

3.5 GHz RF Heads

Point-to-Multipoint Transceivers

PRELIMINARY

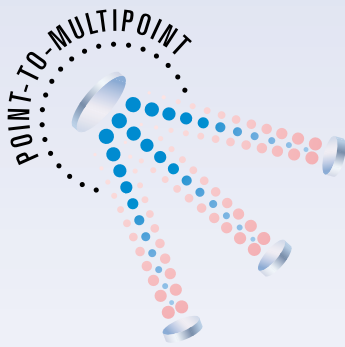
Standard Power Unit

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

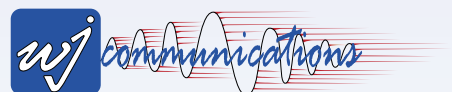


High Power and Headend Units

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

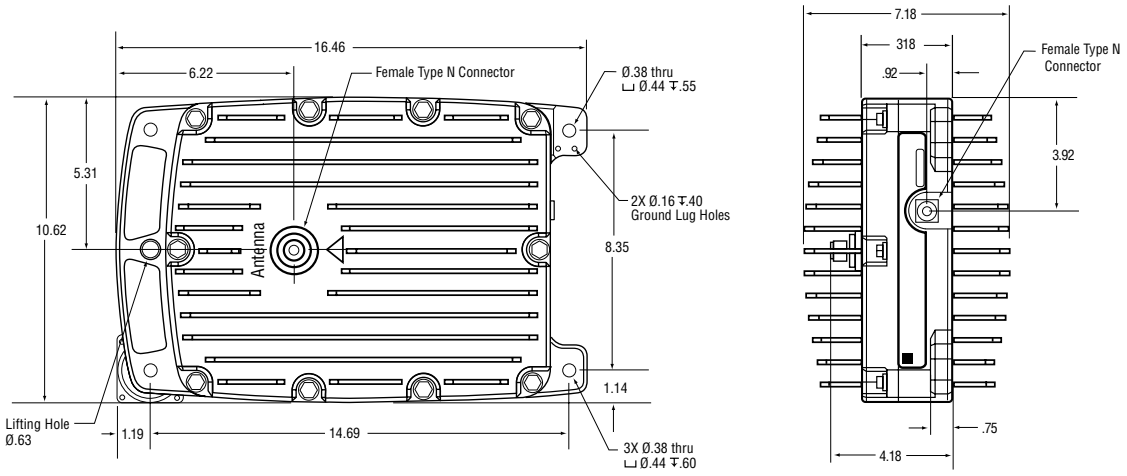


The Communications Edge™

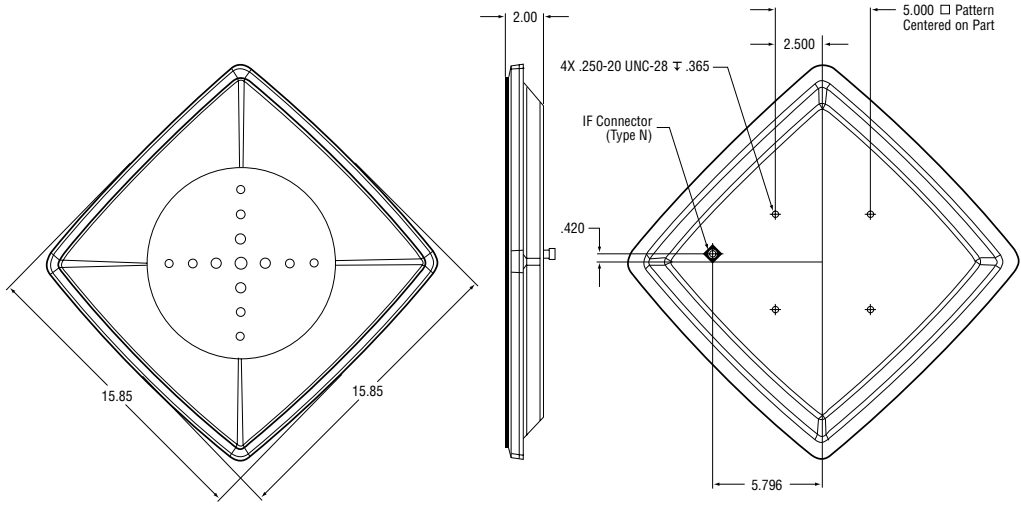


| Specifications | | | |
|--|-----------------------------|-----------------------------|-----------------------------|
| Parameter | SX1160 | SX1161 | SX1162 |
| Description | Standard Power ODU | High Power ODU | Headend |
| RF Frequency | | | |
| Tx, MHz | 3403.5-3596.5 | 3403.5-3596.5 | 3403.5-3596.5 |
| 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

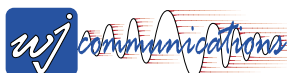
| Ordering Information | |
|-------------------------|---|
| WJ Model No. | Description |
| SX1160 | 3.5 GHz RF Head, Standard Power with Integral Antenna |
| SX1161 | 3.5 GHz RF Head, High Power |
| SX1162 | 3.5 GHz RF Head, Headend |
| Antenna Information | |
| Antenna (Optional) | SX1160 |
| Gain, 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™



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