

VIASAT SECURE WIRELESS HUB (SWH)

Integrated and modular mission communications, computing, and security for the edge user

Ruggedized yet ergonomic approach focused on human performance and mobility

The Secure Wireless Hub (SWH), an addition to Viasat's tactical gateway portfolio, offers an intuitive and versatile body-worn system that prioritizes human factors and ease of use. The SWH seamlessly integrates into body armor systems, reducing kit configuration time by 90%, allowing edge users to quickly adapt to changing mission requirements while also providing additional processing power, enhanced security, and advanced networking capabilities.

The SWH is designed for dismounted operations in austere environments where network extensions and edge compute are needed to execute the mission. The SWH's multi-radio networking capabilities facilitate the transfer of data and networks to the battlespace, allowing joint and coalition forces to exchange situational awareness data with other tactical data link and MANET platforms, seamlessly integrating all assets into the Common Operational Picture.

This system is compatible with a wide range of peripheral devices and features advanced power management, customizable edge computing and situational awareness. Specifically designed to integrate Type-1 encryption handheld tactical radios, SWH also connects to non-Type-1 MANET and other IP based radios. A single SWH management app on an end user device easily configures peripheral devices.

Ease of use, scalability, and dismounted interoperability with modern communications

SWH utilizes Viasat's mobile software defined networking (SDN) platform, NetAgility™, to provide advanced networking capabilities such as automatic network configuration and support for Commercial Solutions for Classified (CSfC). This allows for seamless hosting of multiple transports and disparate waveforms, ensuring resilient connectivity for mission critical applications and data across the battlespace.

Thanks to its all-in-one design, SWH can be quickly set up within minutes by one dismounted user to provide ground force commanders with situational awareness. With faster set up, it's possible to remain mission ready virtually anywhere and with fewer personnel. Whether it's at-the-pause communications for dismounted warfighters or networking-on-the-move for small vehicles and boats, Viasat keeps you connected.



Viasat SWH At-a-Glance

WEARABLE HUB WEIGHING LESS THAN 1 KG

- › Increased situational awareness and information exchange across mixed tactical transports utilizing Viasat's mobile SDN platform NetAgility™
- › Advanced power management ensures the system and connected devices remain fully mission capable and eliminates the need to disassemble any configurations to recharge when the mission is complete
- › Onboard compute provides an EUD-agnostic approach and containerized distributed mission applications as a tactical gateway
- › Ruggedized connectors and integrated cabling help ensure availability and safety from snag hazards
- › Modular adapters enable flexibility in configuration in transport density, wireless connections, and peripheral integration
- › Peripheral device expansion from five (5) to nine (9) PAN ports



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Specifications

<p>BASE SYSTEM</p> <p>Tactical Edge Compute Module (TECM)</p> <ul style="list-style-type: none"> › Viasat NetAgility™ – mobile SDN › Containerized application support › Configuration & control of tactical Type-1 and non-Type-1 MANET radios › EUD agnostic networking <p>Backtray & Central Hub</p> <ul style="list-style-type: none"> › Universal to MOLLE Plate-Carriers › Nett-Warrior-compatible ISPDS › Dual-rail outputs (V_{BAT}/V_{BUS}) › 5 peripherals (4 USB 2.0, 1 USB 3.2 1x1) › Advanced power management › Primary & auxiliary power inputs 	<p>PHYSICAL</p> <p>Color Multi-Cam. & Black Anodized</p> <p>Dimensions (WxLxH) 8.75 x 12 x 1 in. (vest)</p> <p>Weight 1.9 lbs. (.86 kg)</p> <p>ENVIRONMENTAL</p> <p>Temperature -40 to +55°C (Operation), -60 to +80°C (Storage)</p> <p>Immersion IP67</p> <p>Shock/Vibe Designed to MIL-STD 810H</p> <p>EMI Designed to MIL-STD 461</p>	<p>CONNECTIONS (up to 9 ports w/exp.)</p> <p>Upstream 480 Mbps (to EUD)</p> <p>Downstream 5.0 Gbps (USB 3.2 ports), 480 Mbps (USB 2.0 ports)</p> <p>SMBus Ver. 1.1 / 2.0 compatible</p> <p>COMPUTE</p> <p>CPU ARM 64-bit (multi-processor) (2x 1.6GHz A72, 4x 1.2GHz A53)</p> <p>RAM 8 GB LPDDR4</p> <p>Storage 16 GB eMMC + expansion, SDXC microSD (up to 2TB)</p> <p>Containers OCI-compatible</p>
<p>PAN PORT EXPANSION</p> <p>Left/Right Cummerbunds</p> <ul style="list-style-type: none"> › Universal to MOLLE Plate-Carriers › Nett-warrior compatible ISPDS › Dual-rail outputs (V_{BAT}/V_{BUS}) › Advanced power management › USB hubs expand peripheral support for 6 additional devices (6x USB 2.0) 	<p>POWER</p> <p>Input 10 V_{DC} to 36 V_{DC}, 120 W (Max)</p> <p>Consumption 5 W (Typical), 10 W (Max)</p> <p>Output (V_{BUS}) 5.2 V_{DC}, 3 A per port, 26 W Max (all ports)</p> <p>Output (V_{BAT}) 10 V_{DC} to 20 V_{DC}, 5 A per port, 100 W Max (all ports)</p> <p>Battery Charging 10 V_{DC} to 33 V_{DC} (dynamic), (SMBus) 0.5 – 5 A (dynamic)</p> <p>EUD Charging (USB-PD) 5.2 V_{DC}, Up to 3 A</p>	<p>SOFTWARE</p> <p>Operating System NetAgility™ (Linux-based)</p> <p>Containers various</p> <p>Android App HubManager (Android), controls networking + advanced power & data</p> <p>Windows App SWH Provisioner (Network VPN admin)</p>
<p>ENHANCEMENT MODULES</p> <p>LTE Module</p> <ul style="list-style-type: none"> › 4G LTE CAT 4 cellular modem › Integrated primary & diversity antennas › 150 Mbps down / 50 Mbps up › Micro SIM card slot <p>Wi-Fi/Bluetooth Module</p> <ul style="list-style-type: none"> › Certified dual-band 802.11 a/b/g/n/ac › WPA2/WPA3 security › Station/hotspot/monitor modes › Bluetooth 2.1+EDR and BLE 5.2 <p>Intra Soldier Wireless (ISW) Module</p> <ul style="list-style-type: none"> › Ultra-wideband transceiver › Personal area network › NIST-certified AES encryption 	<p>PERIPHERALS & CABLES</p> <p>PAN Ports NW 6-pin F (807-series)</p> <p>Power Ports NW 6-pin M (807-series)</p>	<p>ORDERING INFORMATION</p> <p>SWH Base System 1454416</p> <p>Cummerbund L/R Kit 1454415</p> <p>LTE Module 1434800</p> <p>Wi-Fi/BT Module 1434802</p> <p>ISW Module 1434801</p> <p>Ancillary Equipment Contact Viasat</p>



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