



TABLE OF CONTENTS

Full Functional System	3
Typical Equipment Complement per Echelon	3
C4ISR Network Gateway Systems	4
Connected Network Gateway Shelter Connected Network Gateway Transportable System Upgradable Mission-Specific Add-Ons	4 5
Connected Vehicle System	7
Connected Vehicle – C2	
Connected Soldier Systems	9
Tactical Dismounted Soldier Systems	
Embeddable Products	11
9820S-ER9800W-E	11
Country Wide Repeater System (cwrs 1.0)	
System Accessories	13
Tactical Solar Power System Variants	15
Situational Awareness Goggle.	
On-the-Move Kits	19
Servers VELOX Accessories	
SATCOM Ontions	

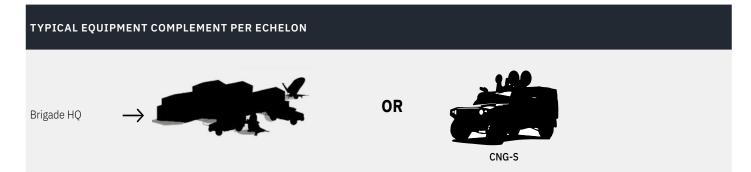


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FULL FUNCTIONAL SYSTEM



TYPICAL EQUIPMENT COMPLEMENT PER ECHELON



Battalion 4 Combat and 3 CS or CSS BN per

Company 4

Combat and 1

CSS and 1 BN HQ Per BN

Typical Combat INF BN consists of:

- > Headquarters Company
- > Rifle Company (3)
- > Weapons Company
- > Forward Support Company









CNG-S for INF BN

CNG-S for CAV TRP5

Integrated Facilities Modules for CS/CSS BN

Typical Combat INF CO consists of:

- > Company commander
 - Commander executive officer
 - First segment
 - Fire Support Team (FIST)
 - Senior Company Medic
- > Rifle Platoon (3)
- > Mortars Section





Connected Soldier

Connected Soldier Forward Observer³

Connected Vehicle

C4ISR NETWORK GATEWAY SYSTEMS

CONNECTED NETWORK GATEWAY SHELTER

The C4ISR Network Gateway (CNG) Systems are self-contained, portable- or fixed-site communications systems, rapidly deployable even in places devoid of any existing high-capacity local and wide area network (LAN/WAN) infrastructure. The flexibility of these systems allows seamless interconnectivity with existing technologies, as well as opportunities for expansion of the network technology to meet specific mission needs of the customer.

C4ISR NETWORK GATEWAY SHELTER



The C4ISR Network Gateway Shelter system, or CNG-S, is an off the shelf solution, providing area communications and data dissemination up and down echelon in a rapidly deployable configuration

FEATURES

- > All capabilities of the C4ISR Network Gateway in a rapidly deployable shelter
- > Shelter mounts to variety of platforms
- Scalable, allowing for standalone function or functional with many units tied together using HCLOS radios
- > Pre-configured and tested capabilities
- > PACE (Primary, Alternate, Contingency, Emergency Communications) support provided. Resilient and robust plan that uses product capabilities to keep some level of transmitting and receiving communications through disruptions/challenges
- > Fast delivery
- > Interoperability with existing technologies and waveforms.
- > Simplified and quick set-up
- > Ongoing technical support and training available

RADIO EQUIPMENT - SOLD SEPARATELY	
RF-7800H, 150W HF Communication System	Qty 1
RF-7850D, dual channel 50W VHF/UHF Communication System	Qty 1
RF-7850W-RP501, Tactical HCLOS PTP Systems	Qty 2
RF-7800W Omni Antenna	Qty 1
RF-7800W 3' parabolic antenna	Qty 2
RF-7800W-AA closed loop automatic alignment system (CLAAS)	Qty 2
Optional LTE, P25 or Tetra terminals available	

^{*}Type 1 configurations available

CNG-S includes:

NETWORKING AND USERS STATIONS EQUIPMENT		
Router, firewall and switch	Qty 1	
Wi-Fi access point	Qty 1	
Network Time Protocol (NTP) Server	Qty 1	
Tactical Intercom System with RoIP	Qty 1	
Dell Server	Qty 2	
AC PDU	Qty 1	
Ruggedized racks for comms and networking equipment	Qty 3	
Ruggedized display monitor	Qty 3	
Interior workstation	Qty 1-3	

ANCILLARY EQUIPMENT	
15KW low noise generator	Qty 1
24KBtu/hr. Environmental Control Unit	Qty 1
15m electrically driven mast	Qty 1
Rooftop storage	Qty 1
S-250 or S-280E, or S-788	Qty 1
Surge suppression and power backup system	Qty 1

^{*}Size of selected shelter may affect quantities of other equipment

SOFTWARE COMPONENTS	
Network management and planning software package	Qty 1

CONNECTED NETWORK GATEWAY TRANSPORTABLE SYSTEM



The C4ISR Network Gateway Transportable System, or CNG-T, is an off-the-shelf solution, providing area communications and date dissemination up and down echelon in a rapidly deployable configuration.

