



Best-in-class RF performance and clarity in a flexible VOIP and Ethernet enabled radio.

Trusted, reliable and flexible communication is critical in today's battlespace. Rockwell Collins' software defined 721S fixed-site VHF-UHF radio transceiver provides a tailorable solution for stand-alone or networked transceivers.

As a part of our V/UHF family of solutions for battle management, the 721S delivers superior connectivity through an Ethernet-based command and control system employing open system architecture.

721S radios are fully configurable to satisfy your VHF and UHF line-of-sight needs and support multiple voice and data operating modes. It can be customized to provide AM and FM frequency coverage in any band within the 30-512 MHz range.

Frequency agile EPM waveform options are available. The radio sets can be upgraded for seamless interoperability with numerous frequency agile radio platforms such as Talon/Talon II, SATURN, HAVE QUICK I/II and country-unique waveforms.

The 721S can be optimized for highly congested operational conditions. Features robust internal tracking filter capable of supporting ECCM waveforms while providing great co-location performance.

Color display and software-definable touchscreen on the removable RCU-710 remote control unit provide intuitive radio control and status interfacing, along with voice audio and keying connections. Used remotely, the RCU-710 uses a single standard 10/100 Ethernet interface for radio control, keying, status and audio via Voice over Internet Protocol (VoIP).

The system supports the installation of Ethernet encryptors between each network component for added security. A robust Microsoft® Windows® application is available for a standard IBM® compatible PC to enable 721S control and monitoring through an Ethernet connection or network.

KEY FEATURES

- > Flexible AM/FM operating frequency from 30-512 MHz
- > 100-watt, high-power radio frequency (RF) transmitter with selectable 20 dB RF output power turndown in 0.1 dB increments
- > RCU-710 remote control unit – installed in the radio front panel or remotely connected via IEEE-compliant 10/100 Ethernet link
- > 721S compatible to Rome Touch Control Software (RTCS) Ethernet and Serial Version
- > A single remote control unit can manage multiple radio transceivers for monitor and control, voice audio and transmitter PTT keying

KEY FEATURES (CONTINUED)

- Clarity™ noise reduction algorithms increase talk power, link margin and range by reducing nonsyllabic background noise
- Networked remote controllers and radios enable flexible control options
- Decentralized system architecture typically precludes the need for expensive voice switching systems and VoIP gateways
- Software defined radio (SDR) implementation and digital signal processors (DSPs) enable simplified customization and future upgrades
- 70 MHz IF interface for external appliques/modems
- Comprehensive built-in-test (BIT) for quick, simplified equipment status indication and troubleshooting aid
- Superior RX sensitivity
- GRC-171/RT-1272 compatible mounting configuration, connectors and pin-outs for easy system upgrades; five-minute drop-in replacement
- Embedded scanning 121.5 MHz or 243.0 MHz guard receiver mode
- Highly efficient primary power inputs – broad range AC voltage and 24/28 VDC with auto switchover
- ED-137 compliant VoIP standard (G.711)
- High mean time between failure

OPTIONS (INQUIRE FOR AVAILABILITY)

- Electronic Protection Measures (EPM) with Talon, Talon II (up to 500 hops/second), HaveQuick I/II and SATURN waveforms
- Additional RCU-710s for radio control, status, voice audio and transmitter keying of a radio or multiple radios through Ethernet link
- Inputs for external timing or frequency standards
- External auto-tune filter/multi-coupler available
- PC-based software for remote control over Ethernet
- RT slide, connector kits and RCU desktop mounts available
- Link 11/22 (TADIL-A) data mode (requires external modem)
- Blank front panel (no local control option)

SPECIFICATIONS

Part numbers**	270-3148-012 (108-174 MHz VHF RT)
	270-3148-022 (225-400 MHz UHF RT)
	270-3148-032 (108-400 MHz V/UHF RT)
	270-3148-042 (30-512 MHz)
	270-3148-062 (RCU-710 control)

** -022, -032, -042 support HAVE QUICK

SATURN Ed2 (base radio configurations support SATURN and HAVE QUICK)	270-3148-023 (225-400 MHz UHF RT)
	270-3148-033 (108-400 MHz V/UHF RT)
	270-3148-043 (30-512 MHz)

Operating frequency	30.000 – 511.975 MHz (available)
Channel spacing and modulation modes	25 kHz (AM DSB, FM, FSK)
	12.5 kHz (AM DSB, FM, FSK)
	8.33 kHz (AM DSB in VHF ATC band)

Specifications subject to change without notice.

Receiver sensitivity	-103.5 dBm (1.5 μ V), AM voice -108 dBm (0.9 μ V), FM voice -97 dBm (3.2 μ V), AM or FM WB
Stability	1.0 PPM (0.1 PPM available)
Transmit power	100 W FM 30 W AM carrier; 50 W AM carrier optional
Transmit duty cycle	Continuous duty under all conditions Full power at VSWR <2:1; up to 6 dB power reduction VSWR >2:1
RT physical	Standard 19" (483 mm) rack mounted 7" (178 mm 4 RU) high, 20" (520 mm) deep; weight 40 lbs (18 kg) typical, but not more than 50 lbs (23 kg)
RT control	Removable front panel control unit, external RCU or remote networked PC
Built-In-Test	Continuous fault detection (C-BIT), User initiated fault Isolation (I-BIT)
Power input	85 to 264 V ac, 47-63 Hz 24 to 30 V dc
Temperature	-30°C to +55°C operating -40°C to +85°C storage
Humidity	5% to 95% non-condensing
Cooling	Internal forced air
Audio	NB voice and WB data; Balanced 600 Ohm, -10 to +10 dBm output level Adjustable in approx. 1 dB steps
Reliability	>50,000 hours MTBF ground benign
Maintainability	NMT 15 minutes MTTR

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Rockwell Collins delivers innovative aviation and high-integrity solutions that transform commercial and government customers' futures worldwide. Backed by a global network of service and support, we are deeply committed to putting our solutions to work for you, whenever and wherever you need us. In this way, working together, we build trust. Every day.

For more information, contact:

Rockwell Collins
400 Collins Road NE
Cedar Rapids, Iowa 52498
800.321.2223 | +1.319.295.5100
fax: +1.319.378.1172
721S_SmartBlade@rockwellcollins.com
rockwellcollins.com