

MMDS RF Heads

Point-to-Multipoint Transceivers

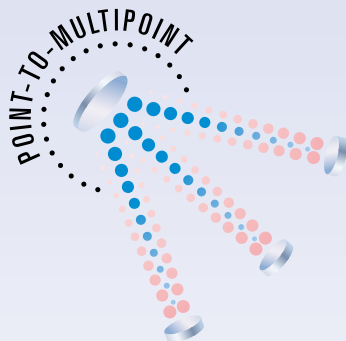


Standard Power Units

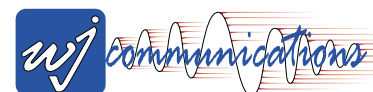
- *+26 dBm Power Output*
- *Tx in MMDS or MDS band*
- *Optional Integral Antenna*
- *Easy Installation*

High Power Units

- *+36 dBm Power Output*
- *Tx in MMDS or MDS band*
- *Single Cable Interface*
- *Rugged Construction*

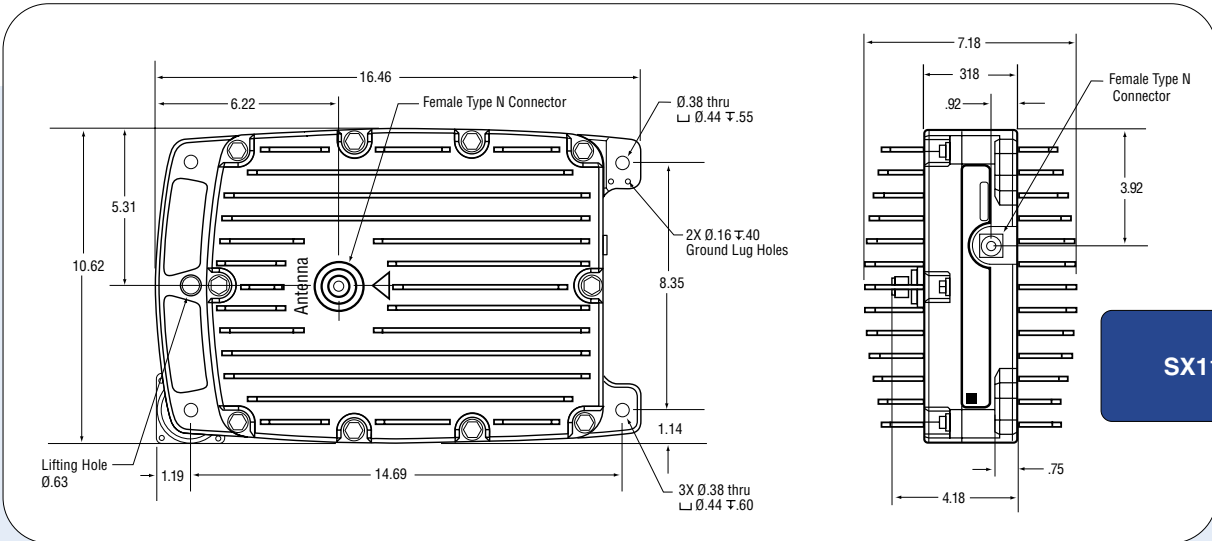


The Communications Edge™

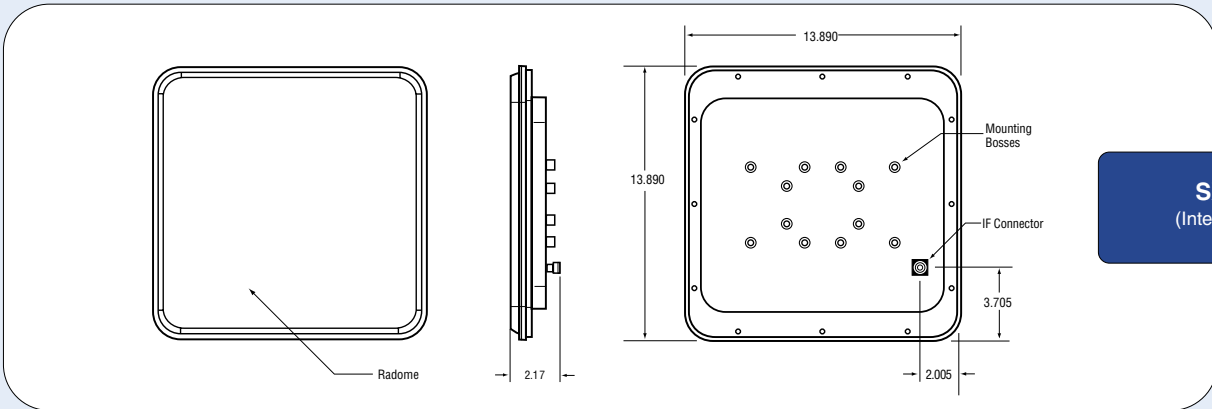


Specifications

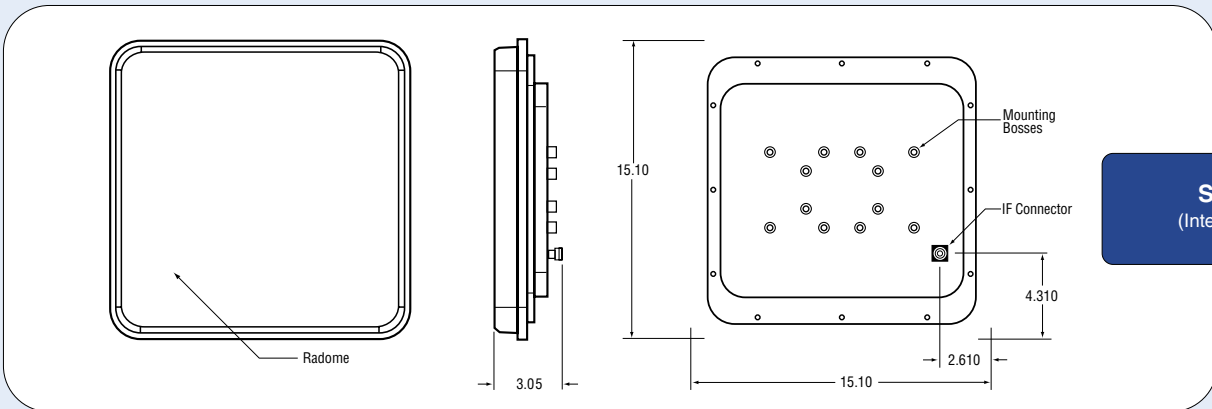
Parameter	SX1121	SX1122	SX1123	SX1124
RF Frequency				
Tx, MHz	2503-2683	2503-2683	2153-2159	2153-2159
Rx, MHz	2503-2683	2503-2683	2503-2683	2503-2683
Tx RF Output				
Power Output				
1.5 MHz BW, dBm	+24 to +28	+34 to +38	+24 to +28	+34 to +38
3.0 MHz BW, dBm	+21 to +25	+31 to +35	+21 to +25	+31 to +35
6.0 MHz BW, dBm.	+18 to +22	+28 to +32	+18 to +22	+28 to +32
Step Attenuator				
Range, dB min.	56	46	56	46
Accuracy, dB	±(2.0 +0.05* Attn)	±(2.0 +0.05* Attn)	±(2.0 +0.05* Attn)	±(2.0 +0.05* Attn)
Step size, dB	1	1	1	1
Flatness (any 6 MHz), dB (pk to pk) max.	1.0	1.0	1.0	1.0
VSWR, max.	1.5:1	1.5:1	1.5:1	1.5:1
Fixed Attenuator				
Range, dB	25 ±1	—	25 ±1	—
Spurious				
Channel edge, dBr, max	-25	-25	-25	-25
Channel edge ±250 KHz, dBr, max	-40	-40	-40	-40
Channel edge ±3 MHz, dBr, max	-60	-60	-60	-60
Tx IF Input				
Frequency, MHz	330±3	330±3	330±3	330±3
Power, dBm	-17 to -5	-17 to -5	-17 to -5	-17 to -5
Cable Compensation Attenuator				
Range, dB min.	12	12	12	12
VSWR, max.	1.5:1	1.5:1	1.5:1	1.5:1
Tx/Rx Synthesizers				
Step Size (tunes over full operating band), MHz	1.0	1.0	1.0	1.0
