

**LNBK, Ku-Band
 1:2 Redundant
 LNB Plate Assembly**



RCP2-1200 Redundant Controller

DESCRIPTION

The LNB Series Low Noise Block Down Converter Systems provide the ultimate system reliability by providing complete back up operation. The LNB series redundant system utilizes the RCP2-1100 redundant controller to provide fault detection and switchover in the event of a Low Noise Block Down Converter failure.

Teledyne Paradise Datacom can provide dual 1:1 redundant systems, 1:2 redundant systems, and a wide variety of custom systems. The outdoor equipment consists of the switch plate assembly and the Low Noise Block Down Converters and associated components. The controller provides complete visual indication of switch position, fault detection, and system status.

FEATURES

- Reliable, weather sealed outdoor equipment
- Manual or Automatic Switchover on fault
- 1 Rack Unit high indoor controller
- 1:1 or 1:2 system configurations
- Standard 100 ft. (30m) control cable
- Universal input AC power supply on controller
- LNB bias supplied by indoor controller

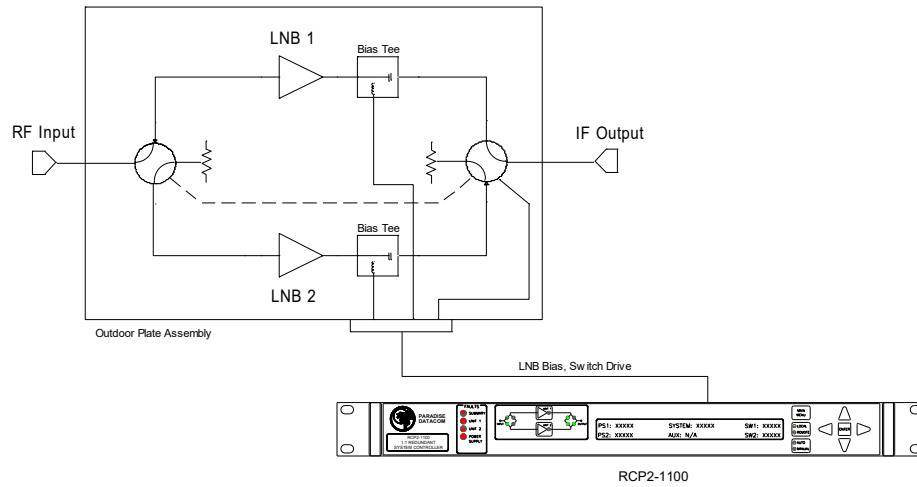
OPTIONS

- TX Reject Filters
- Offline Input Coupler
- Internal or External reference
- Offline & Test Ports
- Custom frequency bands

