

CHANGING THE WAY YOU COMMUNICATE



WAVE RELAY® MANET

The world's most scalable Mobile Ad Hoc Network. Persistent System's Wave Relay® MANET unites the Internet of Battlefield Things (IoBT) on a high throughput, self-forming and self-healing network. The Wave Relay® ecosystem connects soldiers, sensors, unmanned systems and cameras in a dynamic network that goes beyond mesh.

Persistent System's Wave Relay® MANET is used in tactical environments all around the world. The Wave Relay® ecosystem is designed to withstand all environments, assuring you will have communications when you need it the most. The MPU5 is the world's first smart radio and was designed to create secure and powerful networks anywhere in the world, where there is no prefabricated infrastructure. The Wave Relay® MANET ties together all your critical data in real time, providing Command and Control (C2) throughout the entire battlespace. The MPU5 provides high speed data, video, voice and an on-board Android computer system, making this the most scalable, advanced and efficient Mobile Ad-Hoc Networking radio in the world.



MPU5



Embedded Module



GVR5

COMMUNICATE MORE, CARRY LESS

Transmitters

MPU5



The most advanced, most scalable, and most efficient Mobile Ad Hoc Networking (MANET) radio in the world. Built to create powerful, secure networks anywhere, the MPU5 unites all your critical data sources in real time –giving you and your team the confidence to make difficult decisions in the heat of the moment.

Data, video, voice, and a fully integrated Android™ computer system makes the MPU5 the world's first Smart Radio.

Dimensions	3.8 x 6.7 x 11.7cm
Weight	391g
Operating Temp.	-40° to +85° C
Environmental	IP68, MIL-STD-810G

The MPU5 is the world's first Smart Radio with an onboard Android™ Operating System that includes everything you need built in. You will spend less time gathering and organizing gear and more time accomplishing the task at hand. State-of-the-art radio technology combined with the Wave Relay® MANET allows you to go farther and faster than ever before.

Integrated GPS, native video encoding/decoding, and PTT audio allow your team to share a common operational picture. The MPU5 is more than just a radio.

Smart Tactical Networking

- Onboard Android™ OS - the MPU5 is your computer
- Install existing Android™ apps
- Run custom apps natively
- Connect & use USB devices

Stay Connected Anywhere

- Uses the Wave Relay® MANET
- Designed for mass scalability - no hop limits
- Rapid self-forming & self-healing
- True peer-to-peer - no master node

Carry More. Do Less.

- Network, voice, video, computer – all in one device
- Eliminate extra batteries, LMRs, encoders, receivers & more
- More room for mission critical equipment

GVR5



The GVR5 provides simultaneous, dual-band, robust, low latency, and high-capacity networked communications among tracked and wheeled ground vehicles, and among ground vehicles and Wave Relay® MANET-equipped aircraft.

Use the Wave Relay® MANET's massively scalable network, with Cloud Relay™ and intelligent Radio-over-IP (RoIP), to rapidly task-organize vehicles, munitions, dismounts, and airborne assets. The GVR5 interoperates with the Wave Relay® MANET family of tactical networking devices.

Dimensions	25.5 x 25.2 x 11.65cm
Weight	4.3kg
Operating Temp.	-32°C to +51°C
Environmental	MIL-STD-810G

Key Features

- Simultaneous Dual Band Wave Relay® MANET (Mobile Ad-Hoc Network)
- Automatically routes communications over the best band depending on geography and RF congestion
- Embedded Cloud Relay™ federates the GVR5 with 3rd Party Communications Systems, such as LTE and Wide Band SATCOM
- Massive Network Scalability & Robust IP networking supports Rapid Task Organization, Joint Operations, & Mobile Command & Control
- Tracked and Wheeled Vehicle Ready
- Ideal for manned-unmanned vehicle teaming and vehicle leader-follower operations
- Optimize communications range, data throughput, and penetration with the GVR5's 3x3 MIMO antennas with vertical and horizontal polarizations.
- Make any command and control service available, virtually, from anywhere in the network, using the GVR5's Internet Protocol differentiated services and efficient

Transmitters

Embedded Module



The Embedded Module is the most advanced, scalable, and efficient Mobile Ad Hoc Networking (MANET) device in the world, available in an integration-ready, SWaP-timized form factor. Integrate the Embedded Module into your products to unite UAVs, UGVs, and sensors on a single network.

Because the Embedded Module features an HD video encoder and onboard Android™ computer, eliminate redundant equipment from your platform.

Dimensions	5.08 x 8.3 x 1.49cm
Weight	95.82g
Input Voltage	8 - 28 VDC

Transform Your Systems into Network Devices

- Designed for integration into disparate unmanned systems and sensors
- Communicate further and faster than ever before

SWaP-timize Your Unmanned Systems

- Consolidate your computing, video encoding, communications, and networking hardware
- Focus on what matters most: the mission, time on station, and payloads

Integrated Antenna Series



The power of the Wave Relay® MANET integrated directly into an antenna extends the enterprise to the edge and over large geographic areas.

Integrated Sector Antennas enable the creation of fixed coverage over massive geographic areas. Cover **all** your assets on the ground with the power of the Wave Relay® MANET – from military bases and wildland firefighters to the border patrol and port/maritime security, the Integrated Antenna Series keeps you connected.

Simple Installation

- Wave Relay® MANET integrated directly into antenna
- No external RF cabling reduces hassle and loss of gain
- Simple mounting bracket for quick setup
- One cable for Power + Data

More Data over Longer Ranges

- MIMO technology delivers high throughput at long range
- Custom antenna polarization maximizes radio performance
- No external RF cabling allows you to leverage the full gain of the antenna

Multi-Band Tracking Antennas



The Multi-Band Tracking Antenna delivers the throughput to go the distance. Operate with up to two MPU5s for frequency redundancy with any aircraft up to 120+ miles.

The Multi-Band Tracking Antenna was designed for both rapid deployment and ease of use. Two people can set up the system in under 15 minutes to provide high throughput at long ranges. The system collapses into multiple, lightweight transport cases for easy portability, allowing you to set the Multi-Band Tracking Antenna anywhere without compromising performance.

Long Range & High Throughput

- MIMO technology for highbandwidth connectivity and reliability
- 360° continuous rotation & <1° pointing accuracy for optimal, bidirectional communication
- Operate in L-, S-, and C-Bands without switching feeds

The Soldier Empowered with Information

- Stream HD Video & IP Data from aircraft over long distances
- Meet growing data exfiltration requirements
- Layer 2 connectivity between payloads and the enterprise

Accessories

Dual PTT



The Dual PTT enables you to communicate on two talk groups with a single radio. Two independent talk group/volume knobs allow you change talk groups and adjust headset volume of two channels independently. You can talk on both groups separately or simultaneously using the two PTT buttons.

The power of smarter Push-To-Talk at your fingertips.