FEATURES

- All functionality of the C4ISR Network Gateway easily transported in T-cases
- Modular approach that allows user to only transport what is needed, reducing size and weight of the system
- Simplified deployment with color coding and central distribution point
- > Pre-configured and tested capabilities
- PACE (Primary, Alternate, Contingency, Emergency Communications) support provided. Resilient and robust plan that uses product capabilities to keep some level of transmitting and receiving communications through disruptions/challenges
- > Interoperability with existing technologies and waveforms
- > Simplified and quick set-up
- > Ongoing technical support and training available
- Transportable SATCOM (requires additional power subsystem equipment)

TACTICAL RADIO EQUIPMENT - SOLD SEPARATELY	
RF-7800H, 150W HF Communication System	Qty 1
RF-7850M, 50W VHF/UHF Communication System with P25 capability	Qty 1
RF-7850W-RP50xx Tactical HCLOS PTP Systems with Automatic Alignment Systems	Qty 2

CNG-T includes:

NETWORKING CASE	
Router, firewall and switch	Qty 1
Wi-Fi access point	Qty 1
Telephony interface: E1/T1, FXO and FXS	Qty 1
Server	Qty 2

CENTRAL DISTRIBUTION	
RF-7800I, Tactical Intercom System with RoIP interface	Qty 1
Network switch	Qty 1
AC and DC power distribution panels	Qty 1
Radio interface and network distribution panels	Qty 1

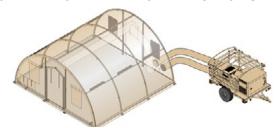
POWER CASE (BATTERIES NOT SUPPLIED)	
AC power interface (grid or generator)	Qty 1
DC power interface and inverter	Qty 1

SOFTWARE COMPONENTS	
Network management suite	Qty 1
L3Harris hC2 SA/HF/CPA modules and Soft PTT application	Qty 1
Tactical chat IP application	Qty 1

ANCILLARY EQUIPMENT	
User stations	Qty 2
18m mast	Qty 1
Accessory storage in pelican cases	Qty 1

Type 1 configurations available.

CNG-T INTEGRATED FACILITIES MODULE



The Integrated Facilities Module is an upgradable option for the CNG-T. It uses the transportable system to allow for unique set up and increased capabilities of the facilities.

UPGRADABLE MISSION-SPECIFIC ADD-ONS

Upgrades extend the capability of the C4ISR Network Gateway systems. Features can be added and combined to create a missionspecific system. Add-ons are ready-to-deploy solutions that can help meet short-and long-term goals of the system.

GROUND SURVEILLANCE OPTION PACKAGE (GSOP)



Integrate and manage additional unattended and soldier-mounted sensors, Electro-Optical/Infra-Red (EO/IR) long-range cameras, ground-based radars and specialized software to detect, track, and confirm targets of interest at borders, high-value targets, or forward battle areas.

FEATURES

- > 360° detection
- > Functional detection day or night
- > Operator acquires target with camera system ("Slew to Cue")
- > Track, label and dismiss targets
- > Data can be shared to HQ

ADDITIONAL EQUIPMENT

Long Range Ground Surveillance Radar

Electro-optical and infrared (EO/IR) cameras

10m mast

Situation Awareness and Sensor Control Software

Unattended ground sensors

Optional packages can be added to the CNG Systems to support deployment needs:

- > UAS/V Detect and Mitigate Option Package (C-UAS)
- > Maritime Surveillance Option Package (MSOP)
- > Spectrum Dominance Option Package (SDOP)

CONNECTED VEHICLE SYSTEM

CONNECTED VEHICLE - C2





The Connected Vehicle - C2, or CV-C2 is a complete modular installation and integration package enabling mission specific communications equipment to install into an existing or new vehicle platform.

FEATURES

- > Light wheeled to heavy tracked mobile platform ready
- > Mission-flexible
- > Upgradable Flexible Building Blocks
- > Communications ready
- > Fast deployment
- > Cost-effective

RADIO EQUIPMENT - SOLD SEPARATELY	
AN/PRC-167 multichannel radio subsystem	Qty 1

CV-C2 includes:

NETWORKING AND USER STATIONS	
Rugged router	Qty 1
Rugged laptop	Qty 1
DC power distribution system	Qty 1
Rugged rack/mounts for comms equipment and antennas	Qty 1

SOFTWARE COMPONENTS	
Rf-7800N-BM300 hC2 Patrol with add-on modules	Qty 1
RF-8705-SW001 Tactical Chat IP for Windows	Qty 1

OPTIONAL EQUIPMENT*	
RF-9850W HCLOS Microwave Radio System	Qty 1
Bullet Camera or Dash Camera System	Qty 1
SATCOM at-the-halt subsystem	Qty 1
AN/PRC-160 HF Radio System	Qty 1
Tactical Intercom System	Qty 1
Invisio Audio Only Intercom System	Qty 1
Rugged Open VPX System with display	Qty 1
Rover ISR System with FlightLense	Qty 1
Rugged display	Qty 1
Mission monitor	Qty 1

CONNECTED VEHICLE-LIGHT







The Connected Vehicle-Light, or CV-L, is an off-the-shelf, highly mobile, vehicle system equipped with mission specific communications equipment. Connected Vehicle System facilitates the transfer and interpretation of multiple data points from the air and land domains, as well as the sharing of information and C2 input across echelons. The military ground vehicle system can be customized for mission-specific requirements and provides strategic networkempowered services. The vehicle can be purchased as part of the system under optional equipment.

FEATURES

- > Mission flexibility
- > Customer customization
- > Reliable and tested software
- > Target identification
- Data, voice, and video communications
- > Long-range connectivity on the move
- Ruggedized technology
- > Upgradable for long-term use

RADIO EQUIPMENT - SOLD SEPARATELY	
RF-7850D multi-channel radio subsystem with next generation power amplifier	Qty 1

CV-L includes:

NETWORKING AND USER STATIONS	
MILDEF router and switch	Qty 1
Rugged tablet	Qty 1
Tactical Intercom System	Qty 1
AC-/DC battery charger	Qty 1
DC power distribution unit	Qty 1
Ruggedized racks for comms and networking equipment	Qty 1

SOFTWARE COMPONENTS	
Rf-7800N-BM300 hC2 Patrol with add-on modules	Qty 1
RF-8705-SW001 Tactical Chat IP for Windows	Qty 1

OPTIONAL EQUIPMENT*	
RF-7800H HF radio subsystem	Qty 1
ISR receiver subsystem	Qty 1
SATCOM at the halt subsystem	Qty 1
RF-7850W HCLOS radio	Qty 1
Rugged firewall	Qty 1
Rugged E1	Qty 1
Utility Task Vehicle (UTV)	Qty 1

Table is Type 3, Type 1 configurations available.