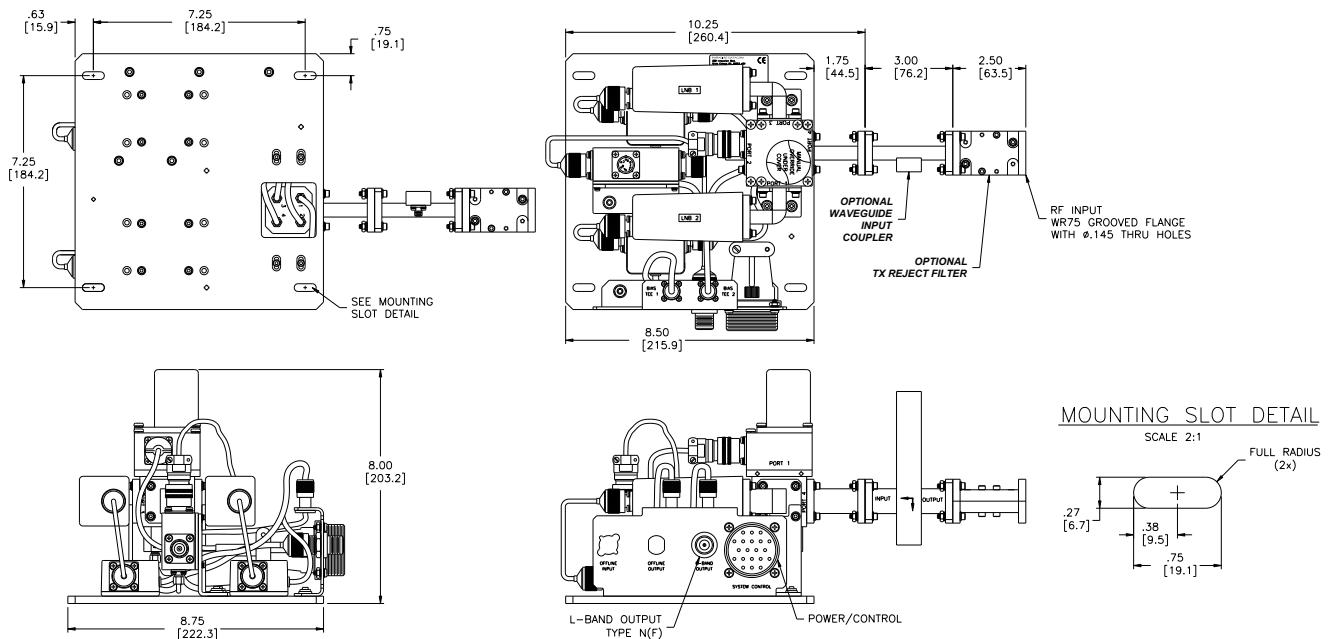
SPECIFICATIONS

- IF Output Frequency:
 950-1750 MHz C-Band;
 950-1450 MHz X-Band;
 950-1450 MHz Ku-Band
- Conversion Gain: 55-70 dB
- Input/Output VSWR: 2.2:1
- Spurious: -50 dBc
- Input Power (+15 to +24 VDC):
 350 mA max C-Band;
 200 mA max Ku-Band
- Output Power (P1dB):
 +5 dBm C-Band;
 +5 dBm X-Band;
 +5 dBm Ku-Band