Frequency Accuracy, ppm	±5	±5	±5	±5
Reference Frequency, MHz	24	24	24	24
Rx IF Input				
Noise Figure (25°C), dB max.	6.0	4.0	6.0	4.0
Input Power, dBm max.	0	-30	0	-30
Flatness, dB (pk to pk), max. (any 6 MHz)	1.0	1.0	1.0	1.0
VSWR, max.	1.5:1	1.5:1	1.5:1	1.5:1
Gain, dB	32±2	32±2	32±2	32±2
Gain Control Attenuator				
Range, dB min.	25	25	25	25
Accuracy, dB max.	2.0	2.0	2.0	2.0
Gain Control Step, dB	25 ±1	—	25 ±1	—
Rx IF Output				
Frequency, MHz	426±3	426±3	426±3	426±3
VSWR, max.	1.5:1	1.5:1	1.5:1	1.5:1
Spurious, dBm max	-103	-103	-103	-103
DC Input Power				
Voltage (24V nominal), V	18 to 30	—	18 to 30	—
Current, A, max.	2.2	—	2.2	—
DC Power, W, Max	40	—	40	—
Voltage (-48V nominal), V	—	-36 to -60	—	-36 to -60
Current, A, max	—	6.1	—	6.1
DC Power, W, max	—	220	—	220
RF Duplexer				
Tx BW, MHz, max	60	60	60	60
Rx BW, MHz, max	60	60	60	60
Tx/Rx Separation, MHz, min	24	24	24	24
Serial Communications Channel (Modem)				
Center Frequency, KHz	750	750	750	750
Bandwidth, KHz	300	300	300	300
Input Level, dBm, min	-3	-3	-3	-3
Transmitter Blanking Signal				
Center Frequency, MHz	48	48	48	48
Input Level, -on, dBm	0 to -10	0 to -10	0 to -10	0 to -10
Input Level, -off, dBm	-10 to -36	-10 to -36	-10 to -36	-10 to -36
Miscellaneous				
Temperature Indicator, °C	-40 to +100	-40 to +100	-40 to +100	-40 to +100
PLL Lock Detect	Provided	Provided	Provided	Provided
Operating Temperature Range, °C	-40 to +60	-40 to +60	-40 to +60	-40 to +60
EMI Compliance	FCC Part 15	FCC Part 15	FCC Part 15	FCC Part 15
Safety	CUL/CSA, US/Canada	CUL/CSA, US/Canada	CUL/CSA, US/Canada	CUL/CSA, US/Canada
Enclosure	Type 4	Type 4	Type 4	Type 4
RF, IF Connectors	N-type	N-type	N-type	N-type



