



ADVANCED AVIONICS  
for mission critical communications



# 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 to 960 MHz, with up to three embedded and individual functional slots. This provides the equivalent capability of three individual radios in one compact form-factor.

Additionally, the RT-7000PMR supports connected push-to-talk capability for the on-the-fly connection of up to two 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 menu selections. The RT-7000 line is also upgradeable as requirements evolve. Because of easy-to-implement software and/or module upgrades/additions, when modules become obsolete, a new radio or training is not necessary. This keeps you current with the latest technologies.

Using Canyon's proprietary Broadband Transceiver Module, the RT-7000PMR 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 requirements for any P25 trunking, including Phase 2 trunking and Motorola-proprietary radio network features. Altogether, these enable an unprecedented communications interoperability.

The RT-7000PMR is unique in its ability 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 as well as enhanced mission capabilities. It also addresses all public service communication needs in a high-reuse, common module, integrated modular architecture (IMA).

Each transceiver has 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
- Three 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 two to five transceivers or receiver/transmitters
- 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 is a fully-functional display without transceivers. It 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" / 114.3 mm

Width: 5.75" / 146.05 mm

Depth: 1.65" / 41.91 mm



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

With connectivity for up to two handheld radios, Skye Avionics' SAL-7000 provides a standardized connection from the RT-7000PMR tactical radio to more than 20 different 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 that comes remote or dzus rail mounted. It 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

<b>Voltage Requirements</b>	27.5 Vdc +/- 20%																				
<b>Dimensions/ Weight</b>	Dimensions: see drawing Max weight: 9 lb. (4.08 kg)																				
<b>Channeling</b>	6.25/8.33/12.5/25 kHz																				
<b>Wideband Transceiver</b>	<table border="0"> <tr> <td><b>Frequency Bands</b></td> <td></td> </tr> <tr> <td>30-50 MHz</td> <td>LMR</td> </tr> <tr> <td>30-88 MHz</td> <td>Military</td> </tr> <tr> <td>108-118 MHz</td> <td>VOR Voice</td> </tr> <tr> <td>118-152 MHz</td> <td>ATC and Civil Air Patrol</td> </tr> <tr> <td>136-174 MHz</td> <td>LMR</td> </tr> <tr> <td>156-174 MHz</td> <td>Maritime</td> </tr> <tr> <td>225-400 MHz</td> <td>Military</td> </tr> <tr> <td>380-520 MHz</td> <td>LMR</td> </tr> <tr> <td>764-960 MHz</td> <td>LMR</td> </tr> </table>	<b>Frequency Bands</b>		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
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<b>Transmit Power</b>	<ul style="list-style-type: none"> <li>• ATC COMS - 4W min</li> <li>• AM - 4W min</li> <li>• FM - 8W max</li> <li>• P25 Conventional - 8W max</li> <li>• Motorola modules - VHF - 6W               <ul style="list-style-type: none"> <li>- UHF - 5W</li> <li>- 700/800 MHz - 3W</li> </ul> </li> </ul>																				
<b>APCO P25</b>	<ul style="list-style-type: none"> <li>• All P25 Bands               <ul style="list-style-type: none"> <li>- Conventional</li> <li>- Common Air Interface (CAI)</li> <li>- Phase 1, 2 trunking</li> <li>- Analog trunking (SmartZone, SmartNet)</li> <li>- FM/AM/P25/trunking</li> </ul> </li> </ul>																				
<b>Encryption</b>	<ul style="list-style-type: none"> <li>• FIPS 140-2, Level 2/3</li> <li>• P25 AES &amp; DES</li> <li>• Analog DES, DES-XL, DVP</li> <li>• P25 OTAR</li> <li>• Multikey</li> </ul>																				