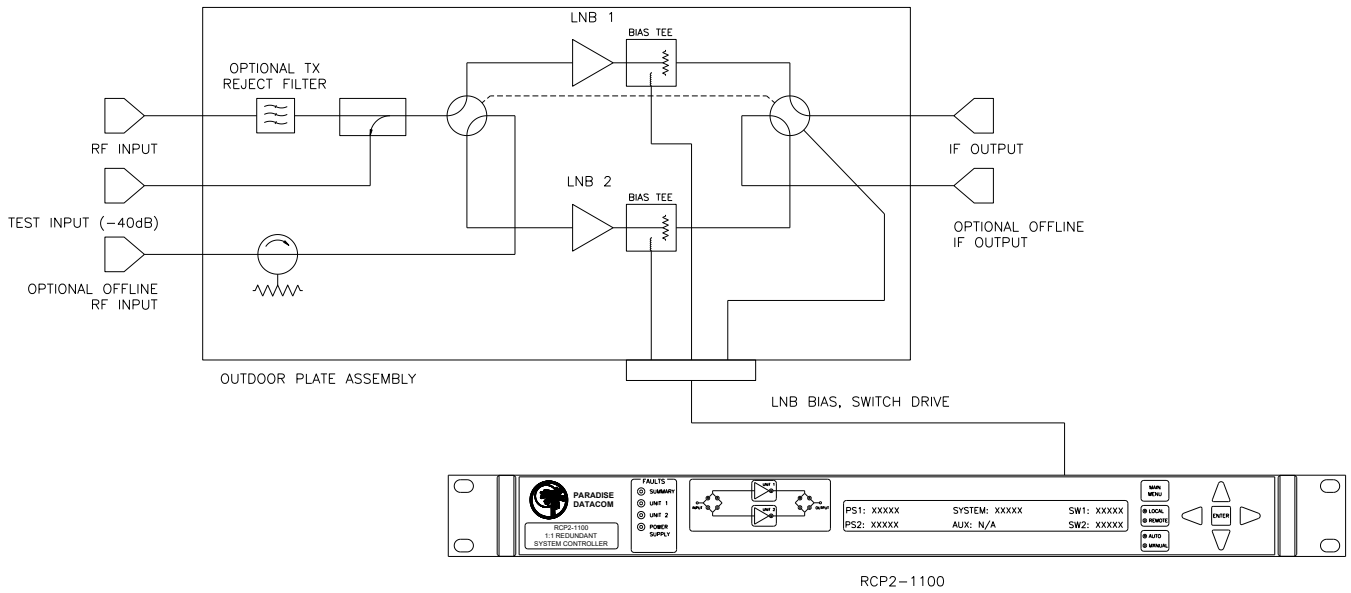
Typical System Block Diagrams



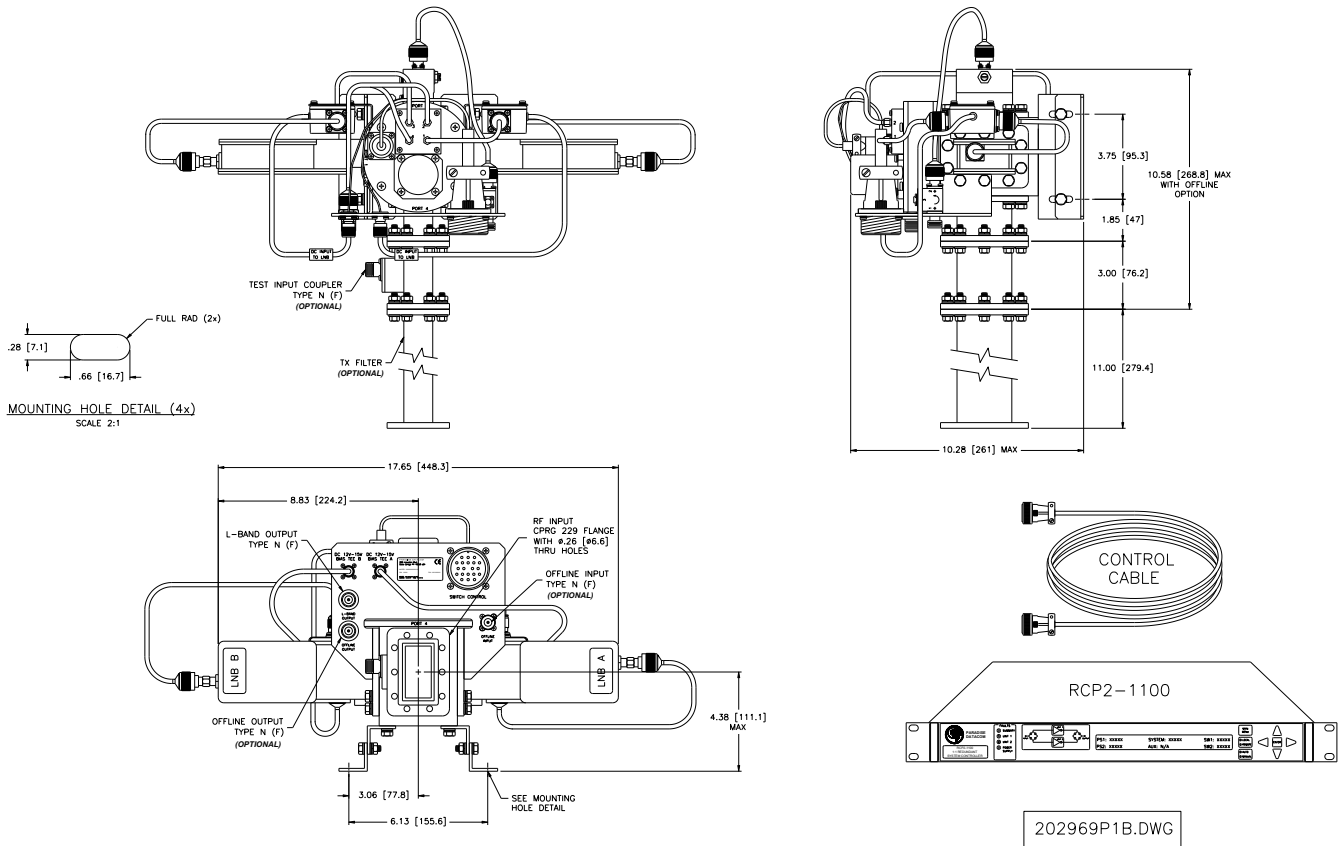
Standard 1:1 Redundant System, with output switching