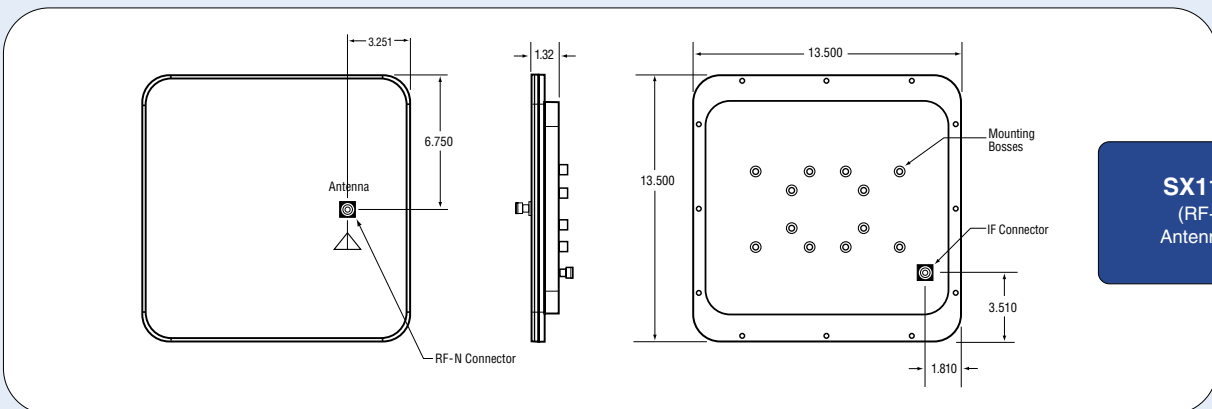
SX1122, SX1124



**SX1121A,
(Integral Antenna)**



**SX1123A,
(Integral Antenna)**



**SX1121, SX1123
(RF-N Connector,
Antenna not included)**

MMDS RF Outdoor Units, Point-to-Multipoint ODU

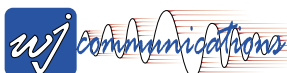
Ordering Information		
WJ Model No.	Description	
SX1121	MMDS RF Head, Standard Power	
SX1121A	MMDS RF Head, Standard Power with Integral Antenna	
SX1123	MMDS/MDS RF Head, Standard Power	
SX1123A	MMDS/MDS RF Head, Standard Power with Integral Antenna	
SX1122	MMDS RF Head, High Power	
SX1124	MMDS/MDS RF Head, High Power	
Antenna Information		
Antenna (Optional)	SX1121A	SX1123A
Gain, dBi	18.5 ±0.5	18 ±1
Sidelobe, dB, min.	23	22
Front to back, dB, min.	25	24
VSWR, min.	1.5: 1	1.5: 1
Beamwidth	18.5 - 20°	16 - 20°

- Notes:
1. Please consult WJ Communications for Duplexer Options.
 2. Each unit includes an integral duplexer and mounting kit.
 - MK1001 - *mounting kit for SX1122, SX1124*
 - MK1002 - *mounting kit for units with integral antenna: SX1121A, SX1123A*
 - MK1003 - *mounting kit for units without integral antenna: SX1121, SX1123*

Specifications and information are subject to change without notice.



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