The RF-7800I is manufactured by L3Harris under license from WB Electronics.

^{*} Recommend single option is picked in order to stay within SWaP limitations of vehicles

CONNECTED SOLDIER SYSTEMS

TACTICAL DISMOUNTED SOLDIER SYSTEMS

L3Harris Connected Soldier systems are self-contained, personal C4ISR systems, configured for general use or mission-specific needs. The systems seamlessly interconnect soldier small teams, supporting forces and dismounted commanders. The systems support bandwidth-heavy applications like video teleconferencing, streaming video and battlefield management technologies, such as hC2, designed to enhance situational awareness and unit collaboration. Connected Soldier systems can radically transform how successful and survivable soldiers and teams can be.

FEATURES

- > Tested compatibility of solution configurations
- > Customizable options available
- Allows individual soldiers to become IP-based JTAC or ISR asset
- > Standardized configurations to reduce training and costs
- > Rapid intelligence gathering
- > Upgradable for future usage
- > Position location information
- > Enhanced coordination and mission understanding (TacChat)
- > Easily technology monitor with WebUI
- > Bridge networks route data
- > Video data sharing capabilities
- > Improved lethality, survivability

CUSTOMIZABLE VARIANTS

Soldier Systems can be designed based on customer requests and mission-specific goals. Different products can be selected by the customer based on preference and required performance. A select number of configurations have been tested and verified for functionality, while other new requests will include costs for such testing. There are different levels of soldier systems based on soldier's role within the squad and mission at hand. Different levels and products are shown and other purchase requests can be met.

Below, five configurations of soldier systems are shown, <u>offerings are</u> <u>NOT limited to these examples.</u> Other system variants can be designed to meet requirements. Products are shown in the equipment list.

Squad Member Configuration

Headset, EUD, radio



Squad Member Configuration

Headset, EUD, radio, mission module



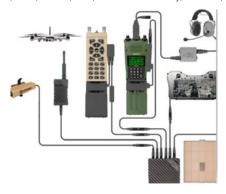
JTAC Configuration

Headset, EUD, TNR, radio, hub, conformal battery



Drone Operator Configuration

Headset, EUD, TNR, radios, hub, conformal battery, camera, drone



Commander Configuration

Headset, EUD, dual radios, hub, conformal battery



RADIO EQUIPMENT - SOLD SEPARATELY	KIT/PART NUMBERS	
11385-1310-001 11385-1310-002 11385-1310-003 11385-1310-004 11385-1310-005 11385-1310-007 11385-1310-008 11385-1310-009 11385-1310-009 11385-1310-011	RF-9820S AN/PRC-163 AN/PRC-152A RF-7800H RF-7850S RF-7850M RF-7800S RF-7400E TVP TNR BATS-D Radio W Booster	Qty 1-4

Soldier System includes:

END-USER DEVICE EQUIPMENT		
11385-1010-07	S23 TE, Juggernaut S23 TE, Tomahawk grip controller Tactical tablet	Qty 1
A30-4216-001	Samsung Active Tablet 5	
DRONES*		
11385-1330-016 11385-1330-014 11385-1330-012 11385-1330-018	Skydio X2D Parrot Anafi Teal Golden Eagle CFE Drone (MCX-MINI) CFE other drone platform	Qty 1
HUB EQUIPMENT		
11385-1210-06 11385-1210-09 11385-1220-01 RF-9081-PD001 A30-8010-001	Starpan VI Starpan NG 3/3 Tomahawk KXM* Picohub2 Invisio ADP	Qty 1
BATTERY EQUIPMENT		
11285-1110-05 11385-1110-02 11385-1110-06	BB-2525/U Conformal Battery HH Battery Top Galvion Solo Pack	Qty 1

AUDIO EQUIPMENT		
11385-1510-01 11385-1510-02 11385-1510-03 11385-1510-04 11385-1510-05 11385-1510-07 11385-1510-08 11385-1510-08 11385-1410-01 11385-1410-02 11385-1410-03 11385-1410-04 RF-3014-HS026 A30-1876-021	Invisio V10 Invisio V20 Invisio V50 Invisio V60 Invisio V10 II Invisio V20 II Invisio V50 II Invisio V50 II Invisio V60 II Invisio V60 II Invisio M3S Invisio X5 Invisio T5 Soldier worn kit, Invisio T7 Headset cable HC01 splitter HC01R T7 GSR 3M Headset Otto Headset	Qty 1

^{*}Tomahawk KMX Hub and Grip Controller Rugged Case Required for Drone System

OPTIONAL EQUIPMENT	
11385-1210-11 11385-1310-010	KIV-335A ISR Mission Module Basic helmet cam
RF-5932-CA006 RF-5933-CA006 12193-1590-01 12193-1591-01 RF-5936-CA001 RF-5937-CA001 RF-5934-CA006 RF-5952-CA006 12055-6060-07 12128-6060-06	Holster, multicam Fold down holster multicam Holster, MCHH, with or without MM, multicam Holster, MCHH, battery access, multicam Holster, digital camo Holster, fold down, digital camo 3-day pack with FIII radio pouch, multicam 7850S/330E, Soldier Radio, holster, multicam Holster, SPR, multicam Holster, multicam
12041-1595-01 12193-1593-01 12128-6050-06	Bag, HH accessory, olive drab Bag, MCHH accessory, multicam Falcon Fighter, kit bag, multicam
12193-2710-01 12177-1000-01 12006-3900-01 RF-3171-AT001	Antenna mount assy, dismount tether Backpack harness assy fieldtex, MCMP Antenna, 30 - 512mHZ coax Ant, UHF/L/S wearable, 225-450, 1200-2600 mHZ

CABLES

Necessary cables will be added based on other selected products and system configuration and function $\,$

EMBEDDABLE PRODUCTS

RF-9820S-ER



The single channel RF-9820S-ER Embeddable Modular Radio delivers robust voice and data capabilities for missions on the move. This multimission solution gives warfighters the flexibility of tactical MANET control for Group 1+ UAVs.

