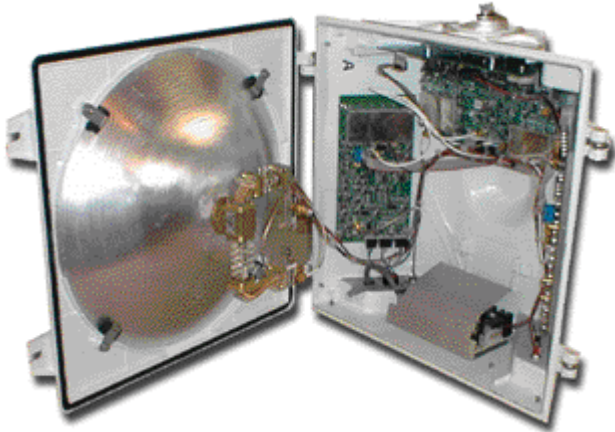


SIERRA DIGITAL MODEL 2423S (Synthesized) 24.0-24.25 GHz Millimeter Wave Radio Link

Video Surveillance Radio Integral Antennas
Part 15/ISM - No License Req'd



KEY FEATURES

- Operating frequency tunable at the RF Head with thumbwheel switches
- Low power consumption - only 25 Watts per Terminal for total of 50 Watts for the link
- Low cost - No recurring monthly charges, fast payback
- One year warranty - low parts count, highly derated solid state devices establish extremely high MTBF
- Low maintenance - simple, compact design ensures a lifetime of trouble-free service
- One hour installation - Bolt in place, plug in and aim

APPLICATIONS

Remote surveillance of

- | | |
|--|---|
| <ul style="list-style-type: none"> ✓ parking lots ✓ traffic intersections ✓ gates | <ul style="list-style-type: none"> ✓ alternate entry points ✓ storage facilities <p><i>and other sensitive locations or valuable resources.</i></p> |
|--|---|

DESCRIPTION

The Raymar-Telenetics SDC 2423S series, digital millimeter wave radio is a simple, low cost alternative to leased copper or fiber optic landline circuits.

Because of cost, response time, or right-of-way constraints with land line, the high performance synthesized 2423S millimeter wave link affords you a frequency agile low cost radio solution. Implementation of the 2423S digital radio will be quicker, easier, and more affordable than copper or fiber alternatives.

Two units make up the 2423S system:

- One RF Head which contains the video transmitter, an RS422 Transceiver, and an integral 12" parabolic antenna
- One RF Head which contains the video receiver, and RS422 Transceiver, and an integral 12" parabolic antenna

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Sierra Digital 2423S (Synthesized)

Technical Specifications

TECHNICAL SUMMARY

Frequency Range:	24.0 to 24.25 GHz
Standard TX/RX spacing:	125MHz
RF: Channel Bandwidth: (recommended)	25 MHz
Modulation type:	2-level FSK for Data (FM for Video)
Tuning Range:	Covers full band with two (2) sets of units

(One set covers upper half, one set covers lower half)

TRANSMITTER CHARACTERISTICS

RF Source:	Crystal Controlled Synthesized Source
Maximum Allowable Power Output:	250mv/m ² measured 3 meters from the radiator/antenna (field strength)
Frequency Stability (-30°C to +70°C) ± 0.001%	
In response to interference, radios may be tuned in 5 MHz increments in the RF Head.	

RECEIVER CHARACTERISTICS

Type:	Superhetrodyne
Noise Figure (system):	6.0 dB Max
I.F. Frequencies: (dual down conversion)	2,600 MHz and 70 MHz
Video Threshold:	-88 dBm
Data Threshold:	-82 dBm
Maximum receiver input:	-15 dBm
(Damage will occur at -5 dBm)	

ANTENNA CHARACTERISTICS

Type:	Parabolic
Diameter:	12.5 inches (31.8 cm)
Polarization:	Linear
Gain (24.125 GHz):	33 dB
Front to back ratio:	42 dB
Beamwidth (3 dB)	3°

ENVIRONMENTAL CHARACTERISTICS

	OUTDOOR UNIT (No Indoor Unit Required)
Ambient temperature range:	-30° to +70° C (wider range available with Arctic modification)
Storage & transportation:	-40° to +80° C
Humidity:	up to 100% (non-condensing)

INPUT VOLTAGE REQUIREMENTS

Power input:	93 to 265 VAC
Brown-out voltage:	90 VAC
Line frequency:	50/60 Hz
Six-foot 3-prong power cord provided with indoor unit.	

TRANSMISSION DATA

At a path length of 1 mile, 10-6 BER is achieved with a fade margin of 20 dB.

POWER CONSUMPTION

Total power required per terminal:	35 Watts Maximum (70 Watts Maximum for both ends of the link)
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STATUS & DIAGNOSTICS

Diagnostic aids:	Outdoor unit; AGC test points
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FCC INFORMATION

FCC identifier:	IO8SDC-2420
FCC rules part number:	15
Frequency range:	24.0 - 24.25 GHz
Frequency tolerance:	± 0.001%

SIZE & WEIGHT

Outdoor RF Unit:	15" H x 12" D x 15" W (excluding mount)
	38cm x 30cm x 38cm Weight: 15 lbs (7.0 kg)
No Indoor Interface Unit Required	

CUSTOMER INTERFACE CONNECTIONS

Data Cabling for RS422:	9 Conductor Shielded
Data Cable Connectors:	12 Pin (mating connector furnished)
Video Cabling:	RG-59/U (75 Ohm) (Radio / Camera / Monitor)
Video Cable Connectors, In & Out	TNC

FREQUENCIES

The lower half of the band is covered by one pair of units and the upper half of the band is covered by a second pair of units. Therefore, to spare all possible frequencies would require four (4) different RF Heads.

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.



Manufactured in the USA by RAYMAR-TELENETICS

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