

RACON MICROPASS® 8500 SERIES 23 GHz Microwave Radio

RACON®
MICROPASS®



KEY FEATURES

- **High System Gain** - Reliable performance for distances of up to 15 miles (25km) between antennas.
- **Flexible Capacity** - Various subcarrier configurations available.
- **Modular Design** - Field-changeable solid state modules allow on-site replacement and assure fast, easy maintenance and repair.
- **Simple Installation** - Lightweight antenna unit may be installed using everyday hand tools. Built-in alignment meter speeds the installation process.
- **Compact, Lightweight Design** - Completely self-contained, weighing only 25 pounds with the built-in 17-inch antenna. Optional 27-inch and 4-foot antennas are available to provide additional system flexibility.
- **Full Duplex Operation** - A single housing contains the integral antenna and complete transmitter and receiver electronics.
- **Durable Construction** - The radio is built with anodized aluminum, coated to MIL specifications.
- **Government Authorized** - Operational in the full 23 GHz band - 21.2 GHz to 23.6 GHz. Certified by the FCC (Part 94 and Part 21) and other world communication authorities.
- **Status Monitor** - Options available for local, remote, and dial-up radio status monitoring.

INNOVATIVE DESIGN FOR ENHANCED PERFORMANCE AND RELIABILITY

The Racon Micropass® 8500 Series from **Raymar-Telenetics** is a self-contained microwave radio system that provides short-haul two-way point-to-point transmission of broadcast quality video. Utilizing 23GHz technology, the 8500 series is the high-performance, low-cost solution to your video transmission application. The 8500 Series is designed as a compact self-contained integrated system with antenna and transceiver operating as a single unit. This innovative design speeds installation and eliminates troublesome intermediate connections and providing for improved reliability and greater performance.

VERSATILITY

The radios in the 8500 Series are available in multiple subcarrier configurations, including duplex audio and audio channels. The 8500 Series integrates voice, data, and video into a complete teleconferencing transmission system. These radios are compatible with virtually all camera and monitor systems, and are available in NTSC, PAL, and SECAM configurations. This versatility means that there is an 8500 series radio to match almost every video application.

A REPUTATION FOR QUALITY

The Micropass® reputation for quality, reliability and unmatched price/performance value has made it the choice in thousands of worldwide installations. All Racon Micropass® components are factory tested and calibrated to ensure long-term system reliability and top performance. Raymar-Telenetics also offers a comprehensive program of product and system support. This includes licensing assistance, path engineering, applications engineering and technical analysis support. Talk to your Raymar-Telenetics representative for specific information on how the 8500 Series can be configured to be your complete video communications solution.

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GENERAL

Modulation:	FM
Video System Capabilities:	Duplex video broadcast quality bandwidth 4.2MHz standard subcarrier options
One Duplex Audio:	15KHz2
Two Duplex Audio:	3KHz3
One Duplex Audio:	3KHz
One Duplex RS422:	19.2Kbps
System Gain:	
Radio:	103dB
Radio w/17" Antenna:	171dB
Radio w/27" Antenna:	179dB
Radio w/48" Antenna:	185dB
Frequency Band:	21.2 to 23.6GHz
Common Carrier (Part 21)	All channels
Business (Part 94)	All channels
Equipment Authorization:	
FCC Type Number:	B2N9CL10050
FCC Type Accepted:	Parts 21 and 94
FCC Emission Designator:	33800F9

TRANSMITTER

Power Output:	
Minimum:	40mW (+16dBm)
Typical:	65mW (+18dBm)
Maximum:	100mW (+20dBm)
Frequency Stability:	Better than $\pm 0.03\%$ of carrier frequency (-30° to 55°C)
Auto temperature	Controlled source

RECEIVER

Type:	Superheterodyne
IF Bandwidth:	33 MHz
Threshold:	-85 dBm
Noise Figure:	12dB nominal

POWER REQUIREMENTS

Power Consumption:	Nominal @ 25°C (77°F) Power on - 100 Watts Operating - 75 Watts
Input Voltage:	120/240VAC 50/60Hz Input to 24VAC remote transformer (supplied)
Optional:	AC/DC Power Supply

MECHANICAL

Diameter:	19 inch (48.26cm)
Depth:	16.25 inch (41.27cm)
Weight:	25 lbs (11kg) per antenna assembly
Material:	White, all-weather aluminum coated to MIL C/5541
Shielding:	Built-in conducted and radiated RFI shielding
Mounting Type:	Universal hardware for mounting to 3" (7.6cm) to 4.5" (11.5cm) O.D. vertical pipe ($\pm 10\%$)

ENVIRONMENTAL

Temperature Range:	
Operating:	-30°C to 55°C (-22°F to 131°F)
Storage:	-40°C to +60°C (-40°F to 140°F)

AUDIO SUB-CHANNEL INTERFACE

Audio Bandwidth:	Model 8505: 15KHz Model 8525: 3KHz
Input Impedance:	600 ohms
Output Impedance:	600 ohms
Input Level:	0dBm
Output Level:	0dBm
Connection:	Screw terminal

RS232 SUB-CHANNEL INTERFACE

Data Rate:	Up to 19.2 Kbps asynchronous
Connection:	25 pin D Sub miniature

RS422 SUB-CHANNEL INTERFACE

Data Rate:	Up to 19.2 Kbps
Connection:	Screw terminal

ALARMS

Loss of RF Alarm
Loss of Subcarrier

INTERFACE

Video:	BNC-75 ohm (coax)
Audio:	Screw terminal connection
Data:	Screw terminal connection

ANTENNA

Size: Standard integrated shrouded 17inch (43cm) inside diameter. Optional integrated shrouded 27" (69cm) or Optional external 48" (122cm), and 72" (1.8m) available.

Diameter	Gain	Beamwidth (3dB)
17" (43cm) shrouded	38dBi	1.7°
27" (69cm) shrouded	42dBi	1.3°
48" (122cm) non-shrouded	46dBi	0.7°

Polarization:	Vertical or horizontal
Alignment:	Includes coarse & fine elevation & azimuth adjust
Radome:	Standard with 17" and 27"



WARRANTY

Raymar-Telenetics manufactured products are warranted against defects in hardware material and workmanship under normal use for one (1) year from date of original retail purchase. Defective product will be repaired or replaced, determination to be made by Raymar-Telenetics, at no charge. Repaired or replaced products are warranted for 90 days or for original warranty period, whichever is longer. Warranty extends to original end-user only.

**RAYMAR
TELENETICS**

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