



STAR-PAN™ Power Distribution and Management Architecture

Symbiotic radio / battery power utilization and management for JTAC and other battery-power-intensive mission profiles



Smart Power = Longer Missions and Lighter Loads

Board-level, embedded system power monitoring, conditioning and charging makes STAR-PAN the most powerful tool for extended mission life and operational effectiveness. *Smart power equals longer missions and lighter loads* by significantly reducing the number of batteries that must be carried by C4ISR-equipped soldiers. Available interconnect cabling and power adapter accessories facilitate accelerated charging of the EUD, radio and peripherals as well as power scavenging from conditioned DC power sources such as vehicles.

UNIVERSAL POWER AND DATA CONNECTOR INTERFACE



The STAR-PAN system uses Glenair Mighty Mouse 807 connectors which are fully-compliant to US and NATO standards for EUDs, radios, batteries, and C4ISR peripherals. Many soldier batteries can be directly connected to the STAR-PAN system without adapters using the general-purpose Mighty-Mouse equipped C1 cable.

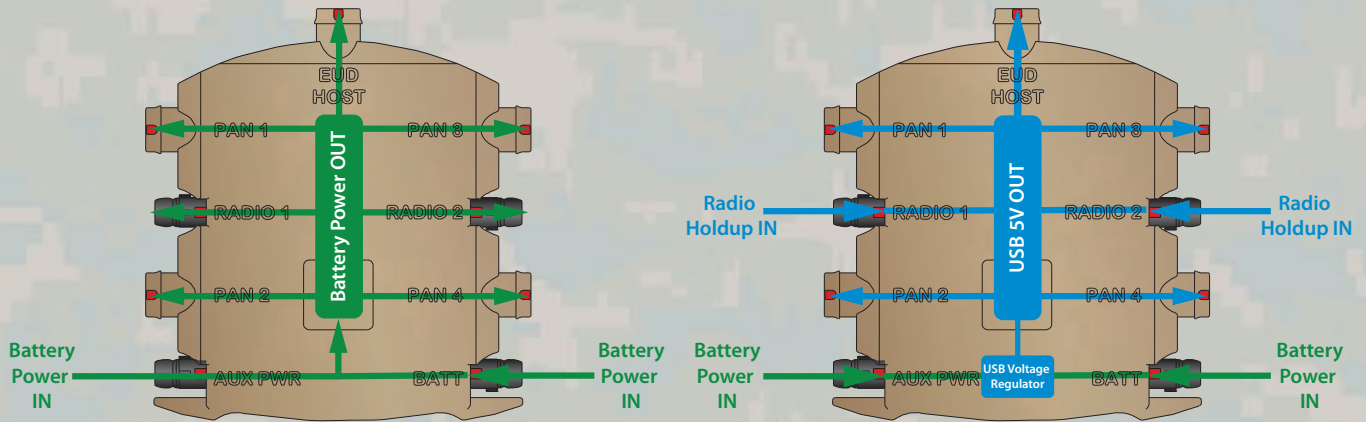


STAR-PAN EMBEDDED SYSTEM POWER MANAGEMENT

- API interface for user-controlled power management
- Port priority, charge state, system battery state, and temperature protection
- Charge-circuitry for a wide range of smart batteries

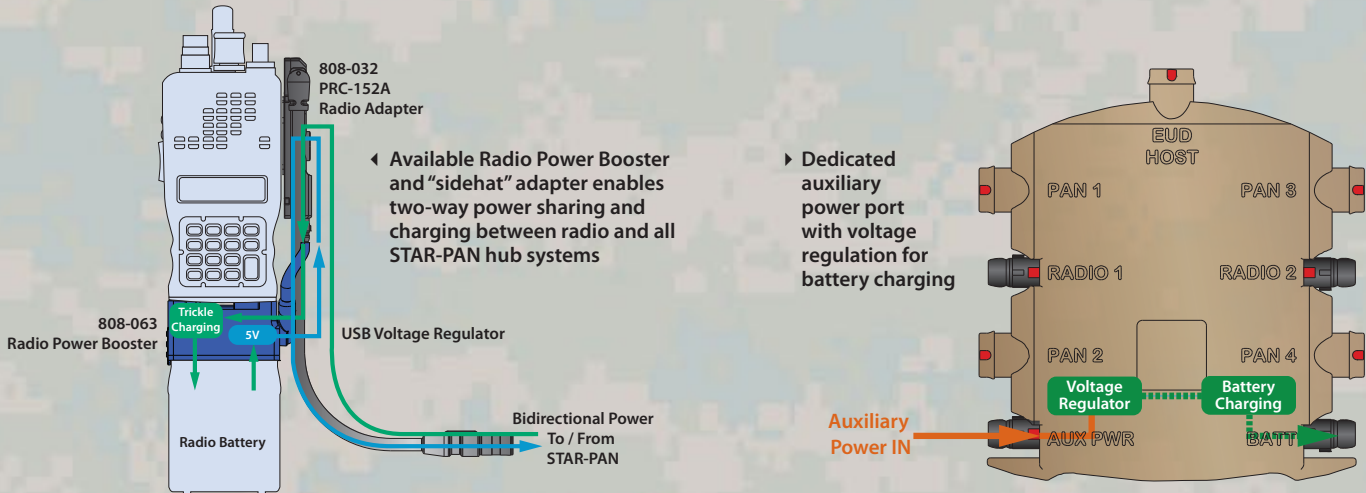


STAR-PAN POWER DISTRIBUTION / CHARGING ARCHITECTURE (STAR-PAN VI SYSTEM SHOWN)



▲ Primary power distribution supports dual hot-swappable battery inputs routed to PAN, EUD, and Radio ports

▲ USB power layer supports regulation of input battery power for distribution to USB 2.0 devices and radio “holdup power IN” functionality

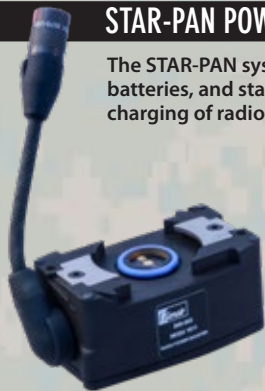


◀ Available Radio Power Booster and “sidehat” adapter enables two-way power sharing and charging between radio and all STAR-PAN hub systems

▶ Dedicated auxiliary power port with voltage regulation for battery charging

STAR-PAN POWER BOOSTER AND SUPPORTED BATTERIES

The STAR-PAN system utilizes the standard SMBus battery protocol for compatibility with a wide range of military standard batteries, and standards-compliant smart battery charging. Power scavenging is supported from a variety of sources. Trickle charging of radio batteries and radio holdup-to-hub is fully enabled with the STAR-PAN radio power booster.



808-063 Radio Power Booster for two-way power sharing



BB-2590/BA-5590 batteries



Handheld radio batteries



Conformal wearable batteries



Soldier smart batteries