

X5 Hot-Swappable Battery

Technical Datasheet

ULTRALIFE
X5



LITHIUMPOWER

SMART  **CIRCUIT**

Features & Benefits

- Robust and lightweight full aluminum case & handle construction
- Rechargeable Lithium Iron Phosphate chemistry for optimal endurance and safety
- Intuitive bi-directional docking simplifies use
- Ultralife Smart-Circuit technology for accurate fuel gauging
- Blue LED gas gauge indicator for quick capacity check
- Certified to the latest transportation and safety standards

Applications

- Medical carts
- Warehouse terminals
- Robotics

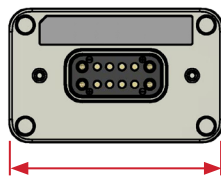
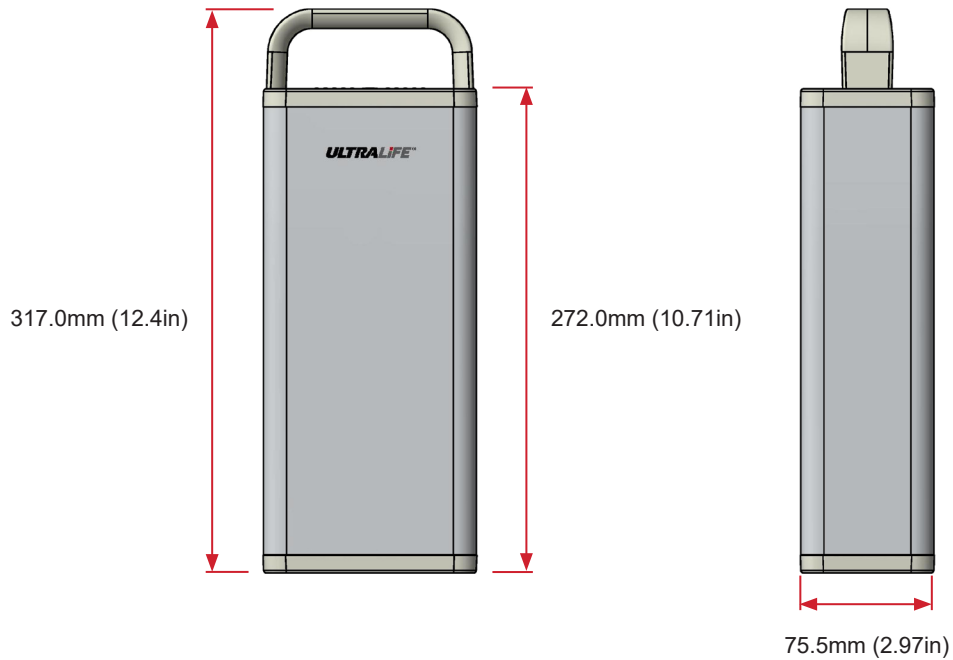
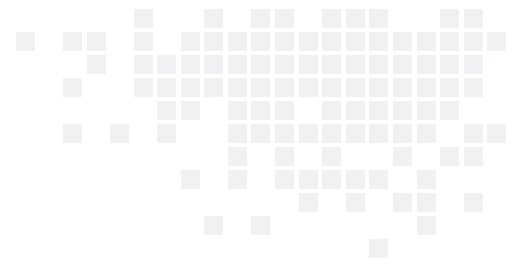
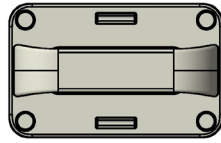
Accessories