Dimensions	6.93 x 4.39 x 2.54cm
Weight	153g
Operating Temp.	-40°C to +85°C
Environmental	IP68, MIL-STD-810G

Reduced SWaP

- Carry a single radio while having access to tactical radios via the MPU5's Radio over IP (RoIP) capability - Tactical radios tethered to MPU5s can be utilized as network services by simply switching to their assigned channels
- Half the weight of competing devices

Be Heard. Anywhere. Anytime.

- Crystal clear audio ensures every syllable comes through and is understood.
- Analog to digital audio conversion occurs as close to the source as possible to preserve signal integrity and ensure communication

Rugged Display Controller



An EUD for End Users – Your direct interface to the networked battlefield. Complete situational awareness is now at your fingertips. Connect the RDC to the MPU5 to enable Command & Control of unmanned systems, TAK operations, streaming HD video, Wave Relay® MANET configuration, and more.

You're already carrying a computer, now connect a display.

Dimensions	18.29 x 10.67 x 2.54cm
Weight	442g
Operating Temp.	-20° to +70°C
Environmental	IP68, MIL-STD-810G

Integrated, Low SWaP Solution

- Eliminate excess cabling
- MPU5 functions as USB Hub - No external USB Hub required
- Powered by the MPU5 - no external power, configuration, or commercial cell phone required

Designed for the Battlefield

- Ruggedized, IP68 rated design allows you to take the RDC anywhere
- Physical buttons for no-look operation
- Developer-supported app optimization

Radio Modules



The MPU5 and Embedded Module are both built on Persistent's Interchangeable Frequency Architecture. Both products are compatible with all of Persistent's Interchangeable Frequency Modules. This design allows you to adapt and select an operational band best suited to your environment and application without replacing your entire radio inventory or redesigning your embedded radio integration.

Additionally, as global spectrum regulations continue to evolve, the Interchangeable Frequency Module protects your investment or design from obsolescence; the module can be quickly and easily changed to ensure compliance.

Key Features

- Three independent RF Chains
- OFDM (64QAM, 16QAM, QPSK)
- All MIMO modes from SISO to 3x3
- 5, 10 and 20MHz Channel Bandwidth
- 100+Mbps peak TCP throughput at 20MHz channel
- 10W Maximum Aggregate Transmit Power (3.3W per RF Chain)
- Maximal Ratio Combining, Space-Time Block Coding, Spatial Multiplexing



RADIO GATEWAYS

Push-to-Talk radios are effective in communicating in the deployed environments, but extending those radio transmissions back over Beyond Line-of-Sight bearers to dislocated headquarters elements is one of the challenges faced in the deployable communications space. CISTECH Solutions has been designing and manufacturing radio gateways in Australia for over a decade, bridging tactical networks as well as providing network extensibility through IP interfaces. Our GV1 radio gateways are designed with simplicity and reliability in mind. All our GV1 Radio Gateways support Multicast, Unicast and SIP streams, with SRTP (AES) and SIPS stream security available.

With the ability to bridge mission critical networks, extend network connectivity, and deliver push-to-talk services to desktop and mobility platforms anywhere, our Radio over IP (RoIP) Gateways can connect you like never before.



GV1-2010



GV1-2020



GV1-2040 Desktop

CHANGING THE WAY YOU COMMUNICATE

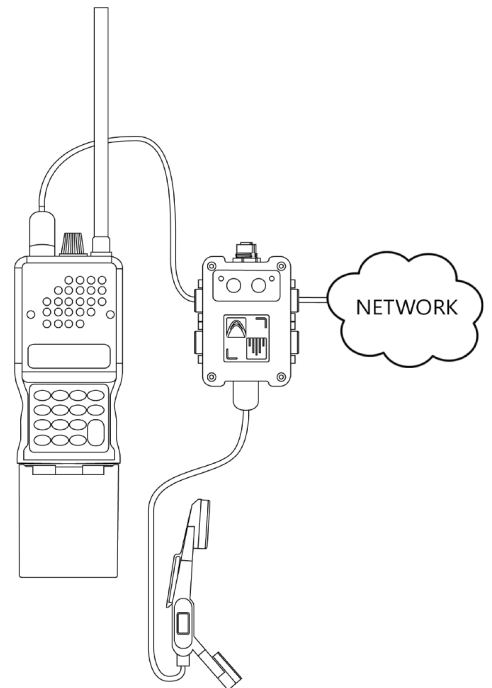
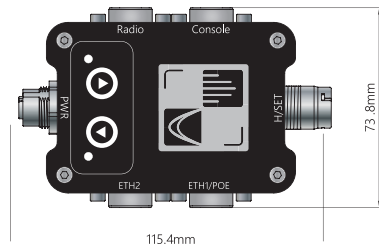
GV1-2010 Single Port Radio Gateway

Single Port Radio Gateway for Mission Critical Operations

The GV1-2010 Radio over IP (RoIP) gateway is a ruggedized, portable, single port radio gateway that provides advanced connection options to IP networks. The compact IP67 / MIL-STD-810G form factor of the GV1-2010 can be utilised as a radio gateway, radio remote, or as a voice mixing engine to converge and convert voice streams. Capable of being powered off PoE, it is your plug and play solution for RoIP.

Using high-grade components, conduction cooling and extended operating temperature range, the GV1 is optimised for operation in harsh environments that require TCP/IP, VoIP and analogue Voice integration.

Dimensions	34.3 x 73.8 x 115.4mm	Interfaces
Weight	390g	• 1 x Mil Handset port
Input Voltage	10-48V DC, 802.3af PoE	• 1 x Console or Serial port (RS232/RS485)
Power	< 3 Watts	• 1 x E&M Radio ports
Operating Temperature	-40 to +85°C	• 2 x 10/100/1000 Ethernet switch ports

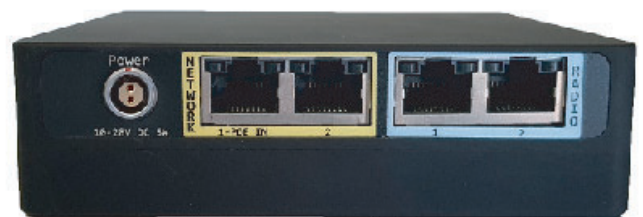


GV1-2020 Two Port Radio Gateway

Two Port Radio Gateway for Mission Critical Operations

The GV1-2020 Two Port Radio Gateway is designed for deployable communications in mission critical environments. Connect two disparate voice networks and extend those networks back into the enterprise, all in a single deployable chassis.

The simple handset can control, communicate and configure the GV1-2020 in the palm of your hand. With different connector options available, the GV1-2020 can be deployed into any environment communications integration is required.



Dimensions	118 x 127 x 35mm	Interfaces
Weight	<500g	• 1 x OLED or Mil Handset port option
Input Voltage	10-28V DC, 802.3af PoE	• 1 x Console Management port
Power	< 3 Watts	• 2 x 10/100/1000 Ethernet switch ports
		• 2 x E&M Radio ports

Physical Specifications
• Connector and Handset options available
• Operating Temperature: -20°C to 65°C

GV1-2040 Four Port Desktop Radio Gateway

Four Port Radio Gateway for Mission Critical Operations

Communications integration has never been better. Leveraging off the power of the ever popular GV1-2010, the GV1-2040 Desktop brings increased capacity in an industrial design. This latest edition to the RoIP gateway suite brings with it the same simplified management interface, increased port capacity with up to 4 Radio interface ports, and a simplified handset that can be used to control and communicate with any of the configured radio or network participants.

