteries. NetWay Spectrum also features LINQ™ Network Management Technology to remotely monitor, control and report power/diagnostics.

Lithium Iron Phosphate batteries, also known as LiFePO4 bring to rise a new generation of batteries designed to far outpace Sealed Lead Acid (SLA) batteries. Lithium Iron Phosphate batteries are used in myriad electronic applications such as recreational vehicles and solar energy systems. LiFePO4 batteries offer superior longevity, efficiency and safety compared to Sealed Lead Acid batteries.

Sealed Lead Acid batteries will soon become a product of the past. Lithium Iron Phosphate batteries offer a tremendous improvement over SLA batteries and their advantages are laid out in this document for your review.



# Lithium Iron Phosphate vs. Sealed Lead Acid



Lithium batteries are 33-50% lighter than Sealed Lead Acid (SLA) batteries.

LiFePO<sub>4</sub> batteries provide up to 99% efficiency, allowing for faster charging with minimal loss; SLA batteries lose power quickly during discharge.

Lithium Iron Phosphate batteries operate efficiently under high-stress environments including temperature fluctuations and energy depletion.



Lithium Iron Phosphate batteries allow for rapid charging and discharging – leading to more up-time.

Lithium Iron Phosphate batteries can cycle up to 5,000 times vs. SLA batteries with only up to 500 cycles.

LiFePO<sub>4</sub> batteries can be shelved up to 10 years! SLA batteries need to be charged every 6 months (often times the batteries coming from overseas have already been sitting and losing their charge for 4+ months).



# Lithium Iron Phosphate vs. Sealed Lead Acid



Although Lithium Iron Phosphate batteries cost more up front their benefits offer a significantly lower total cost of ownership. The cost per cycle of a LiFePO4 battery is \$0.31 vs Sealed Lead Acid batteries \$0.92\*.

\*Real cost per cycle includes maintenance, replacement product and labor including electrical costs to charge the battery.

LiFePO4 batteries are made from light metals. They do not contain toxic chemicals that cause decay. Recycling and redistribution is easy and cost-effective, also reducing the financial burdens of disposing Sealed Lead Acid batteries.



A global leader in power and data transmission, Altronix designs and manufactures innovative solutions that maximize overall performance and efficiency. Our power products and peripherals feature the quality, reliability and unparalleled customer support that have been associated with Altronix for over 30 years.

**Altronix products are made in the U.S.A. and backed by a Lifetime Warranty.**

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