- UCA-X5 Docking Cradle
- UCH-X5 Smart Charger

Technical Specifications

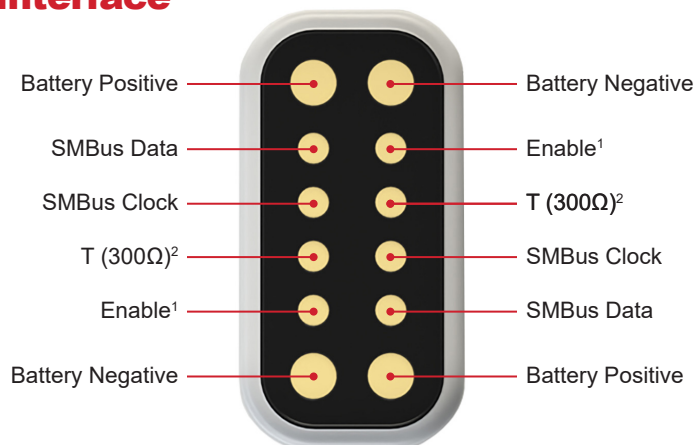
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|-------------------------------------|--|-------------------------------------|
| Model No. | URB-X5 | |
| Chemistry | Lithium Iron Phosphate (LiFePO ₄) | |
| IEC Designation | 4IFpR19/66-12 | |
| Average Voltage | 12.8V | |
| Nominal Capacity¹ | 21.6Ah | |
| Voltage Range | 14.4V to 10.0V | |
| Max. Continuous Discharge | 20A | |
| Max. Pulse Discharge | 84A (<21ms) | |
| Energy | 276.5Wh | |
| Energy Density | 112Wh/l 81Wh/Kg | |
| Weight | 3.4Kg ± 50g | |
| Cycle Life² | >2,000 Cycles | |
| Operating Temperature | 0°C to +45°C (charge), -10°C to +50°C (discharge) ³ | |
| Storage Temperature | -20°C to +50°C | |
| Internal Resistance | <50mΩ | |
| Self-Discharge @ 23°C | <5%/month | |
| Exterior/Housing | Silver anodised aluminum housing with traffic white aluminum handle and endcaps | |
| Terminals/Connector | Sub-flush gold-plated contacts for power and communications | |
| Size | Width: | 120.5mm (4.74in) |
| | Depth: | 75.5mm (2.97in) |
| | Height (Shoulder): | 272.0mm (10.71in) |
| | Height (Handle): | 317.0mm (12.4in) |
| Communications | System Management Bus Specification Rev 1.1 compliant Smart Battery Data Specification Rev 1.1 compliant | |
| State of Charge Indicator | 10 segment blue LED with push button activation | |
| Protection | Over Charge: | >3.75V / cell |
| | Over Discharge: | <2.50V / cell |
| | Over Current: | >22A (charge), >22A (discharge) |
| | Over Temperature: | >+53°C (charge), >+60°C (discharge) |
| | Short Circuit: | Included |
| | Cell Imbalance: | Included |
| Charging | Constant Current, Constant Voltage (CC-CV) <20A, 14.4V (14.6V max) | |
| Safety | Material Safety Datasheet - 1923B_SDS Refer also to Safety Guide UBM-5112 | |
| Certifications | UN 38.3 (Transportation), IEC 62133-2:2017 (Safety), UL 62133-2:2020 (Safety) | |
| Transportation | Class 9 International and within U.S. ⁴ Excepted when shipped by motorcar or rail within U.S. | |
| Harmonized Tariff Schedule | 8507.60.0000 | |
| Compatibility | Ultralife UCA-X5 Docking Cradle | |
| Notes | <ol style="list-style-type: none"> 1. Based on 0.2C discharge to 10.0V at +20°C 2. Based on CC-CV 10A 14.4V charge and 10A discharge to 10.0V 3. Ambient temperature must be limited to +40°C if continual discharge at 20A is required 4. Transportation regulations and classifications are available on the Ultralife website | |

Dimensions



120.5mm (4.74in)

Electrical Interface



Notes

1. This pin must be connected to Battery Negative to enable the battery output
2. A 300Ω fixed resistor is connected between this pin and Battery Negative and provides the 'Safety Signal' described in the Smart Battery Data Specification

