

Microwave: Sierra Digital Series

Applications

- ▲ Remote surveillance of parking lots, traffic intersections, gates, alternate entry points, storage facilities, and other sensitive locations or valuable resources.

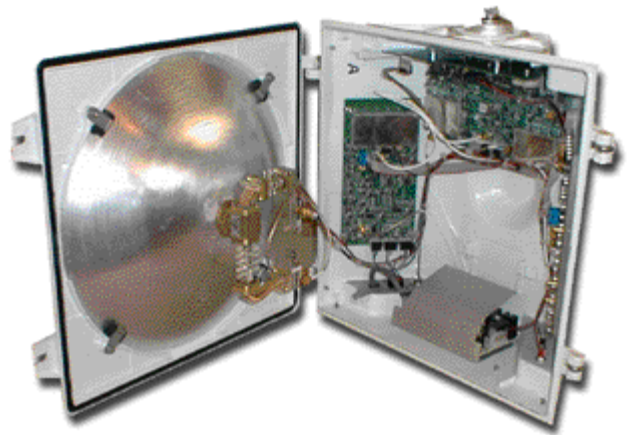
MODEL 2423S (SYNTHESIZED)

24.0-24.25 GHz MILLIMETER
WAVE RADIO LINK

VIDEO SURVEILLANCE RADIO

INTEGRAL ANTENNAS

Part 15/ISM - No License Req'd



Features & Benefits

- ▲ 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 der-rated 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.

Description

The 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 lines, 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, an RS422 Transceiver, and an integral 12" parabolic antenna.

Technical Specifications for the 2423*

ORDERING INFORMATION

Synthesized Video Surveillance Link Model 2423S (includes two (2) Duplex RS422 control channels)

OPTIONS (Consult the Factory)

- Note that standard models will accept input voltages from 93 to 265 VAC, 50/60 Hz.
- 6. ± 24 VDC
 - 7. ± 48 VDC
 - 14. Data Channels as RS232 instead of RS422.
 - 17. Arctic Mod to Operate Down to -45 C. (Increases Power Consumption)

TECHNICAL SUMMARY

Frequency Range	24.0 to 24.25 GHz
Standard TX/RX spacing	125 MHz
R.F. 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 (Damage will occur at -5 dBm)	-15 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 AND DIAGNOSTICS

Diagnostic aids	Outdoor unit; AGC test points
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FCC INFORMATION

FCC identifier	I08SDC-2420
FCC rules part number	15
Frequency range	24.0 - 24.25 GHz
Frequency tolerance	± 0.001%

SIZE AND WEIGHT

	High	Deep	Wide	Wt
Outdoor RF Unit (excluding mount)	15"	12"	15"	15 lb.
	38cm	30cm	38cm	7.0 kg

No Indoor Interface Unit Required

CUSTOMER INTERFACE CONNECTIONS

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

www.arcelect.com

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* Specifications are subject to change without notice.