



# UltraLYNX: Dismounted Soldier Architecture

**The need for improving how we fit technology and increase capability, such as situational awareness, onto the soldier is well understood.**

Poorly integrated equipment and the batteries required to power it can actually inhibit a soldier's ability to fight.

Finding a way to reduce this burden has been the driving force behind UltraLYNX; which provides an open man-worn architecture that enables the efficient distribution of power and data that is lightweight and scalable.

UltraLYNX is a key component in the realisation of the benefits of any future situational awareness system; Increased operational tempo, improved operational agility and effectiveness and more efficient force application in a Combined, Joint, Interagency, Intergovernmental and Multinational command (CJIM) organisational context.

The benefits delivered by better situational awareness and more efficient power management will contribute to reducing the cognitive and physical burden on the soldier.

UltraLYNX provides the definitive standard for future soldier systems that provides a truly integrated and open systems solution.



## Features :

- Connects up to 12 devices using smart hub and ports
- Seamlessly integrates data radio(s) with Battle Management Applications
- Open architecture complies with UK MOD/NATO standard
- Bearer, power source & connector agnostic
- Supports any End User Device
- Installs onto/into any vest systems reducing external cabling
- Ruggedised for battlefield use and fully submersible

## Wearable Power & Data Architecture



*Representative vest systems*

## Power Management:

UltraLYNX has intelligent power management, which allows devices to be supplied from a central power source, typically a Lithium Ion battery. This means that the use of technologies such as wireless charging extend mission operability.

Each port can individually switch power to and from the central power bus, providing the user with control of the sources and loads that are connected. In addition, each port also provides overload protection as well as real time monitoring of power consumed.



**Data Management:**

UltraLYNX has a smart hub allowing USB device drivers and message routing to be installed locally. This means that customisation of the End User Device (EUD) software kernel is no longer required. The EUD operates in device mode with network connectivity being achieved via reverse USB tethering.

UltraLYNX also supports applications where no End User Device is required such as autonomous sensing or minimal user interaction. ■

**For more informatoin, contact:**

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| GENERAL SPECIFICATIONS  |  |
|-------------------------|--|
| Power Input             | Power Input 8–36V DC<br>Primary & secondary batteries<br>Auxiliary & scavenged power sources   |
| Data Bus                | USB 2.0  |
| PAN Ports               | 6 NATO/GSA compatible smart PAN ports (12 with scalable expansion unit)  |
| Power Output (Per Port) | 5A, 8–36V power (10A system total)<br>2A, USB 5V power (5A system total)<br>Robust circuit protection  |
| Dimensions (Hub)        | 115 x 58 x 15 mm (4.5 x 2.3 x 0.6 in)  |
| Weight (Hub)            | 230 g (8.1 oz)   |
| Colour (Hub)            | Black, Tan 499   |
| Certifications          | CE, FCC, WEEE, REACH, RoHS, IP68, MIL-STD-810G*, MIL-STD-461F*   |
| Temperature             | Operating: -20 to 55°C (-4 to 131°F)<br>Storage: -40 to 70°C (-40 to 158°F)  |
| Immersion               | 2 metres for 60 minutes<br>Fully functional with connectors covered / mated  |
| Reliability             | MTBF: 20,000+ hrs, MTTR: 10 mins<br>Independently field replaceable interconnect & connectors<br>Reversionary mode ensures power distribution availability |

| SMART HUB TECHNICAL SPECIFICATIONS |   |
|------------------------------------|---|
| CPU                                | Dual-core 1.0 GHz ARM Cortex-A  |
| RAM                                | 1 GB DDR3   |
| Operating System                   | Custom embedded Linux OS<br>SDK and power API available for 3rd party integration   |
| Storage                            | 4 GB onboard flash memory<br>expandable up to 64 GB   |
| HMI                                | System status LED (NVG compatible)<br>User button power on-off / sleep  |
| Device Management                  | Web management console<br>High integrity dual-partition software update, over-the-air update capable<br>User initiated built-in self-test                     |
| Platform Security                  | Secure high assurance boot<br>Tamper detection<br>Hardware RNG and encryption<br>PBIT platform integrity verification<br>Configuration of allowed USB devices |
| Interface Options                  | Bluetooth Low Energy v4.2<br>WiFi 802.11b/g/n   |
| Sensors                            | On-board IMU  |
| Power Consumption                  | Idle: 130mW<br>Typical: 2W  |