KEY BENEFITS

- Maintain network integrity in congested and contested environments with resilient Wraith™ waveform
- Easy-to-use, integrate and upgrade using provided programming tools and commercial connectors
- Interoperable with fielded L3Harris FalconIV® radios; allows for UAV control through fielded radios
- Software Defined Radio capable of being field-upgraded and storing multiple waveforms
- Designed to easily integrate into a wide variety of Group 1+ UAV platforms
- > Low SWaP

RF-9800W-E



Packed with new innovations, the RF-9800W-E unleashes next-gen battlespace connectivity, moving data and C2 from air to ground and back faster, easier and more resiliently. The RF-9800W-E changes the game for robust, MIMO wireless broadband connectivity and control for Group 2+ UAVs.

KEY BENEFITS

- Send and receive more data, faster with Ethernet data rates over 300 Mbps
- Maintain comms integrity in congested and contested environments
- > Clear, detailed, real-time ISR
- Full mesh MANET for instant infrastructure and flexible, selfhealing coverage
- > Autonomous network scalability and optimization
- > Radio-family agnostics can pair with any IP-capable radio
- Designed to easily integrate into a wide variety of Group 2 UAV platforms
- > Low SWaP

RF-7850A-ER



Designed for unmanned and airborne missions, the RF-7850A-ER provides resilient connectivity to Group 1+ low-payload UAVs. This embeddable radio delivers advanced Intelligence, Surveillance and Reconnaissance (ISR) and communications relay capabilities with resilient, high-speed data and video transmission for improved Situational Awareness (SA) and decision making.

KEY BENEFITS

- Provides high-speed networked data and video via 4Mbps Video TDMA Networking Waveform (V-TNW)
- > Fulfills evolving mission needs for ISR, long range c2 support and joint operations with ground troops
- Available with resilient, anti-jam Vanguard™ and Vapor™ waveforms
- > Improves and expands battlefield communications with an interoperable airborne relay mode
- > Based on combat-proven L3Harris Falcon III® technology
- > Full compatibility with legacy narrowband
- Designed to easily integrate into a wide variety of commercially available Group 1 UAS
- > Low SWaP

SYSTEM ACCESSORIES

COUNTRY WIDE REPEATER SYSTEM (CWRS 1.0)



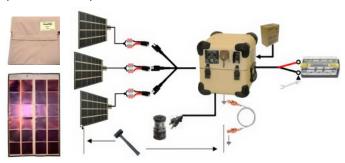
A country wide repeater network extends the range of the RF-7800V/RF-7850M and RF-7850A network with intelligent retransmission of radio traffic including voice, data, SMS, SA, and directed calling. The system is Scalable and compatible with existing network infrastructure, the solution provides coverage for fast-moving teams to 'roam' across vast areas without losing connectivity.

- > Support for High Speed Backbone; RF-7800W or Fiber Optics
- > Directed Calling
- > IP Data
- > PTT Broadcast voice
- > GPS position reporting and BMS tracking
- > SMS
- > Outstation mobility/Auto registration
- > SIP based telephony integration
- > Dispatch manager
- > Support for up to 1,000 outstations

TACTICAL SOLAR POWER SYSTEM VARIANTS

The systems were developed for man portable and vehicular mobile applications. The system comes with 6 lithium-ion Batteries (BT-70791JV). The system is equipped integrated MPPT Solar controller (between 12 and 24 solar arrays), an AC input for battery charging and Power supply DC output, integrated power management system, single On/Off operations with easy-to-read power and capacity status, hot swapping ability, rugged assembly closure with multiple MIL-STD ratings.

1.8W TACTICAL SOLAR SYSTEM, SOFT PANEL (11453-2000-01)



FEATURES

- > Single-user Portable Solution
- > Lightweight (6 lb. panels, 65 lm. system)
- > Low luster for low reflection
- > Can be positioned based on sunlight positioning
- > Power output is 360 W at 32V (11.25A)

Soft Panel System includes:

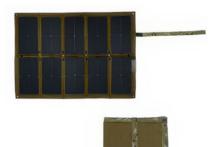
BREN-TRONICS		QTY
A30-0734-011	1.8 kWh BB-2590/U Based Portable Power System	1
A30-0757-002	Solar input cable for 3-panel	1
A30-0734-005	24V DC 6-pack output cable with ring lugs	1
A30-0734-007	BTA-70864-6-pack AC input cable with US Plug2	1
BT-70791JV	BTE-70791JV 10.3 Ah high cap high perf Li-ion battery	6
Powerfilm		QTY
A30-2196-001	Solar panel foldable 120W 30V 3.6A	3

кіт		QTY
E55-0016-001	Conn splice coolsplice 16/18 to 16/17 AWG sealed	8
W90-0329-072	Cable assy, 50-00550 SAE to blunt cut 16 AWG 72 in	3
Z15-6030-023	Duel bus bar, 2 5/16 in stud, 5 10-32 screw. 150A	1
A10-0364-001	Universal vac plug adapter	1
A30-2197-001	Ground anchor stakes 5/8 x 12 in steel	13
Z90-0078-012	Hammer. dead blow	1
Z90-0169-105	Wrench, open-end, thin, 5/16 x 3/75 in long	1
Z90-0475-001	Grounding wire W/2 alligator clips 3 ft	1
11453-2000-01	1.8KW tactical solar system, soft panel	1

Also available with a hard tactical panel configuration.

