

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 is an addition to Viasat's tactical gateway portfolio, offering an intuitive and versatile body-worn system that prioritizes human factors and ease of use. It seamlessly integrates into body armor systems, reducing kit configuration time by 90%. This allows 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. Through multi-radio networking capabilities, the SWH facilitates the transfer of data and networks to the battlespace. This allows joint and coalition forces to exchange situational awareness data with other tactical data link and MANET platforms, ensuring that all assets are seamlessly integrated 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 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 easy 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 NIAP accredited VPN 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 by one dismounted user, providing ground force commanders with situational awareness within minutes. 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 helps 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

BASE SYSTEM

Tactical Edge Compute Module (TECM)

- › Viasat NetAgility™ – mobile SDN
- › NIAP Certified cPP-ND VPN Gateway
- › Containerized application support
- › Configuration & control of tactical Type-1 and non-Type-1 MANET radios
- › EUD agnostic networking

Backtray & Central Hub

- › Universal to MOLLE Plate-Carriers
- › Nett-Warrior compatible ISPDS
- › Dual-rail outputs (V_{BAT}/V_{BUS})
- › 5 peripherals (4x USB 2.0, 1x USB 3.2 1x1)
- › Advanced power management
- › Primary & auxiliary power inputs

PAN PORT EXPANSION

Left/Right Cumberbunds

- › 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)

ENHANCEMENT MODULES

LTE Module

- › 4G LTE CAT 4 cellular modem
- › Integrated primary & diversity antennas
- › 150 Mbps down / 50 Mbps up
- › Micro SIM card slot

Wi-Fi/Bluetooth Module

- › 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

Intra Soldier Wireless (ISW) Module

- › Ultra-wideband transceiver
- › Personal area network
- › NIST-certified AES encryption

PHYSICAL

Color	Multi-Cam. & Black Anodized
Dimensions (WxLxH)	8.75" x 12" x 1" (vest)
Weight	1.9 lbs. (.86 kg)

ENVIRONMENTAL

Temperature	-40°C to +55°C (Operation), -60°C to +80°C (Storage)
Immersion	IP67
Shock/Vibe	Designed to MIL-STD 810H
EMI	Designed to MIL-STD 461

POWER

Input	10V _{DC} to 36V _{DC} , 120W (Max)
Consumption	5W (Typical) 10W (Max)
Output (V_{BUS})	5.2V _{DC} , 3A per port, 26W Max (all ports)
Output (V_{BAT})	10V _{DC} to 20V _{DC} , 5A per port, 100W Max (all ports)
Battery Charging	10V _{DC} to 33V _{DC} (dynamic), (SMBus) 0.5A – 5A (dynamic)
EUD Charging (USB-PD)	5.2V _{DC} , Up to 3A

CONNECTIONS (up to 9 ports w/exp.)

Upstream	480 Mbps (to EUD)
Downstream	5.0 Gbps (USB 3.2 ports), 480 Mbps (USB 2.0 ports)
SMBus	Ver. 1.1 / 2.0 compatible

COMPUTE

CPU	ARM 64-bit (multi-processor) (2x 1.6GHz A72, 4x 1.2GHz A53)
RAM	8 GB LPDDR4
Storage	16 GB eMMC + expansion, SDXC microSD (up to 2TB)
Containers	OCI-compatible

SOFTWARE

Operating System	NetAgility™ (Linux-based)
Containers	various
Android App	HubManager (Android), controls networking + advanced power & data
Windows App	SWH Provisioner (Network VPN admin)

PERIPHERALS & CABLES

PAN Ports	NW 6-pin F (807-series)
Power Ports	NW 6-pin M (807-series)

ORDERING INFORMATION

SWH Base System	1454416
Cumberbund L/R Kit	1454415
LTE Module	1434800
Wi-Fi/BT Module	1434802
ISW Module	1434801
Ancillary Equipment	Contact Viasat



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