

3.5 GHz RF Heads

Point-to-Multipoint Transceivers

PRELIMINARY

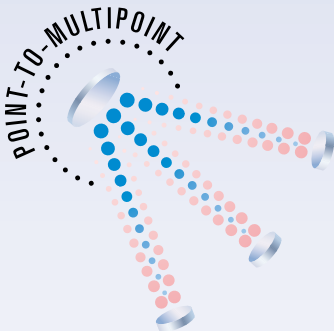


Standard Power Unit

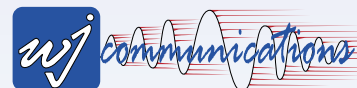
- *+23 dBm Power Output*
- *Band Specific Duplexers*
- *Integral Antenna*
- *Easy Installation*

High Power and Headend Units

- *+32 dBm Power Output*
- *Band Specific Duplexers*
- *Single Cable Interface*
- *Rugged Construction*



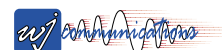
The Communications Edge™



3.5GHz RF Heads

Point-to-Multipoint Transceivers

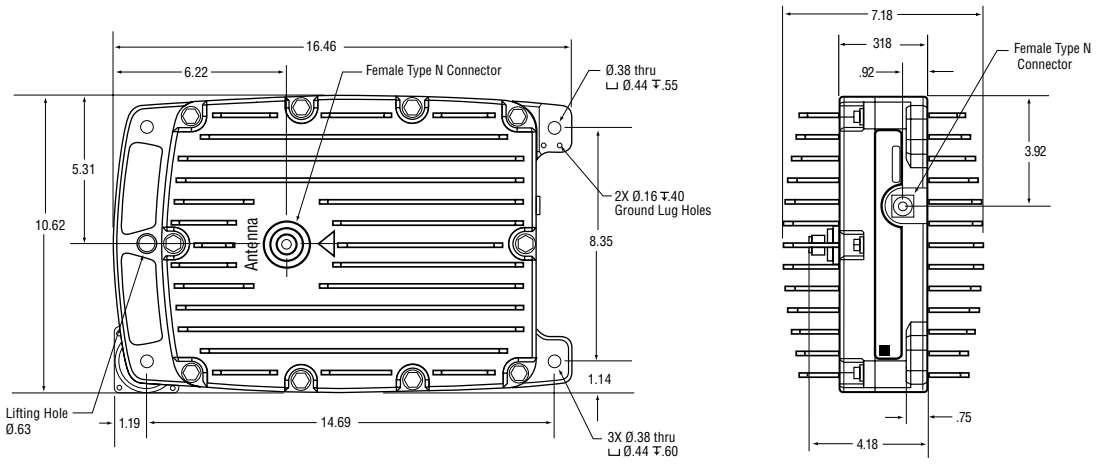
www.wj.com



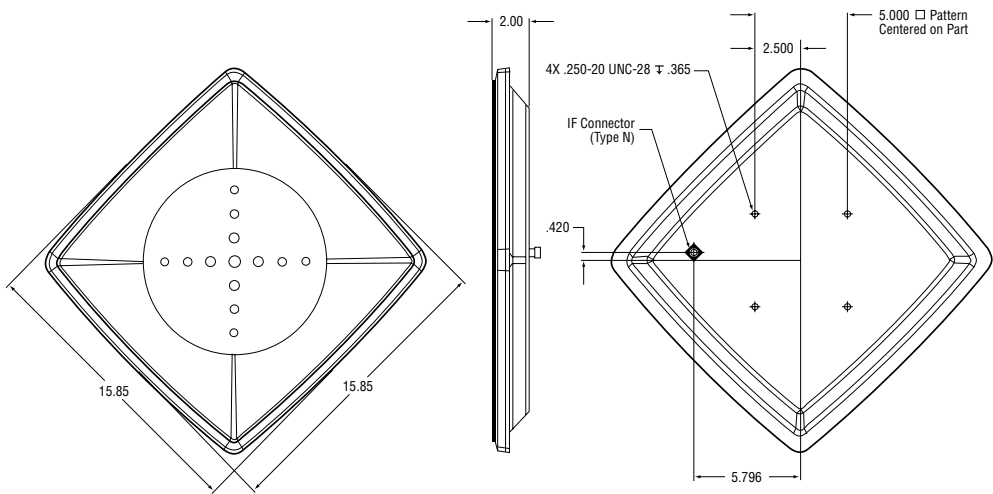
Specifications

Parameter	SX1160	SX1161	SX1162
Description	Standard Power ODU	High Power ODU	Headend
RF Frequency			
Tx, MHz	3403.5-3596.5	3403.5-3596.5	3403.5-3596.5
Rx, MHz	3403.5-3596.5	3403.5-3596.5	3403.5-3596.5
Tx RF Output			
Power Output			
1.5 MHz BW, dBm	+21 to +25	+31 to +35	+6 to +32
3.0 MHz BW, dBm	+18 to +22	+31 to +35	+6 to +32
6.0 MHz BW, dBm.	+15 to +17	+28 to +32	+6 to +32
Step Attenuator			
Range, dB min.	55	43	—
Accuracy, dB	±(2.0 +0.05* Attn)	±(2.0 +0.05* Attn)	±1.0 at 32 dBm (25°C)
Step size, dB	1	1	1
Flatness (any 6 MHz), dB (pk to pk) max.	1.0	1.0	1.0
VSWR, max.	1.5:1	1.5:1	1.7:1
Fixed Attenuator			
Range, dB	25 ±1	—	—
Spurious			
1.2 MHz offset for 1.75 MHz Channel, dBr	-32	-32	-32
2.2 MHz offset for 1.75 MHz Channel, dBr	-37	-37	-37
4.8 MHz offset for 1.75 MHz Channel, dBr	-50	-50	-50
Tx IF Input			
Frequency, MHz	330±3	330±3	330±3
Power, dBm	-17 to -5	-17 to -5	-17 to -5
Cable Compensation Attenuator			
Range, dB min.	12	12	12
VSWR, max.	1.5:1	1.5:1	2.5:1
Tx/Rx Synthesizers			
Step Size, MHz	0.5	0.5	0.5
Frequency Accuracy, ppm	±5	±5	±5
Reference Frequency, MHz	24	24	24
Rx IF Input			
Noise Figure (25°C), dB max.	6.0	4.0	5.3
Input Power, dBm max.	0	-30	-40
Flatness, dB (pk to pk), max. (any 6 MHz)	1.0	1.0	1.5
VSWR, max.	1.5:1	1.5:1	1.7:1
Gain, dB	32±2	32±2	30-36
Gain Control Attenuator			
Range, dB min.	25	25	—
Accuracy, dB max.	2.0	2.0	—
Gain Control Step, dB	25 ±1	—	—