Ku-Band 1:1 Redundant LNB Plate Assembly

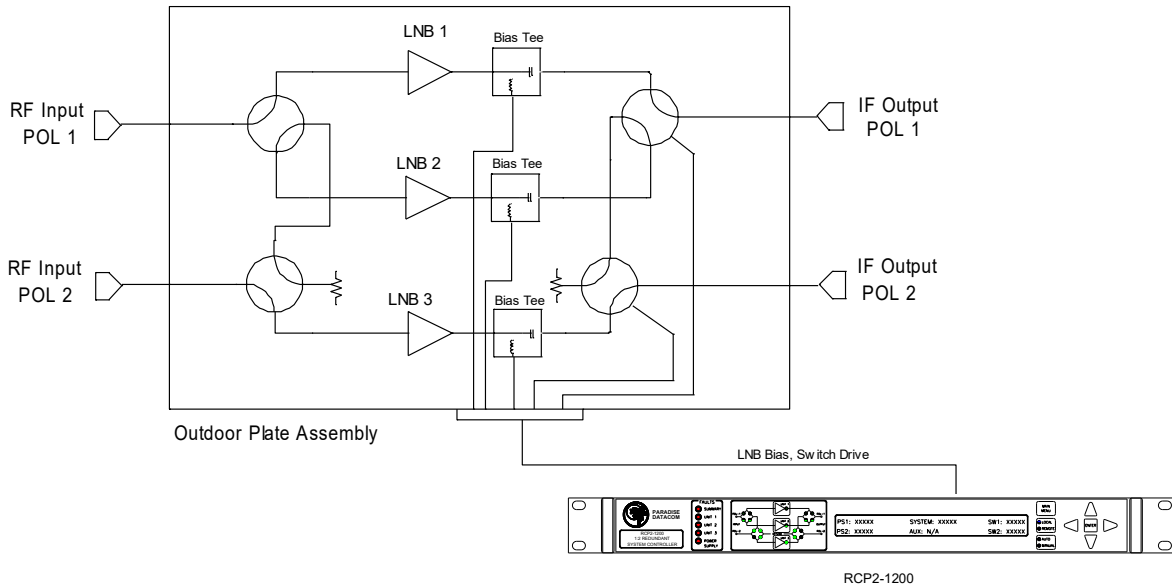


1:1 LNB System with optional test input port, offline ports, TX reject filter, and output switching