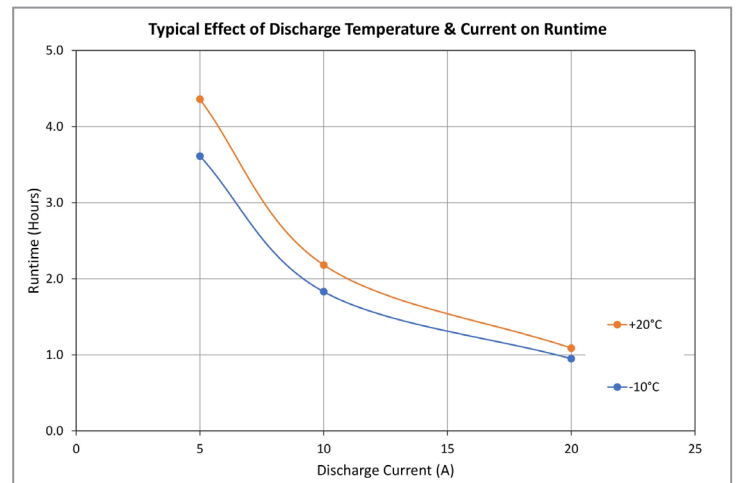
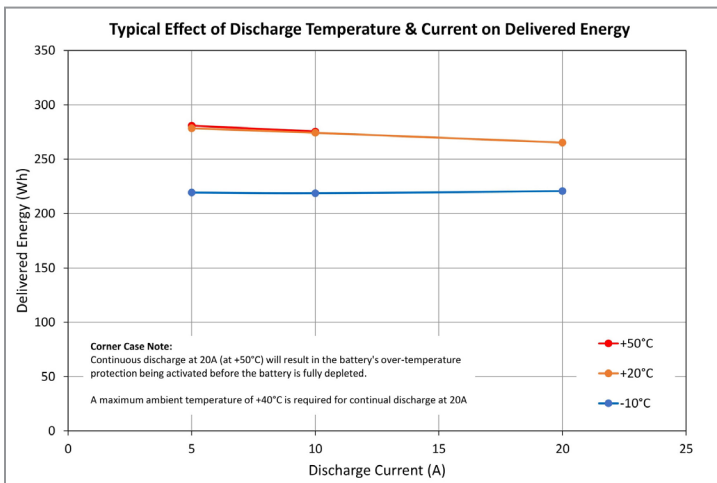
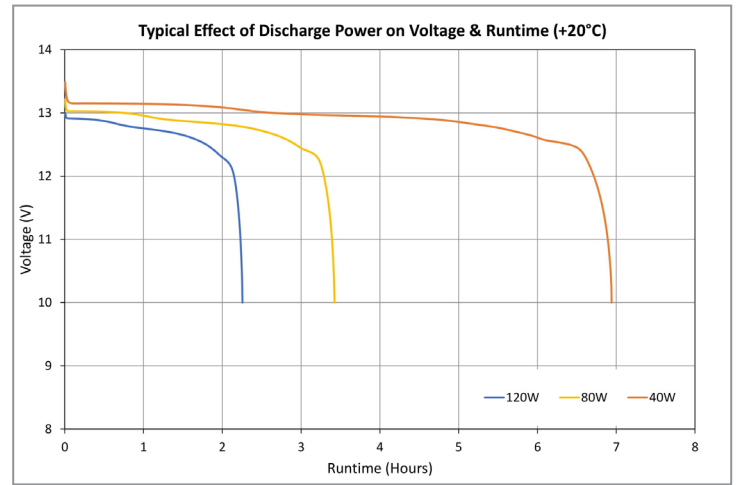
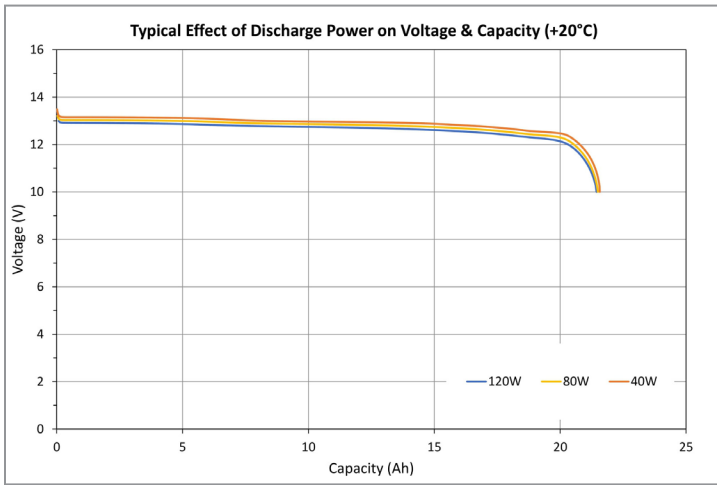
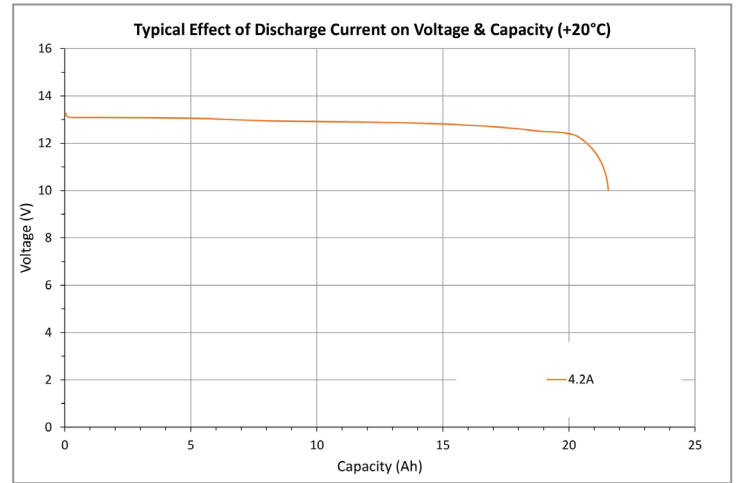