Rx IF Output			
Frequency, MHz	426±3	426±3	426±3
VSWR, max.	1.5:1	1.5:1	2.5:1
Spurious, dBm max	-103	-103	-103
DC Input Power			
Voltage (24V nominal),V	18 to 30	—	—
Current, A, max.	2.2	—	—
DC Power, W, Max	40	—	—
Voltage (-48V nominal), V	—	-36 to -60	-36 to -60
Current, A, max	—	6.1	6.5
DC Power, W, max	—	220	235
RF Duplexer			
Tx BW, MHz, max	17.5-50	17.5-50	10-50
Rx BW, MHz,max	17.5-50	17.5-50	10-50
Tx/Rx Separation, MHz, min	32.5-67.5	32.5-67.5	25-67.5
Serial Communications Channel (Modem)			
Center Frequency, KHz	750	750	750
Bandwidth, KHz	300	300	300
Input Level, dBm, min	-3	-3	-3
Transmitter Blanking Signal			
Center Frequency, MHz	48	48	48
Input Level, -on, dBm	0 to -10	0 to -10	0 to -10
Input Level, -off, dBm	<-36	<-36	<-30
Miscellaneous			
Temperature Indicator, °C	-40 to +100	-40 to +100	-40 to +100
PLL Lock Detect	Provided	Provided	Provided
Operating Temperature Range, °C	-40 to +60	-40 to +60	-40 to +60
EMI Compliance	ETSI EN 300-385, EN 301-021	ETSI EN 300-385, EN 301-021	ETSI EN 300-385, EN 301-021
Safety	IEC 60950	IEC 60950	IEC 60950
Enclosure	Type 4	Type 4	Type 4
RF, IF Connectors	N-type	N-type	N-type

SX1161, SX1162



SX1160



3.5 GHz RF Outdoor Units, Point-to-Multipoint ODU

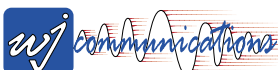
Ordering Information	
WJ Model No.	Description
SX1160	3.5 GHz RF Head, Standard Power with Integral Antenna
SX1161	3.5 GHz RF Head, High Power
SX1162	3.5 GHz RF Head, Headend
Antenna Information	
Antenna (Optional)	SX1160
Gain, dBi	19.0
Cross Polar, dBi, min.	20
Front to back, dB, min.	28
VSWR, min.	1.5:1
Beamwidth	15.5

- Notes:
1. Please consult WJ Communications for Duplexer Options.
 2. Each unit includes an integral duplexer and mounting kit.
 - MK1001 - *mounting kit for SX1161, SX1162*
 - MK1002 - *mounting kit for units with integral antenna: SX1160*

Specifications and information are subject to change without notice.



The Communications Edge™



WJ COMMUNICATIONS, INC. • 401 River Oaks Parkway • San Jose, CA 95134-1916 • www.wj.com