Dimensions	214 x 163 x 24mm	Interfaces
Weight	975g	• 2 × 10/100/1000 Ethernet switch ports
Input Voltage	12 - 28 VDC	• 4 × E&M Radio ports
Power	< 3 Watts	• 1 × OLED Handset port
Operating Temperature	-20 - 65°C	• 1 × Console Management port

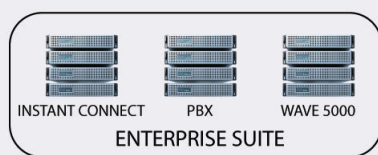
Physical Specifications

- Integrated aluminum chassis

IP Configuration

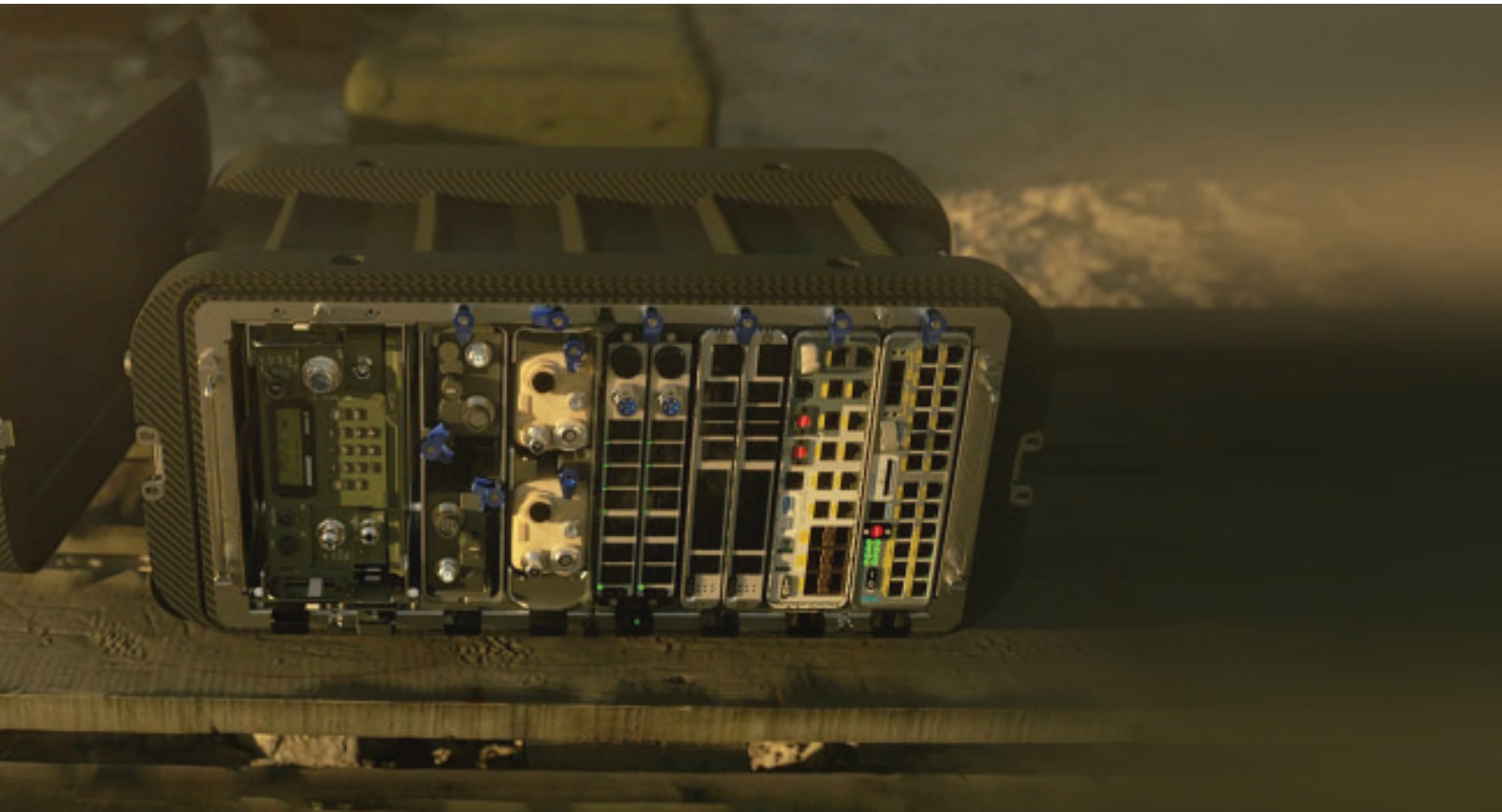
- IP Address allocation Static/ Dynamic
- Network Monitoring Support SNMP V2
- Network Time Protocol Support SNTP
- Adjustable MTU Support (VPN)

1. PTT Button
2. PTT Latch
3. Volume Up / Down
4. OLED Screen
5. Talkgroup Up / Down
6. Programmable Buttons
7. 2 Watt Front Facing Speaker
8. Backlight Keypad
9. Heavy Duty Curly Cord



UNICAST/SIP

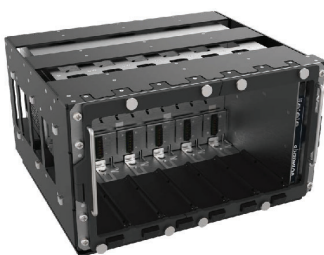




MODULAR CHASSIS

Voyager by Klas is a modular scalable deployable network architecture, designed with government, military and public safety users in mind. Based on a common module form factor, incorporating best-of-breed virtualised and hyperconverged compute and networking technologies available, Voyager provides flexibility, versatility and agility in the most demanding operational environments. With its optimised size, weight and power, and a range of integrated chassis to enable ease of deployment and platform integration, Voyager provides the functionality and performance you need where you need it most. Engineered for survivability and reliability even in the most extreme environments, Voyager is battle hardened and combat proven.

Voyager chassis are designed to be more than transit cases. The intelligently planned nested uninterruptible power supply (UPS) capability allows subsystems to be carried within larger chassis for multi-enclave operations, yet remain quickly severable should a subsystem need to be separated for individual operations. Voyager chassis also may be customized or specially designed to support unique operating environments or deployment platforms.



Voyager 6



Voyager 2 Slim



Voyager 8 Plus

COMMUNICATE MORE, CARRY LESS

KLAS

Voyager 1 / Voyager 1+



Voyager 1 and Voyager 1+ rugged battery packs for use with the Voyager range of network modules.