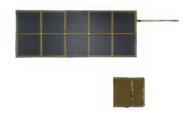
RF-5917-CH063 (60W CHARGER)

The 60-watt solar-energized power generator for mobile power needs. The charger is an Excellent choice for applications that require lightweight, flexible and durable silent power. There is low glare and visibility of the solar panel surface. It is impact resistant and puncture tolerant, and has partial shading tolerant. The product is CE Compliant.



- > Dimensions:
 - Folded length: 11.75 in (298.5 mm), width: 7.25 in (184.2 mm), height: 2.5 in (63.5 mm) TYP
 - Unfolded length: 32 in (812.8 mm), width 23.13 in (587.5 mm) TYP
- > Weight: 2.65 lbs (1.2 kg) max
- > Power to weight ratio 23 w/lbs (50 w/lb)
- > Open circuit voltage at MPP 21.5V
- > Nominal voltage at MPP 21.5V
- > Nominal current at MPP 3.0A
- > Operating temperature -32°C to +71°C (-25°F to +159.8°F)
- Recommended storage temperature -32°C to +71°C (-25°F to +159.8°F)

RF-5917-CH123 (120W CHARGER) FEATURES



- > Dimensions:
 - Folded length: 12.5 in (317.5 mm), width:12.5 in (317.5 mm), height: 2.5 in (63.5 mm) TYP
 - Unfolded length: 58.8 in (1493.5 mm), width 24.4 in (619.8 mm) TYP
- > Weight: 6 lbs (2.72 kg) max
- > Power to weight ratio 20 w/lbs (44 w/kg)
- > Open circuit voltage 28.0V
- > Nominal voltage at MPP 21.5V
- > Nominal current at MPP 6.0A
- > Operating temperature -40°C to +90°C (-40°F to +194.0°F)
- > Recommended storage temperature -40°C to +90°C (-40°F to +194.0°F)

SOLAR BATTERY CHARGERS SOLAR BATTERY CHARGER - HANDHELD



RF-5903-CH00X

The RF-5903-CH00X is a tactical solar charger for use with L3Harris 12041-2X00-0C Li Ion handheld batteries. Designed for fast, convenient battery charging, the unit is ruggedized to withstand outdoor conditions. It includes a 34-watt solar panel, interconnect cable, four stakes and carrying case.

COLOR OPTIONS AVAILABLE		
RF-5903-CH001	Traditional camo	
RF-5903-CH002	Desert camo	
RF-5903-CH003	Digital camo	

SOLAR BATTERY CHARGER — MANPACK RF-5904-CH00X

The RF-5904-CH00X is a tactical solar charger for use with L3Harris BA-2590/U and BB-390B/U lithium-ion manpack batteries. Designed for fast, convenient battery charging, the unit is ruggedized to withstand outdoor conditions. It includes a 57-watt solar panel, interconnect cable, four stakes and a carrying case.

COLOR OPTIONS AVAILABLE		
RF-5904-CH001	Traditional camo	
RF-5904-CH002	Desert camo	
RF-5904-CH003	Digital camo	

SOLAR BATTERY CHARGER — SPR™

RF-5905-CH00X

The RF-5905-CH00X is a tactical solar charger for use with L3Harris 12055-2105-02 Li Ion SPR $^{\text{TM}}$ batteries. Also works with the TVP and RF-7400E-CV00X.

COLOR OPTIONS AVAILABLE		
RF-5904-CH001	Traditional camo	
RF-5904-CH002	Desert camo	
RF-5904-CH003	Digital camo	

BATTERY CHARGER	STYLE	COLOR	BATTERIES SUPPORTED	NUMBER OF BAYS	CHARGE TIME	BATTERY CONDI- TIONING	INPUT POWER	INCLUDES
RF-5903-CH00X	Handheld battery solar charger, soft case	Traditional	12041-2X00-0X	1	Dependent on sun	No	34 W Solar	Tactical charger, 34-watt solar panel, interconnect cable, carrying case, stakes (4) and operator car
RF-5904-CH00X	Manpack battery solar charger, soft case	camo (CH001), Desert camo (CH002), Digital camo (CH003)	BB-2590/U, BB-390B/U	1	Dependent on sun	No	57 W Solar	Tactical charger, 57-watt solar panel, interconnect cable, carrying case, stakes (4) and operator car
RF-5905-CH00X	SPR™ battery solar charger, soft case		12055-2105-01	1	Dependent on sun	No	34 W Solar	Tactical charger, 34-watt solar panel, interconnect cable, carrying case, stakes (4) and operator car

ANTENNA COUPLER SYSTEM — HF UPGRADE RF-5382H-TM001



Case-1 contains the antenna coupler, ruggedly mounted on a removable tray. A whip antenna mount is located on the coupler tray. Case-2 is used to store the control and coax cable assemblies that interface to the radio system. See RF-7800H-TM001, TM002 and TM004 for larger system solutions.

The RF-5382H-TM001 includes:

PRODUCT NUMBER	PRODUCT NAME	QTY
RF-5382H-CU001	Antenna coupler	1
12020-1460-A250	Control cable, 250 ft (~76.2 m)	1
10181-9824-250	Coax cable, 250 ft (~76.2 m)	1

Case-1:

Weight: 20 lbs (~9 kg)

Dimensions: 22.5 W x 22.5 D x 14.5 H in (~57.2 W x 57.2 D x 36.8 H cm)

Case-2:

Weight: 20 lbs (~9 kg)

Dimensions: 22.5 W x 22.5 D x 24.5 H in (~57.2 W x 57.2 D x 62.2 H cm)

ANTENNAS

VHF-LOW-BAND BICONE ANTENNA



RF-290-AT420

The RF-290-AT420 is an easily-assembled, transpotrable omnidirectional antenna designed for broadband operation from 30 to 88 MHz, usable up to 108 MHz with degraded performance. This antenna has 350 watts output power and is used for extended line-of-sight (LOS) range.

