URG-IV HF COMMUNICATIONS SYSTEM

POWERFUL, SCALABLE COMMUNICATIONS

Modern, user-friendly and transportable

You now have a proven, beyond-line-of-sight (BLOS) communications option in contested environments where SATCOM is expensive, challenged or denied. It is flexible, user friendly, cost-effective and backward compatible. It delivers a clear ground-based communications system in a rack mount or transportable configuration. Above all, it's powerful.

Introducing the URG-IV HF communications system from Collins Aerospace.

FLEXIBILITY FOR A DYNAMIC MISSION ENVIRONMENT

The URG-IV line of high-frequency (HF) radio communications equipment offers you the right communications systems for your missions. Whether you need a single radio to integrate into your existing system or you want to establish a new network of multiple radio systems dispersed geographically under remote control by multiple operators, Collins Aerospace has the answer. Our engineers can work with you to customize installations and networks to meet specific requirements such as remote control and split-site operability.

This easy-to-use, modernized HF system provides wideband and legacy narrowband interoperability for BLOS analog voice, digital voice and data communications. Modernized wideband HF (WBHF) provides a powerful alternative to expensive narrowband SATCOM in contested battlespaces. The URG-IV includes the latest in modern HF Automatic Link Establishment (ALE) technology standard MIL-188-141D.

KEY FEATURES

- Delivers data rates over 20 times faster than legacy HF
- Built-in 4G ALE for reliability and ease of use
- Supports flexible architectures, enabling networking capabilities in commercial and military installations
- 1.5 to 29.99999 MHz transmit and receive frequency ranges in regular operation
- Simplex and half-duplex operation
- SSB, two-channel ISB, CW, AM, AME Tx, WBHF modes
- MIL-STD-188-141D compliant
- Provides analog voice

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HARDWARE

The heart of the HF communications system is the new, software-defined RT-2200A receiver-exciter and PA-2010 1 kW power amplifier. A full-color LCD touchscreen provides intuitive local radio control and status interfacing, along with voice audio and keying connections. The network-wide Remote Control Console software provides a powerful, user-friendly communications system.

RT-2200A receiver-exciter

Our RT-2200A's wideband channel (3-48 kHz) operation provides significant advantages over legacy HF, facilitating better establishment and link maintenance in poor propagation and operating environments than legacy narrowband HF can support.

Even under these conditions, the RT-2200A will support text chat and low-rate digital voice. Under normal conditions, it delivers high-speed data rates up to 20 times faster than legacy narrowband HF, which supports networking and other data-intensive applications. The RT-2200A is taking HF where it's never gone before.

Scalable power amplifier

The PA-2010 power amplifier is a proven solution in applications requiring a rugged and reliable high-power amplifier. It combines solid-state radio-frequency (RF) power amplification and control technology to produce reliable HF power at continuous duty.

Its two amplifier assemblies, each providing 500 watts, deliver a combined output power of 1 kW. This allows the units to deliver conservative averages of 1 kW. Combining power supplies and amplifiers in modular form produces considerable redundancy and protection against failures.

KEY SOFTWARE FEATURES

- Email – STANAG 5066 compliant
- Chat – sending and receiving text messages over HF
- File transfer – sending and receiving files up to 20 times faster than legacy HF
- Remote control via web browser, or external remote control software

ANCILLARIES

DVP-200 digital voice privacy processor

The processor provides integrated digital voice and AES-256 encryption via the Remote Control Console interface.

- An electronically tuned RF banpass filter intended for Cosite applications

URG-IV SPECIFICATIONS

Frequency: 1.5 to 29.9999 MHz transmit-and-receive frequency ranges in regular operation

Narrowband and wideband HF compliant per MIL-STD-188-110D and MIL-STD-188-141D

Waveforms support data rates 75 bps up 240 kbps in up to 16 x 3 kHz channels (48 kHz max. BW)

Simplex, half-duplex and split-site operation

RF output:

- Output power: Per ML-STD 188-141D 5.3.7
  – 1 kW (+/-1dB) – PEP and average up to 1.3:1 VSWR
  – Max VSWR: 3:1
- Duty cycle: 100%
- Output impedance: 50 Ohms at 1.5:1 VSWR
- Emissions compliance: Per MIL-STD-188-141D
  – 5.2.7.1-, 5.2.7,
  – 5.3.1.1, 5.3.1.2, 5.3.1.3, 5.3.2.3
- Antenna connector N-type female

Control:

- Front panel: LCD touchscreen
- Ethernet: Remote HTML or remote-control software
- Serial RS-232 and RS-422: Remote-software control
- Interlock: Antenna interlock to prevent keying of PA when not connected

Data interfaces, Ethernet, RS-232, EIA-530 (synchronous serial, asynchronous serial)

Size:

- Height: 30.9 in. (785 cm)
- Width: 22.6 in. (574 cm)
- Depth: 31.6 in. (803 cm)

Weight: 325 lbs. (147 kg) – 284 lbs. (129 kg)

- 19 in. rack, 16U rack space

Input power: 180-264 VAC single phase, 47-63 Hz

Temperature:

- Operating: -4° F to 122° F (-20° C to 50° C)
- Storage: -40° F to 158° F (-40° C to 70° C)

Humidity: 95% non-condensing

Built-in control, audio panel, power amplifier, power supply for size, weight and power savings

Software updates/datafill: via USB on front panel or remote via Ethernet

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