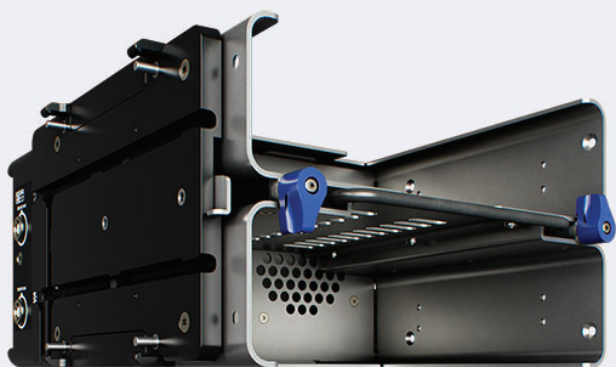
As an alternative to a backplane chassis, the Voyager 1 or 1+ battery pack can be attached to the rear of any Voyager network module. The Voyager 1+ is especially suited to the higher power requirements of modules such as the VoyagerVM 3.0 and VoyagerESR 2.0.

Dimensions	188 x 42 x 52mm
Weight	0.48kg
Charge Voltage	10 - 18VDC for Voyager 1 10 - 36VDC for Voyager 1+

Key Features

- Rugged battery pack compatible with all Voyager network modules including VoyagerESR, VoyagerVM and VoyagerSW14
- May be stacked for extended operation
- Voyager 1 provides a power output of 60 W and 75 Wh of battery backup power (including 12 W PoE).
- Voyager 1+ provides a power output of 120 W and 65 Wh of battery backup power (including 12 W PoE) and which is especially suited to modules with higher power requirements

Voyager 2 / Voyager 2+



The Voyager 2 / Voyager 2+ chassis is the smallest dual-enclave system available based on Cisco 5915 ESR. Optimized for backpack use, Voyager 2 has support for two Voyager Network Modules and either ViaSat KG-250X, TACLANE-Nano KG-175N, KIV-54, KG175D or Mini-Catapan HAIPE devices.

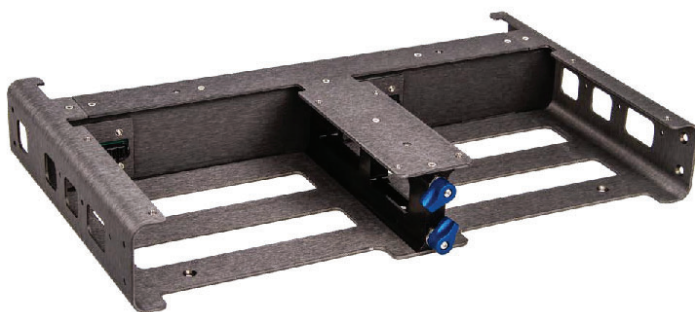
All devices are batterybacked using 2590-based UPS with built-in charger.

Dimensions	210 x 247 x 122mm Voyager 2 214.4 x 288.7 x 122mm Voyager 2+
Weight	1.5kg Voyager 2 2.1kg Voyager 2+

Key Features

- Supports any two network modules including VoyagerESR, VoyagerVM, VoyagerLMR and VoyagerSW14
- The Voyager 2+ has a higher power output than the standard Voyager 2 to allow for the increased power demands of newer more powerful Voyager modules such as VoyagerVM 3.0 and VoyagerESR 2.0.

Voyager 2 Slim



Voyager 2 Slim is a two slot, rugged backplane chassis supporting two Voyager modules in a backpack or briefcase form factor.

Battery-backed power is provided by Voyager 1 and the system is also ideal for vehicle installs with addition of Voyager Module Battery Bracket (VMBB) or Voyager Module Adapter (KVMA).

Optional mounts for a HAIPE device or Cradlepoint IBR900 above each slot are also available.

Dimensions	395 x 246 x 58mm
Weight	1kg

Key Features

- The HAIPE bracket can also be used to attach a Cradlepoint IBR900.
- Space for one Voyager network module or two Voyager m-Series modules per slot.
- Standard depth or full depth options available where the standard depth houses a Voyager module without a Voyager 1 attached and the full depth houses a Voyager module plus Voyager 1 attached.
- The HAIPE bracket can also be used to attach a Cradlepoint IBR900.

Voyager 4



Voyager 4 is a lightweight chassis with space for up to four Voyager modules with or without a Voyager 1 battery pack attached.

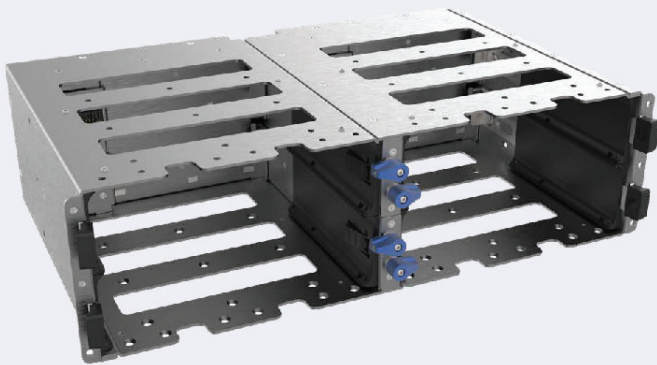
The Voyager 4 has multiple point points to enable vehicle installations and can also be DIN rail mounted and powered.

Dimensions	258 x 232.5 x 232.5mm
Weight	2.5kg
Input Voltage	12 VDC / 48 VDC PoE
Construction	Aluminum chassis

Key Features

- Lightweight aluminum construction.
- Support for up to four Voyager modules including Voyager 1 battery packs if attached.
- Multiple mounting options with mounting holes on the front, rear and sides of the chassis.
- DC input connector for connecting a 12 VDC power source. Ensure that the input power matches the power rating of the Voyager modules installed in the chassis.

Voyager 4 Slim



Voyager 4 Slim is a lightweight chassis with space for up to four Voyager modules with or without a Voyager 1 battery pack attached.

The Voyager 4 has multiple mount points to enable vehicle or rackmount installations.

Dimensions	432 x 276 x 118mm
Weight	2.6kg

Key Features

- Support for up to four Voyager modules including Voyager 1 battery packs if attached.
- Multiple mounting options with mounting holes on the front, rear and sides of the chassis.
- Lightweight aluminum construction.
- DC input connector for connecting a 12 VDC power source. Ensure that the input power matches the power rating of the Voyager modules installed in the chassis.
- PoE power input connector for connecting a separate 48 VDC PoE power source.

Voyager 6



The Voyager 6 is a six slot chassis designed for vehicle applications. The chassis is compatible with the Standardized A-Kit Vehicle Envelope (SAVE) specification and the SINCGARS MT-6352.