FEATURES

- > Collapsible mast, 33 ft. (~10 m)
- > Coaxial cable with BNC connectors, 80 ft. (~20 m)
- > Ground stakes
- > Mounting base
- > Guy assemblies
- > Hammer, canvas bag and instructions

TRANSPORTABLE DUAL-BAND ANTENNA/MAST SET RF-3193DB-AT420

The RF-3193DB-AT420 is a transportable 30 to 512 MHz dipole antenna with 75 watts maximum power. The antenna connects to the low-band port of the AN/PRC-117G via a TNC-style connector using the included cables.

Antennas

TRANSPORTABLE ANTENNAS — VHF, UHF				
RF-3193TB-AT420	RF-300-TV, AN/PRC-117G, AN/PRC-158	10 ft. (~3 m)	Mast/antenna set	Dual band, 30-88 and 108- 512 MHz
RF-3193DB-AT520	RF-300-TV, AN/PRC-117G, AN/PRC-158	33 ft. (~100 m)	Tripod antenna set	Dual band, 30-88 and 108- 512 MHz
RF-3193TB-AT420	AN/PRC-117G, AN/PRC-158	10 ft. 4 in. (~3 m) with mast	Tripod antenna set	30 MHz-2 GHz
RF-3193TB-AT520	AN/PRC-117G, AN/PRC-158	33 ft. 8 in. (~10 m)	Tripod antenna set	30 MHz-2 GHz

DUAL-BAND TRIPOD ANTENNA SET RF-3193DB-AT520

The RF-3193DB-AT520 is a transportable 30 to 512 MHz dipole antenna operable at a maximum power of 100 watts. The antenna connects to the low-band port of the AN/PRC-117 via TNC-style connector using the included cable. It can be mounted using the included tripod and mounting hardware. The antenna does not require a ground-plane. It weighs less than 45 pounds (~20 kilograms and stores in the included Cordura bag.

TRANSPORTABLE TRI-BAND ANTENNA/MAST SET1



RF-3193TB-ATX20

The RF-3193TB-ATX20 is a transportable 30 to 2000 MHz dipole antenna with 100 watts maximum power. The antenna connects to the low-band port of the AN/PRC-117G via a TNC-style connector using the included cables. It can be mounted and elevated using the tripod, mast and mounting hardware included in the kit. The antenna does not require ground plane and stores in the included Cordura bag.

RF-3193TB-AT420 includes a 27-foot telescoping mast RF-3193TB-AT520 excluding mast (tripod only)

TRANSPORTABLE ANTENNA

RF-3193EX-AT420 Green with mast and tripod RF-3193EX-AT424 Tan with mast and tripod RF-3193EX-AT520 Green with tripod RF-3193EX-AT524 Tan with tripod

The RF-3193EX is the next generation of transportable antenna with improved gains and better radiation patterns than its successors. When compared to current antenna offerings, the RF-3193EX improves gain by over 2 db per band and adds the ability to utilize the high bands from 2000-2600 MHz. Each antenna comes with an improved tripod base offering improved support when the antenna is utilized in tripod mode.

HANDHELD ANTENNA WITH FLEX BASE



12006-2800-01

The 12006-2800-01 is a ruggedized lightweight dismount 30 to 870 MHz antenna for use with the AN/PRC-152A and AN/PRC-163 radios. The antenna is 14 inches (35,5 centimeters) in length and connects directly to the RF connector on the Transceiver with a TNC connector. It can be used with common VHF and low band UHF waveforms. The antenna assembly incorporates a bidirectional folding blade, and a flexible matching circuit construction that can be flexed on 90° in any direction around the center radius. Both the folding blade and matching circuit return to their original position when released. This flexible matching circuit reduces stress on the user when the radio is worn by moving with the user's body, without a rigid base that would resist movement.

VHF FOR DISMOUNTED SOLDIER (MAN-PORTABLE)

VHF DISMOUNT SOLDIER ANTENNA RF-3161-AT001 (152A, 7850M)



RF-3161-AT001

The VHF Dismount Soldier Antenna is a self-contained antenna that attaches to the RF-7800V-HH radio via a 3.3-foot (~1-meter) coaxial cable. The antenna is a 69-inch (~180-centimeter) flexible gooseneck and flexible blade antenna with a sophisticated matching circuitry to allow the full 30 to 108 MHz range. It is designed for users requiring communication ranges with the RF-7800V-HH approaching that of a 10 watt manpack radio.

This ergonomic antenna comes with clamps to attach to the standard web gear or rucksack and conforms to and moves with the body. The Soldier Antenna can be used in a low-profile mode, increasing mobility for urban combat but decreasing range. It can also be elevated in to a tree or other structure for extended range when required. Accessories are listed in the chart below. Color: Black.

12006-2425-01 ELEVATION KIT FOR ANTENNA

MULTIBAND DISMOUNT SOLDIER ANTENNA

RF-3162-AT001

The Multiband Dismount Soldier Antenna is very similar to the VHF version, except it has a wider frequency band - 30 to 512 MHz - for compatibility with the AN/PRC-152A radios. This 65-inch (~170-centimeter) antenna has three gooseneck sections and a flexible blade with several sophisticated matching circuits along its length. It is designed for multiband handheld radio users who require communication ranges approaching those of a 10 watts manpack radio.

This ergonomic antenna conforms to and moves with the body. It comes with clips to attach to standard web gear or rucksack and can be used in low-profile mode where the gooseneck and blade conform to the body, decreasing range but increasing mobility for urban combat. The antenna can also be elevated into a tree or other structure for extended range when required. Color: Black.

