



# RT-7000

Airborne Tactical Radio  
Panel-Mount Radio (PMR)  
Multi Band Multi Transceiver



# RT-7000

## P25 TRANSCEIVER AND CONTROLLER

Canyon RT-7000PMR (Panel Mount Radio) supports the full spectrum of VHF and UHF, AM/FM communications from 29.7-960 MHz, with up to three (3) embedded and individual functional slots, providing the equivalent capability of three (3) individual radios in one (1) compact form-factor.

In addition, the RT-7000PMR supports connected Push-to-Talk capability for the on-the-fly connection of up to two (2) external devices, such as hand-held radios, mobile phones, or SATCOM handsets. The RT-7000PMR includes an integrated full-color, NVIS Green B-compliant radio control display/ Graphical User Interface (GUI).

Because the RT-7000PMR is a Software-Defined Radio, the GUI can be individually customized to fit an operator's unique requirements. All RT-7000PMR commands are supported by either the touch screen display or the easy-to-use dual concentric front panel knobs. All user control functions and operations are supported within three (3) menus selections. As a Software-Defined Radio, the RT-7000 line is upgradable as requirements evolve. When modules become obsolete, you won't need a new radio or training, you'll remain current with the latest technologies through easy-to-implement software or module upgrades/additions.

The RT-7000PMR, using Canyon's proprietary Broadband Transceiver Module, can perform P25 conventional digital modulation across the entire 29.7-960 MHz range, while Motorola APX-8000 based transceiver modules can be added to cover any requirements for any P25 trunking. This includes Phase 2 trunking and Motorola-proprietary radio network features, all together enabling the user an unprecedented level of communications interoperability.

The RT-7000PMR is unique in its capability to

provide multi-channel cross-band repeat and simulcast between all connected transceivers (internal and external) thereby allowing its operator maximum capability during complex operations. The system is in-flight tunable - including P25 frequency and data. It delivers the widest frequency and modulation coverage, enhanced mission capabilities, and addresses all public service communication needs, in a high-reuse, common module, integrated modular architecture (IMA).

Each transceiver is designed with a single port antenna interface, making installation of the RT-7000PMR a breeze within all aerial platforms. The RT-7000PMR is compatible with existing RT-5000 antennas and most other antennas.

### Features

- Trunking: P25 Phase 1 & 2, SmartZone, SmartNet, OmniLink
- P25 OTAR
- Multi-key FIPS-140-2 encryption
- 3 embedded internal radio modules can be any combination of:
  - Canyon wideband transceiver modules: 29.7-960 MHz AM/FM, P25 conventional
  - Motorola APX-8000 modules
  - SAR (Search and Rescue) module
- Easy, embedded relay/simulcast across 2-5 transceivers or receiver/transmitters
- Front panel-programmable up to 3000 preset channels per transceiver
- Programmable scan groups
- Programmable quick access preset channels
- ATC Communications (TSO)
- Color LCD display with programmable day/night backlighting:
  - MIL STD 3009 NVIS Green B-compliant
- Customizable GUI
- Flight tunable
- Touch-screen or knob/button command
- Flight glove-compatible
- Industry-best display readability at-a-glance



### Remote Control Display Unit (RCDU)

The RT-7000RCDU, a fully-functional display without transceivers, connects to an RT-7000PMR and replicates the panel-mount radio display in every way. It becomes a remote control display head for the RT-7000PMR, allowing radio control in a second position in the aircraft.

Delivers instantaneous operation with no delay.

- Features a customizable Graphical User Interface.
- Designed for users such as Emergency Medical Technicians (EMT), Intelligence Surveillance Reconnaissance (ISR) platform radio operators, rear seat-position Airborne Law Enforcement (ALE) Tactical Flight Officers, rescue winch operators, Search and Rescue (SAR) scanners, or anyone with cabin communication needs.

### RT-7000 RCDU Dimensions

Height: 4.50" / 114.3mm

Width: 5.75" / 146.05mm

Depth: 1.65" / 41.91mm



### SAL-7000 Portable Radio Interface (PRI)

Connectivity for up to Two Handheld Radios  
 Skye Avionics' SAL-7000 provides a standardized connection from the RT-7000PMR Tactical Radio to over 20 different popular FM handheld models. Skye Avionics has engineered harnesses for Motorola APX, XTS, XPR, SRX, EX, PR, and MT models. The SAL-7000 is a reliable turnkey solution, comes remote or dzus rail mounted, and is DO-160 qualified approved.



### Dzus-mount SAL-7000 Radio Interface



### Antennas

A full selection of tuned and passive antennas are available to meet your mission profile(s).

## Technical Specifications

**Voltage Requirements** 27.5 Vdc +/- 20%

**Dimensions/ Weight** Dimensions: see drawing  
Max weight: 9 lbs (4.08 kg)

**Channeling** 6.25/8.33/12.5/25 kHz

Wideband Transceiver	Frequency Bands
30-50 MHz	LMR
30-88 MHz	Military
108-118 MHz	VOR Voice
118-152 MHz	ATC and Civil Air Patrol
136-174 MHz	LMR
156-174 MHz	Maritime
225-400 MHz	Military
380-520 MHz	LMR
764-960 MHz	LMR

**Transmit Power**

- ATC COMS – 4W Min
- AM – 4W Min
- FM – 8W Max
- P25 Conventional – 8W Max
- Motorola modules - VHF - 6W
  - UHF – 5W
  - 700/800 MHz – 3W

Contact us about add-on external amplification options

**APCO P25**

- All P25 Bands
  - Conventional Common Air Interface (CAI)
  - Phase 1, 2 Trunking
  - Analog Trunking (SmartZone, SmartNet)
  - FM/AM/P25/ Trunking

**Encryption**

- FIPS 140-2, Level 2/3
- P25 AES & DES
- Analog DES, DES-XL, DVP
- P25 OTAR
- Multikey