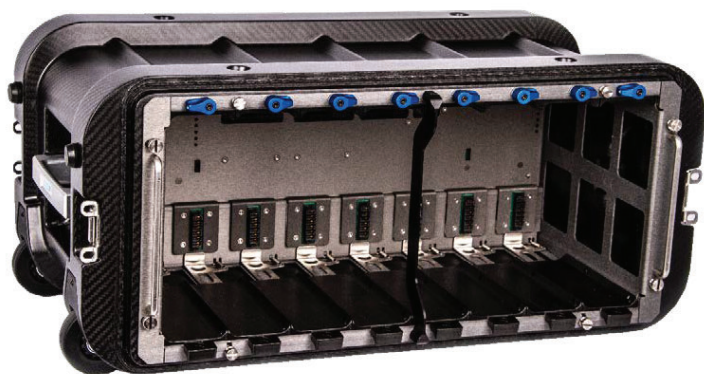
Each of the six slots can accommodate standard Voyager form factors.

Dimensions	360 x 406 x 240mm
Weight	19.5kg
Compliance	MIL-STD-810, MIL-STD-1275, MIL-STD-461
IP Rating	IP20

Key Features

- Support for up to six Voyager modules and radio brackets in standard Voyager form factors
- 28 VDC power input to MIL-STD-1275 for vehicle installations
- Optional desktop kit available

Voyager 8



The award-winning Voyager 8 is a carbon fiber, airline carry-on-size transit case with a rack-mountable UPS that can host up eight Voyager modules.

Ideal for Command Post deployments in either fixed or mobile locations, Voyager 8 is a mature product deployed in the field since 2012 but still providing class-leading capability per cubic inch.

Dimensions	571 x 360 x 257mm
Weight	6.5kg
Compliance	MIL-STD-810, MIL-STD-461
UPS	2 x BB-2590 Batteries

Key Features

- Supports the full range of Voyager network modules to provide:
 - Routing & switching
 - VoIP
 - Server virtualization
 - Radio integration
 - WAN acceleration
 - Storage
 - UPS
 - Satellite, terrestrial and cellular backhaul
- Can be configured as a tactical data storage network, tactical radio integration system, cross domain suite and more

Voyager 8 Plus



As traditional reachback network architectures are supplemented by the need to analyse data on the edge of the network, your compute and communications requirements have grown.

The Voyager 8 Plus chassis increases the power budget of Voyager 8 by 50% to support Klas' Xeon-based compute modules and the expanding range of radio interface brackets.

Dimensions	478 x 571 x 257mm
Weight	21.35kg
Compliance	MIL-STD-810H, MIL-STD-461G
IP Rating	IP67

Key Features

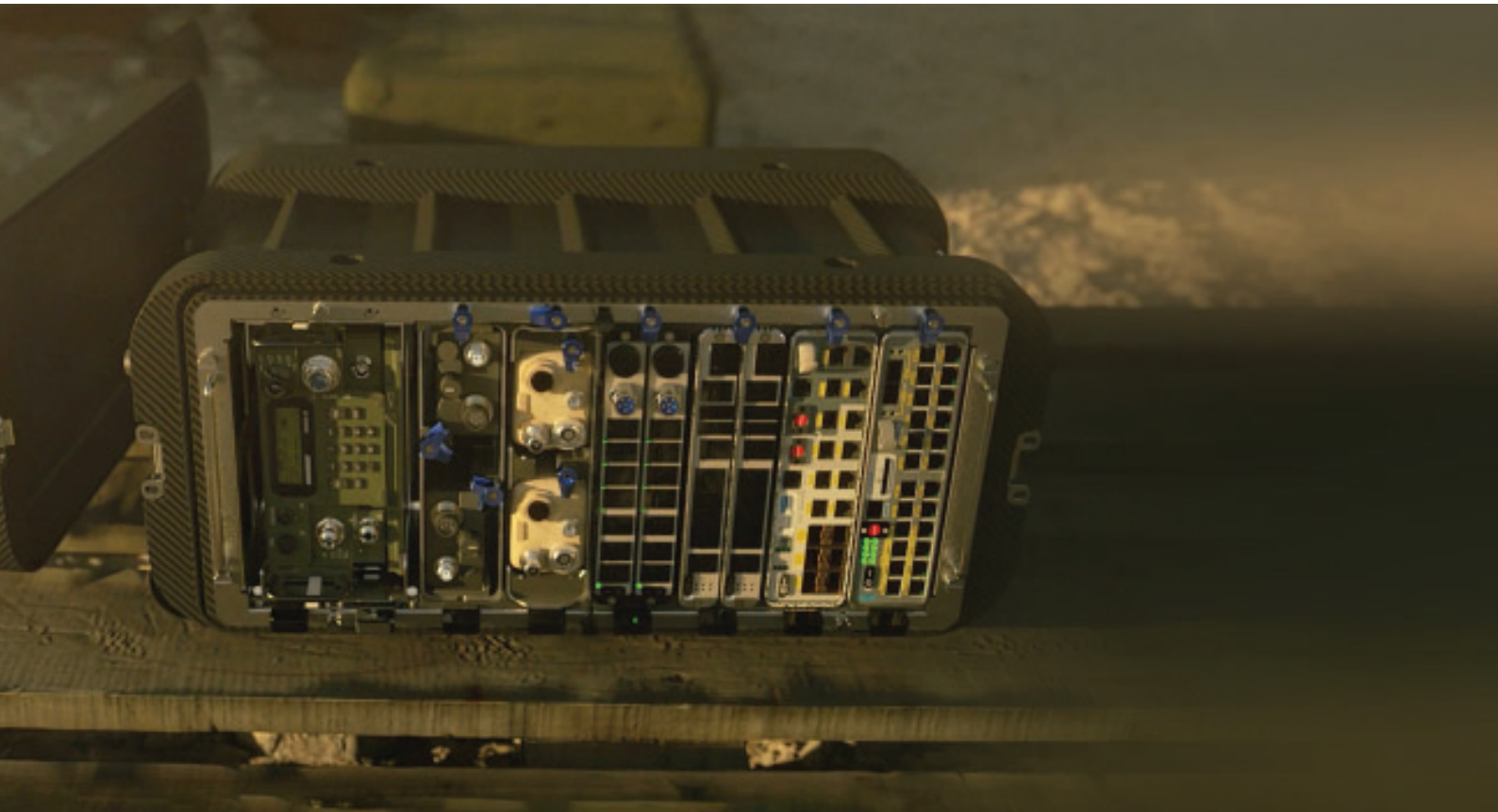
- Compute module on the rear of the Voyager 8 Plus runs KlasOS Keel and hence provides many familiar features such as a Cisco like CLI for management, SSH, SNMP, and a built-in hypervisor.
- User authentication, SSH access, etc. using the same KlasOS codebase as for Common Criteria approved products
- Built-in hypervisor to allow deployment of a GuestOS, for example, a lightweight management suite to monitor the installed modules

Voyager 158



The Voyager 158 chassis and transit case provides a portable solution for tactical environments. The Voyager 158 consists of a chassis and transit case containing the Voyager 158 Sled with support for a Harris AN/PRC-158 Multi-Channel Manpack Radio along with up to two AR Modular RF AR-50 amplifiers and two AR Modular RF AR-RBT Bias-T modules.