RF-3171-AT001

The RF-3171-AT001 conformal dual band antenna is suitable for frequencies from 225-450 and 1,200-2,600 MHz. A 36 inch cable with two right angle TNC plugs links the antenna to the R/T TNC antenna jack of the radio. See 10515-7011 Operator Card for more information.

GOLDIE SUAS HIGH BAND ANTENNA



Goldie High Band Antenna is a small form factor, flexible antenna that can conform to many different sUAS and UxV needs that operates in the high-frequency bands of the radio spectrum. These antennas are critical for various functions such as communication, navigation, and telemetry. They enable the UAV to send and receive signals over long distances, even in challenging environments. This antenna is an end fed dipole, and unlike more common center fed dipoles, features it's connector on one end of the board. This allows for a small flexible design allowing for easier integration onto various platforms such as fiberglass and shapes such as rudders, fins and other flight control surfaces. This antenna will work with both the RF-9820S-ER and RF-7850A-ER in L and S band as well as the RF-9800W-E in L band. It could be used with the PRC-163 or SSDLv3 when embedded into a UAV or UGV.

ELECTRICAL	
Frequency Range	870 MHz to 2600 MHz
RF Power Capacity	6 Watts
Impedance	50 ohm (nominal)
Radiation Pattern	Omnidirectional in azimuth when measured at the horizon
Polarization	Linearly polarization which is aligned with the antenna axis

ELECTRICAL	
VSWR	Less than 3.0.1 for 95% of each band, relative to 50 ohms
Gain	Average peak power gain > 0 dBi from 870-2600, with a minimum level of -2dBi

MECHANICAL	
RF Connector	SMA Straight Plug
Total length	~10.36 (~26.314) cm)
Max width	~.95 in (~2.413 cm)
Antenna weight	~0.2 (~5.67 g)

ENVIRONMENTAL

Designed to be installed into and conform to many different sUAS and $\mbox{UxV}\xspace$ needs

NANTENNA LOW PROFILE UHF TACSAT 220-380MHz



By integrating revolutionary materials, we are able to crush traditional expectations that high gain antennas need to be large! Mount this antenna on the rood of your vehicle with easy-to-use magnet feet or rack mounting.

ELECTRICAL	
Frequency Range	220-380 MHz
Polarization	RCHP
Impedance	50 ohm
Gain	6+dBic
Power	100w continuous, 200w blasts

MECHANICAL	
Dimensions	18 x 18 x 2.5
Ground plane	Built in
Connector	Type N(f) or TNC (f)
Attachment	Magnet feet or rack mounted
Flange	Bottom

CAMERAS

BASIC HELMET CAMERA

11385-1310-010



This is the basic camera offering attached to a soldier helmet as part as the dismounted solider system configuration. The camera is used to generate live video feeds utilizing a smart hub, like the KXM or Pico Hub for data processing and transmission over a handheld radio. The camera is a full HD USB camera,with high sensitivity, high performance, and gives full HD image pixel. It is available in three different models with various capabilities.

FEATURES

- > Various frame rates, lens, sizes and output formats based on model type
- > 1/2.7 inch image sensor
- > Progressive scanning
- > 3µm x 3µm pixel size, 5856µm x 3276µm image area
- > USB power source, DC 5V
- > 350mA power current
- > Windows (7/8), Linux (kernel 2.6.27 or later), and Android OS

MOHOC 2 IP2 NW CAMERA





MOHOC® & MOHOC IR® CAMERAS

FEATURES

- > Back illuminated pixels for ultra-low light (1/2.8" sensor)
- > Auto adjustment for optimal recording in low light
- > 0.006Lux at F2.0
- > 120° Field of View, manual rotation up to 190°
- > Progressive Scanning System
- > Drop, temperature and water tested
- > Low SWaP
- Curve-lock technology for secure attachment to helmet or helmet cover
- > MOHOC Ethernet to USB cable for connecting with radios

GS TECH FALCON CAMERA





A rugged 4k IP H.265 camera that can be connected directly to helmets. Falcon camera supports dual stream encoded video, and can be added as an accessory to other system solutions.

FEATURES

- > 1080p max resolution
- > Low SWaP
- > Custom designs available
- > Low bandwidth
- > 1.5W power consumption
- > 50Kbps-12Mbps
- > Motion detection and face recognition
- > Low latency

SITUATIONAL AWARENESS GOGGLE

ENHANCED NIGHT VISION GOGGLE-BINOCULAR (ENVG-B)

11385-1088-01





The ENVG-B incorporates RTA capabilities to the goggle, enabling soldiers to see around corners and behind cover without risk of exposure while targeting. This gives soldiers the ability to identify, assess and engage a target with greater accuracy and speed.

FEATURES

- > Increased mobility
- > Enhanced vision in degraded battlefield conditions
- > Improved accuracy
- > Decreased target engagement time

ADDITIONAL FEATURES FOR THE SOLDIER

- > Objective focus 18 inches to infinity
- > Diopter eyepieces that allow use by soldiers with differing visual acuity
- > FPAs fused with I² for left or right eye configurations
- > Auto-off when stowed and resumes power when deployed
- > Infrared illumimator

ON-THE-MOVE KITS

DISTRIBUTED TACTICAL OPERATIONS KIT (DTOK)

12006-2200-01



The scalable platform supports a large variety of C5ISR solutions including LOS, SATCOM, mobile ADHOC networking (MANET), and can integrate with existing networking infrastructures and equipment. The DTOK can be used in tactical operation centers (TOC), aircraft and vehicles. Radio over IP (RoIP) seamlessly integrates radio systems with IP networks to provide secure and efficient communication, enhancing interoperability and mission-critical coordination on the battlefield.

