



WASP

Wireless Air Soldier Power Manager

ISI's Wireless Air Soldier Power Manager is a soldier-worn power and data distribution hub with an advanced 14V/28V dual voltage conformal wearable battery. WASP provides comprehensive power distribution for air and ground soldiers due to its support of various alternative power sources including primary cells, vehicle power, solar blankets, fuel cells and wireless power transfer. SMBus device monitoring allows intelligent charging with the internal SMBus Level III battery charger and reports the state of charge and state of health of connected devices via SMBus over USB 2.0 (480 Mbps). The status is displayed on the touch screen Graphical User Interface (GUI) of an Android End User Device (EUD) in a Juggernaut™ or other ruggedized enclosure via ISI's ISPDS-C and Nett-Warrior compatible Android App. All input and output ports include reverse polarity (RP), over voltage (OV), under voltage (UV) and over current (OC) protection. WASP contains thermal sensors to monitor and report internal electronics temperature to maintain safe operating conditions. The WASP system provides seamless, zero drop out power switching through an integrated microcontroller which provides automatic detection and routing of the best available input power sources under firmware control.

Features



Dual 14 V/28 V Conformal Wearable Battery

Alternative Power Source (APS) 10-36 VDC

UV, OV, RP, OC protective circuits on all ports

Built-in Maximum Power Point transfer (MPPT) for APS

Wireless power transfer compatible up to 100 W+

Nett-Warrior compatible Glenair connectors

Android end user device interface



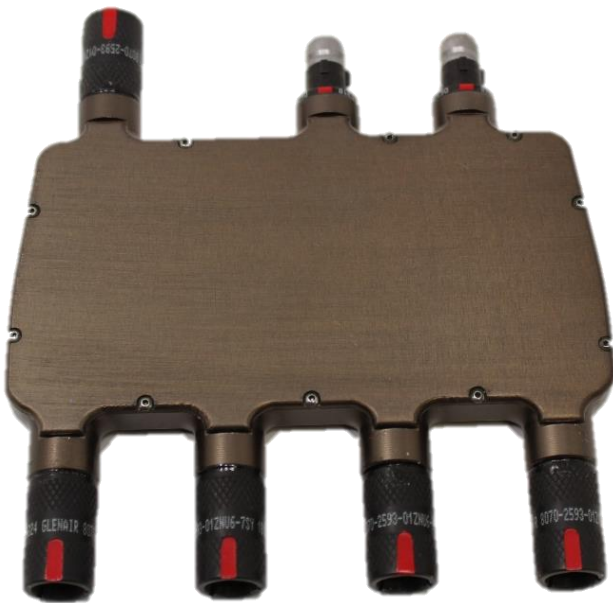
Specifications

Physical Specifications

PARAMETER	WASP DEVELOPMENT
Length, Width, Thickness	4.35" x 3.1" x 0.5"
Weight	<10 oz. (est.)

Interface Specifications

PARAMETER	WASP DEVELOPMENT
Hub Power Consumption	Less than 500mW
Hub Ports	Two Dual-Voltage Power Inputs with SMBus, Five Powered Outputs - One upstream USB host supplying 10-20VDC and 5VDC and 4 downstream USB peripheral ports supplying 10-20VDC, 5VDC, and 28VDC (LWECS compatible)
Data Bus	USB 2.0 and SMBus over USB
Data Protocol	ISPDS-C To EUD Communications ICD (open source)
Battery Charging	SMBus Level III



Connector PIN Assignments

PIN	PAN Port (Data) Function	Battery Port Function
1	Direct Battery Voltage	10-20VDC Batt+ Input
2	Ground	Batt - (GND)
3	+5VDC	Chg+ Output
4	USB +	SMBus Data
5	USB -	SMBus Clock
6	28VDC Return	28VDC Return
7	+28VDC	28VDC Batt+ Input

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