Dimensions	572.4 x 460.7 x 237mm
Weight	21.2kg
Compliance	MIL-STD-810G
IP Rating	IP65



Voyager by Klas is a modular scalable deployable network architecture, designed with government, military and public safety users in mind. Based on a common module form factor, incorporating best-of-breed virtualised and hyperconverged compute and networking technologies available, Voyager provides flexibility, versatility and agility in the most demanding operational environments. With its optimised size, weight and power, and a range of integrated chassis to enable ease of deployment and platform integration, Voyager provides the functionality and performance you need where you need it most. Engineered for survivability and reliability even in the most extreme environments, Voyager is battle hardened and combat proven.

Voyager's extensive range of rugged, deployable network modules allows for customization based on mission demands with optimized size, weight, and power (SWaP). Voyager modules have customized electrical, mechanical, and network components to provide a high number of features in compact packages.



VoyagerVM



VoyagerESR



TRX R2

COMMUNICATE MORE, CARRY LESS

KLAS

Switch

VoyagerSW12GG



Datacenter or cloud workloads use Software-Defined Storage and Hyper-Converged technology to distribute processing across multiple compute nodes. This technology provided by Microsoft Azure, Nutanix, VMware vSAN and Red Hat HCI requires high-speed network connectivity between compute nodes. Now you can move these workloads to a tactical location using Klas' 10 Gbits/s Ethernet switch.

Dimensions	188mm x 160mm x 52mm
Weight	1.3kg
Input Voltage	9 - 36VDC
Power	12 - 32.5W

Key Features

- Port mirroring, IPFix
- Inter-VLAN routing in hardware at line rate
- Ansible playbook management supported
- 802.1AX/802.3ad
- 40 Gbps trunk for interconnection with 3rd party switches
- 121 Gbps backplane for line-speed processing on all ports simultaneously
- Voyager Ignition Key (VIK) for configuration and storage
- 1x 40 Gbps QSFP+ port for high-speed uplink.

VoyagerSW26G



Take advantage of your tactical compute capability by providing high-speed access from client to server using VoyagerSW26G.

VoyagerSW26G, based on Cisco ESS 3300 connects PCs and VoIP phones to your network at 1Gbps providing a ten-fold increase in performance.

Dimensions	188mm x 160mm x 52mm
Weight	1.63kg
Input Voltage	9 - 36VDC
Temperature	-32°C to +70°C

Key Features

- 2 x 10 Gigabit SFP+ uplink ports
- Low power consumption
- Voyager Ignition Key (VIK) support
- SD card support
- Small form factor Cisco IOS switch in Voyager module format
- 24 x 1 Gigabit Ethernet switch ports, with 8 ports (Gi1/3 to Gi1/10) providing PoE+
- Cable-free internal construction for maximum reliability
- Zeroize function to erase any sensitive information on the device

VoyagerSW24



VoyagerSW24 increases the user port density on the Voyager system while maintaining the same small size and weight of a standard Voyager module.

VoyagerSW24 ruggedizes the Cisco ESS 2020 switch while adding additional power features to deliver a highly capable, industry standard product.

Dimensions	188mm x 160mm x 52mm
Weight	1.2kg
Input Voltage	10 - 18VDC
Compliance	MIL-STD-810G / IEC 60529

Key Features

- Small form factor Cisco IOS switch
- 2 Gigabit uplink ports
- Voyager form factor
- 22 Fast Ethernet switch ports, 8 of which have PoE
- Cable-free internal construction for maximum reliability

Route

TRX R2



TRX combines both connectivity and local compute so that vehicles have cloud connectivity when they need it, but local processing power for analytics when there is no backhaul. The solution is underpinned by KlasOS Keel, a lightweight hypervisor with SD-WAN and the latest Wi-Fi and LTE connectivity. TRX R2 provides the KlasOS Keel feature-set in a Voyager module form factor, compatible with Voyager 1, Voyager 2 and Voyager 8 chassis.

Dimensions	188mm x 160mm x 52mm
Weight	2kg
Input Voltage	9 - 36VDC
Power	15 - 32W

Key Features

- Two copper 1Gb Ethernet ports
- Two 10 Gb SFP ports in 8-core variant
- Simultaneous Wi-Fi AP and client
- KlasOS Keel KVM-based hypervisor
- Intel® Atom™ Denverton 8-core or 4-core processor options
- Two LTE modem slots supporting Sierra Wireless EM7455 & EM7511 incorporating Band 14 FirstNet support
- NVMe-based storage with up to 1TB capacity

VoyagerESR 2.0



VoyagerESR 2.0 is the ultimate in Cisco hardware routing and switching in a single Voyager module. Ideal as a WAN-services module or enclave router, VoyagerESR provides the reliability needed for the harshest environments. Now available with Klas Voyager Ignition Key for increased security and simplified deployment. The VoyagerESR 2.0, powered by Cisco's ESR 6300 and ESS 3000, is NIAP CC certified.

Dimensions	160mm x 188mm x 52mm
Weight	1.9kg
Input Voltage	9 - 36VDC
Power	25W

Key Features

- High speed crypto routing acceleration
- Cable free internal construction.
- Both the ESR and ESS RTCs are battery backed.
- 2 x 10 Gigabit SFP+ switch ports
- Small form factor Cisco IOS router and switch in Voyager module format.
- Zeroize buttons to return the router and switch quickly to a declassified state
- Cisco IOS XE software with support for Cisco SDWAN and Unified Communications
- 2 x Gigabit route ports available as either copper or SFP (order time option)

Storage

VoyagerNAS



VoyagerNAS provides a combined compute and network attached storage (NAS) capability in a Voyager form factor. VoyagerNAS has eight 2.5" SATA or SAS solid state disk that provide up to 32 TB of raw storage.

When installed in the Voyager 8 UPS transit case, VoyagerNAS is battery backed and can be integrated in a VMware cluster for ease of management.

Dimensions	188mm x 162.5mm x 198.12mm
Weight	4.7kg
Input Voltage	12VDC
Power	120W

Key Features

- Up to 32 TB of storage
- Write cache protection
- Supports up to eight 2.5" SSDs.
- Intel® Xeon® Quad-Core processor (E3-1278L v4) with 32 GB RAM & virtualization
- Supports hardware RAID levels 0,1, 5, 6, 10, 50, 60
- Network attached storage with eight drive bays spanning three slots in the Voyager 8 chassis

Compute and Storage

VoyagerVMm



VoyagerVMm offers an Intel 5th Gen i5 compute platform in a fanless, half-size module format. With support for 32GB RAM and dual-core performance, VoyagerVMm supports VMware virtualization for Guest Operating support such as Riverbed WAN Acceleration, Cisco ASA and Cisco CUCM. It can also be paired with VoyagerLMRm to provide a Twisted Pair WAVE implementation including four E&M ports, to integrate your radios with an IP network in a single Voyager module.