CONTINGENCY COMMUNICATIONS KIT (CCK)

12206-2100-01



A next-generation modular box specifically designed for Tactical Combat Control applications at the forward edge, which seamlessly integrates with fielded digital aided Close Air Support (CAS) systems. The box leverages the smallest form factor available on the market while still maintaining core capabilities that are needed for today's modern battlefield. Interchangeable sleds can be installed in the box to allow for any configuration of equipment. Sleds are easily removable and are measured in "U", or units. The CCK has 4U of space. The sled system allows for maximum customization for specific operational needs.

SERVERS

MILDEF MOBILE COMMAND GATEWAY SERVER

Tier 1/2 (CS2216)



A powerful rugged server that is designed to host tactical applications optimized for L3Harris radio networks. These applications are mission critical, providing commanders with a real time view of the battlefield while operating in a combat environment. The unit is available in multiple colors to suit the specific environment.

FEATURES

- > Low SWaP
- > Flexible mounting
- > Military-relevant rugged design
- > 2.0 GHz Intel Xeon 9th Gen E-2276ML
- > 32 GB DDR4 ECC RAM
- Support for 2 x 480GB or 2 x 960GB removable disks in caddy (not included)
- > No internal disk
- > TPM 2.0
- > 6x 1000BASE-T switched ports
- > 18-36 VDC

MILDEF MOBILE COMMAND GATEWAY SERVER

TIER 3 (CS2217)



A powerful rugged server that is designed to host tactical applications optimized for L3Harris radio networks. These applications are mission critical, providing commanders with a real time view of the battlefield while operating in combat environments

- > Small form factor
- > 2.0 GHz, Intel Xeon 9th Gen, E-2276ML
- > 64 GB ECC RAM
- > RAID 1
- > TPM 2.0
- > 8x 1000BASE-T switched ports
- > 12-36 VDC

JUGGERNAUT VELOX ACCESSORIES

FEATURES

- > Quick docking and undocking to mount
- > Durable, rugged, secure connection to EUD
- > Power delivery management for system hubs and peripherals
- > Compact lightweight form factor
- > Integrated cable routing
- > Low profile integration to kit
- > Full ecosystem managing data and charge of multiple devices

VELOX SMART-BLOCK



FEATURES

- > Interfaces with all DPRTR cases
- > 15 Pin interface USB 3.2
- > IP68 seal against mating mount
- > IP68 seal to USB-C port on EUD
- > Rugged pogo-pin assembly

VELOX PALS MOUNT





FEATURES

- > 15-Pin interface USB 3.2
- > Integrated closure security strap
- > Highly improved MOLLE/PALS installation
- > Tension adjustable thumb screw tightener
- > Secure low profile mounting to plate carrier
- > Adaptable, integrated cable management
- > Serviceable Pogo-pin Module

VELOX DOCK



- > 6-device charge and data bays
- > Smart-block interface
- Data transfer managed via Mobile Device Management (MDM) app
- > Rugged platform for field application
- > Quick connect bay interface
- > Modular device specific cups
- > Daisy Chain expansion for data
 - Up to 5 docks (30 devices)
- > Individual power per dock
 - Integrated power supply for up to 25 W charging per EUD

SATCOM OPTIONS

PANTHER™ II



FEATURES

- > Tri-band 60-96 cm man-portable VSAT
- > Multi-orbit, MEO/GEO capable
- > Modular design for rapid band, aperture or modem changes
- > Quickly "lock on" with the optional one-touch Auto-Acquire
- > Single airline checkable case or overhead-stowable rucksack

HAWKEYE™ III LITE



FEATURES

- > Modular desgin allows for easy RF band change
- Light-weight two or three case design (as determined by system configuration
- Robust auto-acquisition pedestral to support Ku-, X- and Ka-Bands
- > Multiple embedded modem options
- > Integrated ViewSat™-e web-based GUI and front panel user interface
- Common architecture to GCS Hawkeye 3 VSAT terminals provides interoperability between systems and reduced operting costs
- > 4 LAN ports or 3 LAN ports plus DSL option

HAWKEYE™ 4



FEATURES

- > Tri-band 2.35 m flyaway VSAT
- Split positioner and tri-pod design for ease of deployment and transit
- Shared common controller and modem module with Hawkeye 4 Lite
- > Modular band assemblies for quick and efficient changes
- > Manual and one-touch auto acquire
- > Low-PIM version available for multi-carrier requirements

HAWKEYE™ 4 LITE



- > Tri-band 1.3m Flyaway VSAT
- > Multi-oribt, MEO/GEO capable
- > Supports high-speed data for video and C5ISR applications
- > Fast, on-touch auto acquire or manual point
- > Modular design for rapid band, aperture or modem changes

SHADOW™



FEATURES

- > Ubiquitous, continuous broadband internet access
- > Suitable for government, tactical and commercial use
- > Global, Ku-band high-throughput network
- > Intelsat Flex certified
- > Integrated modem, RF and antenna for near-instant operational readiness
- Extends the range of L3Harris tactical radios, creating a global network
- > Lightweight, inconspicuous form factor
- > Executive/VIP travel, Military SATCOM
- > Low profile
- > Assisted pointing, setup in less than 5 minutes
- > Designed for HTS networks
- > Sealed against weather and particles for austere environments

DARKWING™



- > Small form factor, lightweight design
- > Flat panel antenna
- > Airline carry-on
- > Integrated ViewSat-e web-based GUI
- > Front panel user interface
- > External AC or DC power supply
- > Integrated Wi-Fi access Point
- > iDirect Evolution and Delocity support
- > IP66 rating
- > Executive/VIP travel, Military SATCOM
- > Lightweight, inconspicuous form factor
- > Low profile
- > Assisted pointing, setup in less than 5 minutes
- > Designed for HTS networks
- > Sealed against weather and particles for austere environments
- Inmarsat GX certified
- > Integrated modem, RF and antenna for near-instant operational readiness
- Extends the range of L3Harris tactical radios, creating a global network

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