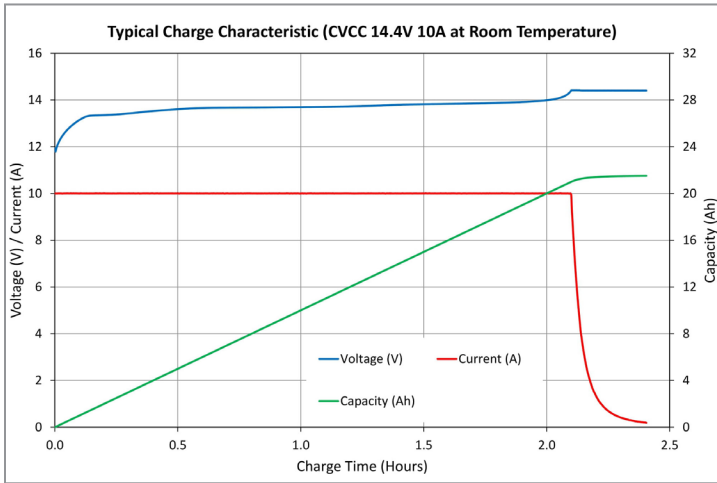
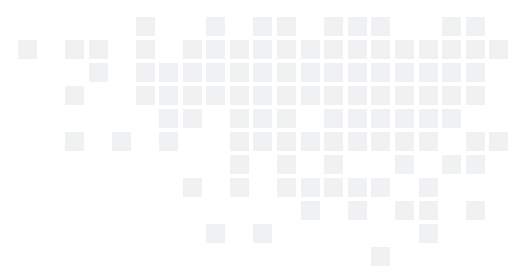
URB-X5

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Performance Graphs



Performance Graphs (continued)