Dimensions	188mm x 145.2mm x 26mm
Weight	1.0kg
Input Voltage	10 - 18VDC
Temperature	-25°C to +60°C

Key Features

- Low power consumption
- Lightweight extruded aluminum construction
- Data & power backplane to simplify cabling
- Cisco-based technology
- Half the height of standard VoyagerVM at 7.4" W x 5.7" D x 1" H
- Intel Processor (i3 or i5 options)
- Platform for Riverbed WAN Acceleration, Twisted Pair WAVE, Cisco IPICS, Cisco 5921 Software Router

VoyagerVM 4.0



VoyagerVM 4.0 is a secure and rugged compute module, powered by the latest Intel Xeon D (formerly Ice Lake) processor. It provides a compact, low power platform that delivers highly reliable compute and networking capabilities in extreme environments.

VoyagerVM 4.0 gives the flexibility to support different software architectures at the tactical edge.

Dimensions	188mm x 160mm x 52mm
Weight	1.5kg
Input Voltage	9 - 36VDC
Power	120W

Key Features

- Intel Xeon D (formerly Ice Lake) processor with 128 GB RAM
- Dual removable E1.S NVMe self encrypted (SED) SSDs
- Aggregated networking capability of 100Gbps
- 120W power consumption compatible with Voyager 1+, Voyager 2+, Voyager 2 Slim, Voyager 4, Voyager 4 Slim, Voyager 6, Voyager 8QP and Voyager 8+
- VIK+ SED removable NVMe device for boot or write cache operations

VoyagerGPU



UAV and CCTV video streams provide increased security in many locations today. With VoyagerGPU, you can analyse video in real time for inference applications but also train your AI/ML models at the edge of the network.

Additionally VoyagerGPU can transcode up to 16 HD video streams for transmission over a low-bandwidth network

Dimensions	201mm x 188mm x 107mm
Weight	3.75kg
Input Voltage	12VDC
Power	130 - 200W

Key Features

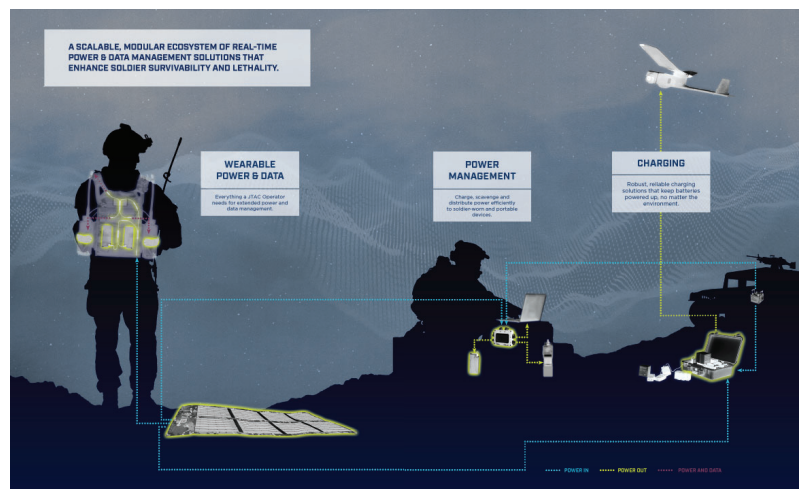
- Two copper 1Gb Ethernet ports
- Two 10 Gb SFP ports in 8-core variant
- Simultaneous Wi-Fi AP and client
- KlasOS Keel KVM-based hypervisor
- Intel® Atom™ Denverton 8-core or 4-core processor options
- Two LTE modem slots supporting Sierra Wireless EM7455 & EM7511 incorporating Band 14 FirstNet support
- NVMe-based storage with up to 1TB capacity



The modern soldier is a totally wired mobile network. Operations today depend on more charged equipment than ever before, and the complexity of sustaining soldiers on the battlefield expands and shifts with every new technology. Energy efficiency and mobility are essential, and understanding the Soldier as an Integrated System will provide critical in-field advantages.

EVER-EVOLVING, DYNAMIC SOLDIER SYSTEMS YOU CAN TRUST

Whether the mission requires an energy-dense, smart li-ion rechargeable battery, the ability to scavenge and manage power at the individual or squad level, bulk charging capabilities, data management or any combination thereof, Galvion is a one-stop-shop solutions provider. Our Nerv Centr® active systems provide intelligent and scalable power and data solutions that enhance soldier agility and lethality.



Wearable Power and Data

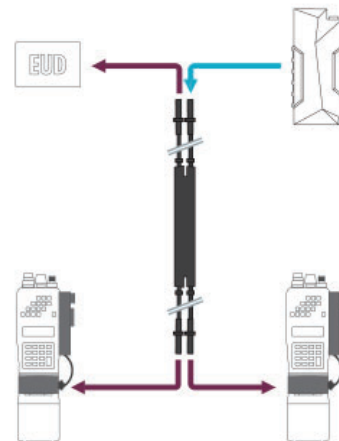
A modular, interconnected ecosystem of ultra-compact components that allow the operator to build a wearable solution that is right for the mission. Whether powering radios, transmitting data or both, Nerv Centr® power and data systems respond to the ever growing technology needs of the agile warfighter.



Power & Data Hub 2-Port (PDH-2)

The PDH-2 is a scalable, lightweight power and data hub that fits easily into MOLLE loop and connects to soldier-worn equipment, including hand-held radios, ATAK device and power source. The NettWarrior compatible PDH-2 integrates seamlessly into the soldierworn architecture, and eliminates the need for individual device batteries by providing power management through a singular port, allowing operators to scale their power and data system to mission needs. The Basic PDH-2 configuration connects 1-2 hand-held radios through RDA, with RPA providing the ability to trickle charge radio batteries. Solopack provides 98Wh of power to keep system running.

The PDH-2 comes with our proprietary Hub Application, ensuring battlefield awareness and maximum control over power management.



Hub Application

Substantiated, accurate mission power monitoring and analysis in order to plan effectively and minimize logistical burden – bring only the power you need to complete future missions.



LIVE POWER

Displays real-time power supply, demand and low power alert



ANALYZE POWER

More detailed understanding of power usage and comparison across users



POWER MODEL

Analyzes historical and modelled power usage in order to predict future mission needs

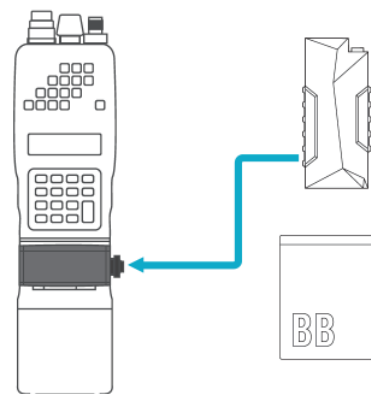


Radio Power Adapter (RPA)

Compatible with the most common hand-held radios in use today, the RPA provides the freedom to connect, charge and maintain critical communication with less burden. Trickle charge radio battery by connecting to power source. Eliminate the radio battery entirely and keep radio powered directly from centralized power source.

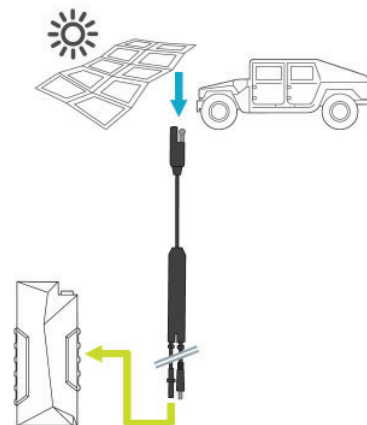
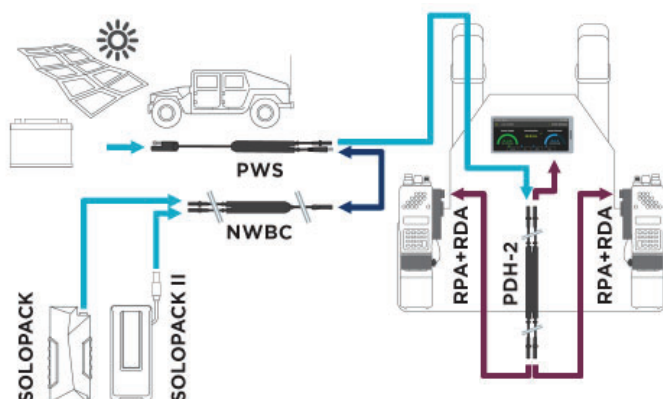
Radio Data Adapter (RDA)

The RDA connects the radio data port with the PDH-2 and is used in conjunction with the RPA.



Personal Worn Scavenger (PWS)

Our smallest power scavenger. This compact plug-and-play component can scavenge power from solar, vehicle, AC or NettWarrior batteries to support a soldier-worn battery like our SoloPack or connect into our PDH-2 for power and data sustainment for the duration of the mission.



SoloPack

The SoloPack goes beyond standard battery technology. Rugged, lightweight and power dense, it fits in a magazine pouch and with 98 Wh of energy, it packs enough power in one charge for a 12-hour mission. Unlike other rechargeable military batteries, the state-of-charge display indicates real-time remaining capacity at the press of a button. This Nett Warrior compatible battery is NAVSEA certified and rated safe-to-fly.

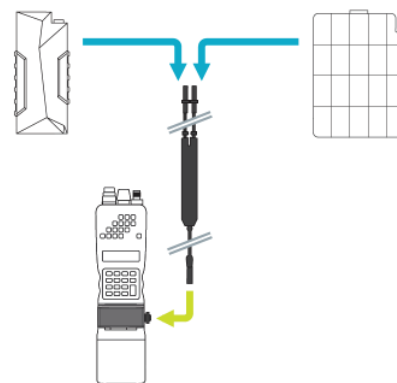


SoloPack II

The SoloPack II Battery delivers an extended power alternative to our widely adopted and used SoloPack™ battery. With 140 Wh of power and a flexible flying lead, the SoloPack II offers 40% more power while maintaining all of the industry-leading features of the original SoloPack. Small, lightweight and energy-dense, this next generation model is designed to support operational power needs and for short duration missions of up to 24 hours.

NettWarrior Battery Combiner (NWBC)

This smart, battery-agnostic cable instantly doubles the functionality of a single connection. Double run-time for devices or hot swap a depleted battery without ever having to disconnect from the system. The NWBC integrates seamlessly with batteries and electronic equipment and can be used directly with periphery devices or in conjunction with the PDH-2 or power managers to extend run-time to ensure constant connectivity.



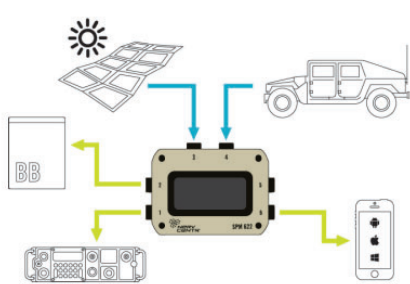
Power Managers

By connecting mission-critical devices to the power manager, the squad can effectively run equipment off of alternative energy sources while simultaneously charging any secondary batteries to maintain back-up power when needed. Power all your gear, all the time, anywhere in the world.

Squad Power Manager (SPM)

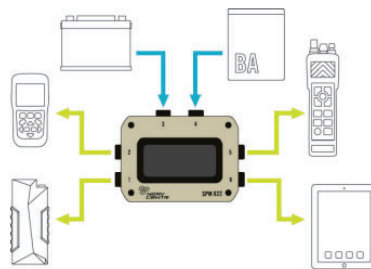
The SPM automatically converts voltage to ensure that the correct amount of power goes to each connected device and displays the state-of-charge of batteries, and the power draw of the system, in order to safely and reliably sustain power.

By eliminating the need for and weight of cumbersome generators, power bars, and extra batteries, the SPM can run everything a small team needs, with no noise and a minimal power footprint. Data logs track how much power is captured and distributed, allowing valuable after mission review and efficient follow-on operational planning.



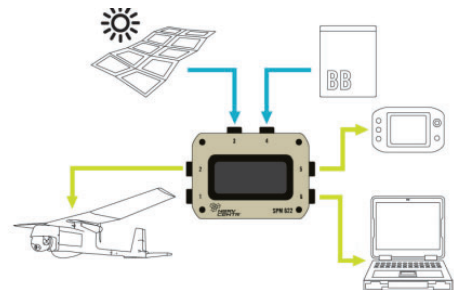
UNINTERRUPTIBLE POWER SUPPLY

When solar power is lost, equipment is powered by vehicle battery in order to keep mission critical systems up and running.



SCAVENGE FROM DISPOSABLE BATTERIES

Leave no power unused – drain disposable batteries to power equipment and recharge batteries.



AUSTERE POWER MANAGEMENT

Maintain constant intelligence, surveillance and reconnaissance capability in even the most undeveloped environments.

Bulk Charging

If Power Managers are the brain – this is the brawn. Robust, reliable charging solutions to keep missions running and operators powered up.

Mission Adaptive Charging Station (MAX-8)

The MAX-8 is a portable charging solution that reduces operational battery burden, allowing teams to do more with less. This powerful charger packs 1000W of power output and 8A USB output. With the ability to draw power from multiple sources like AC, solar, or vehicle, the MAX-8 can charge multiple battery types simultaneously, in less than three hours. Whether military batteries (BB2590s), CWBs, sUAS, commercial power tools, or Nett Warrior battery types, this intelligent system evaluates the power source and adjusts charge rates to maximize power and minimize charge times, with no special programming or configuration required.

In an area with no AC power source and low solar conditions, the MAX-8 can scavenge power from a military or commercial vehicle battery to charge mission critical batteries. NORMAL mode prevents vehicle battery drainage. SCAVENGE mode allows MAX-8 to drain vehicle battery completely, ideal for disabled vehicles in an austere operational environment on the battlefield.



Communications Equipment



Medical Equipment



Commercial Power Tools



GPS & Targeting Systems



Unmanned Systems



Computers & Smart Phones



EOD Equipment



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