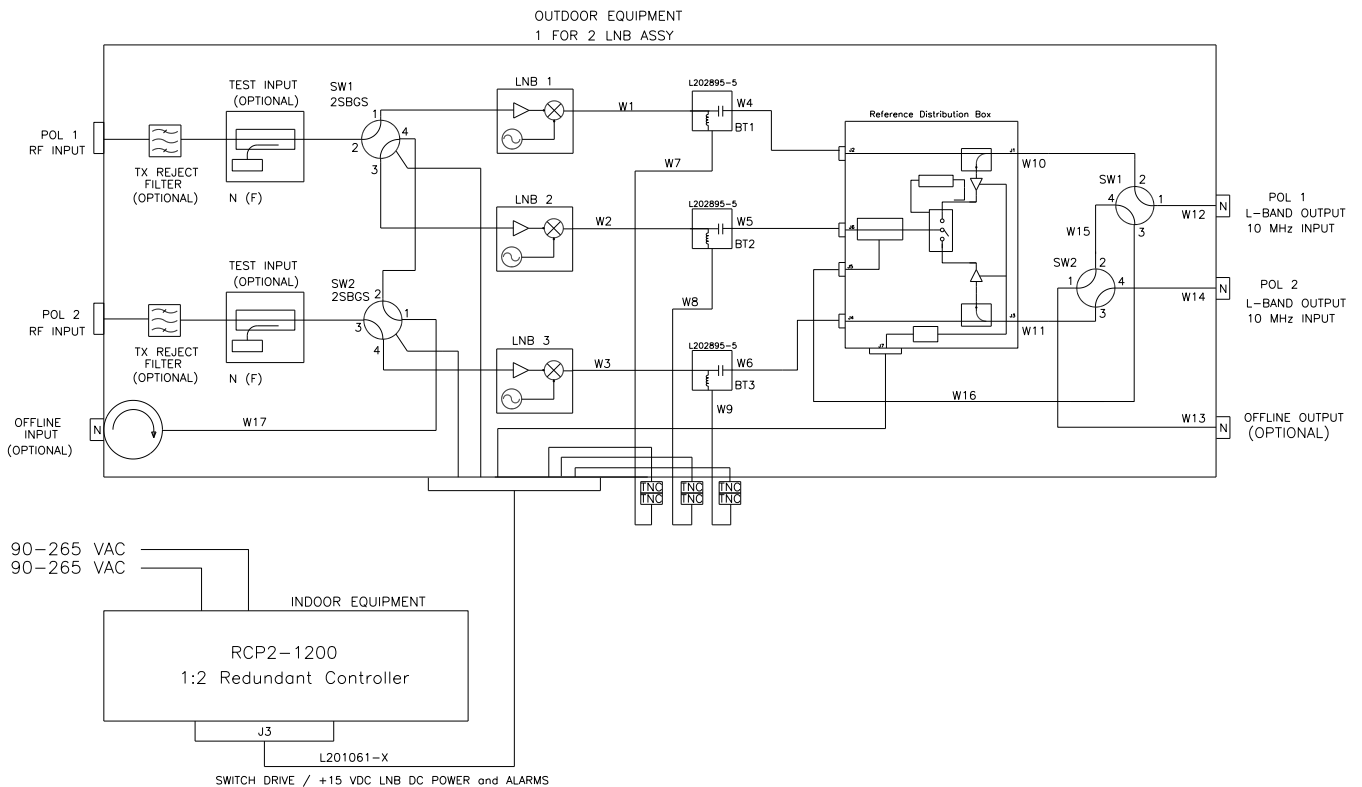


C-Band 1:1 Redundant LNB System with RCP2-1100 and control cable

Typical System Block Diagrams

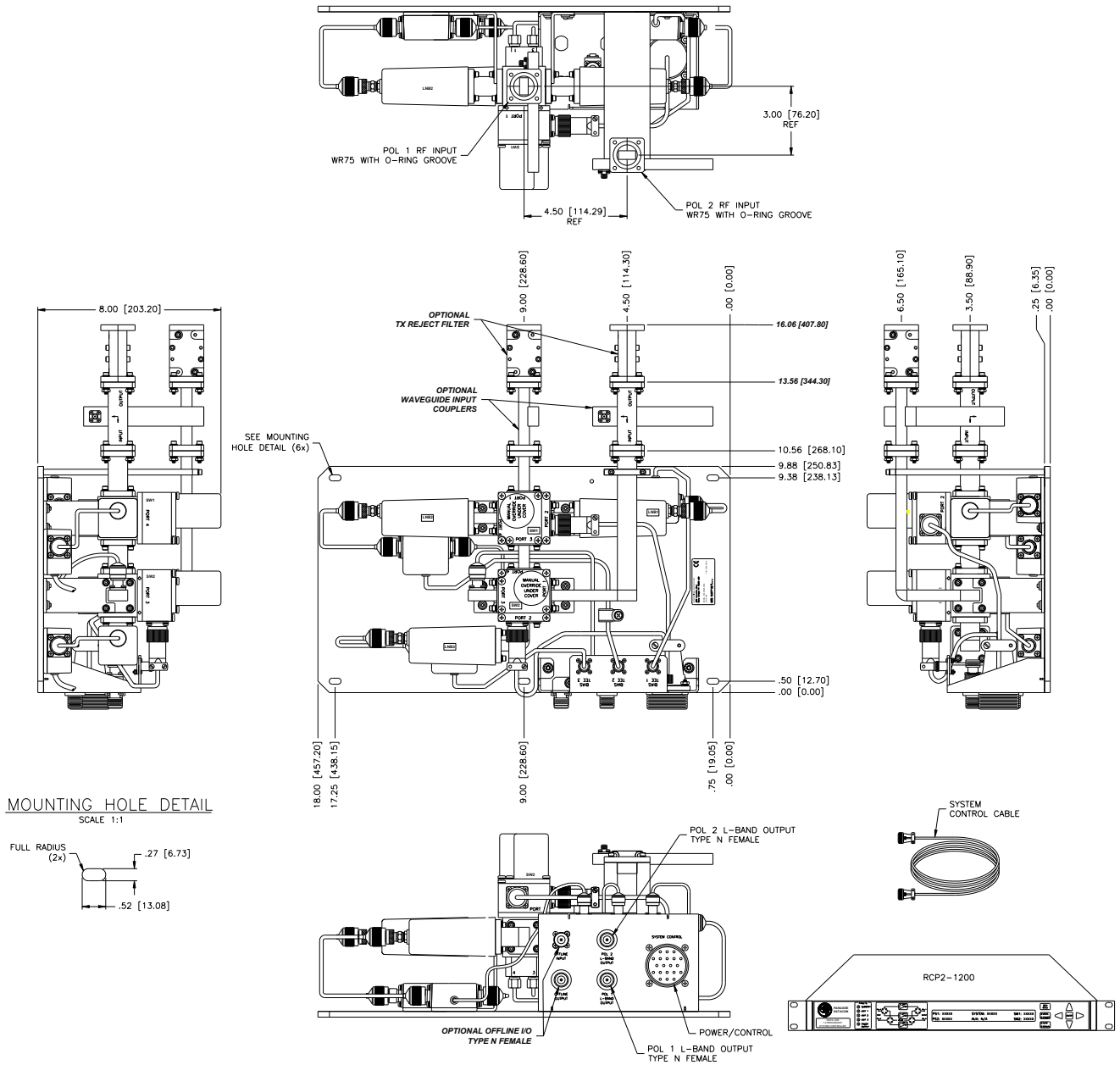


Standard 1:2 Redundant System, shown with output switching

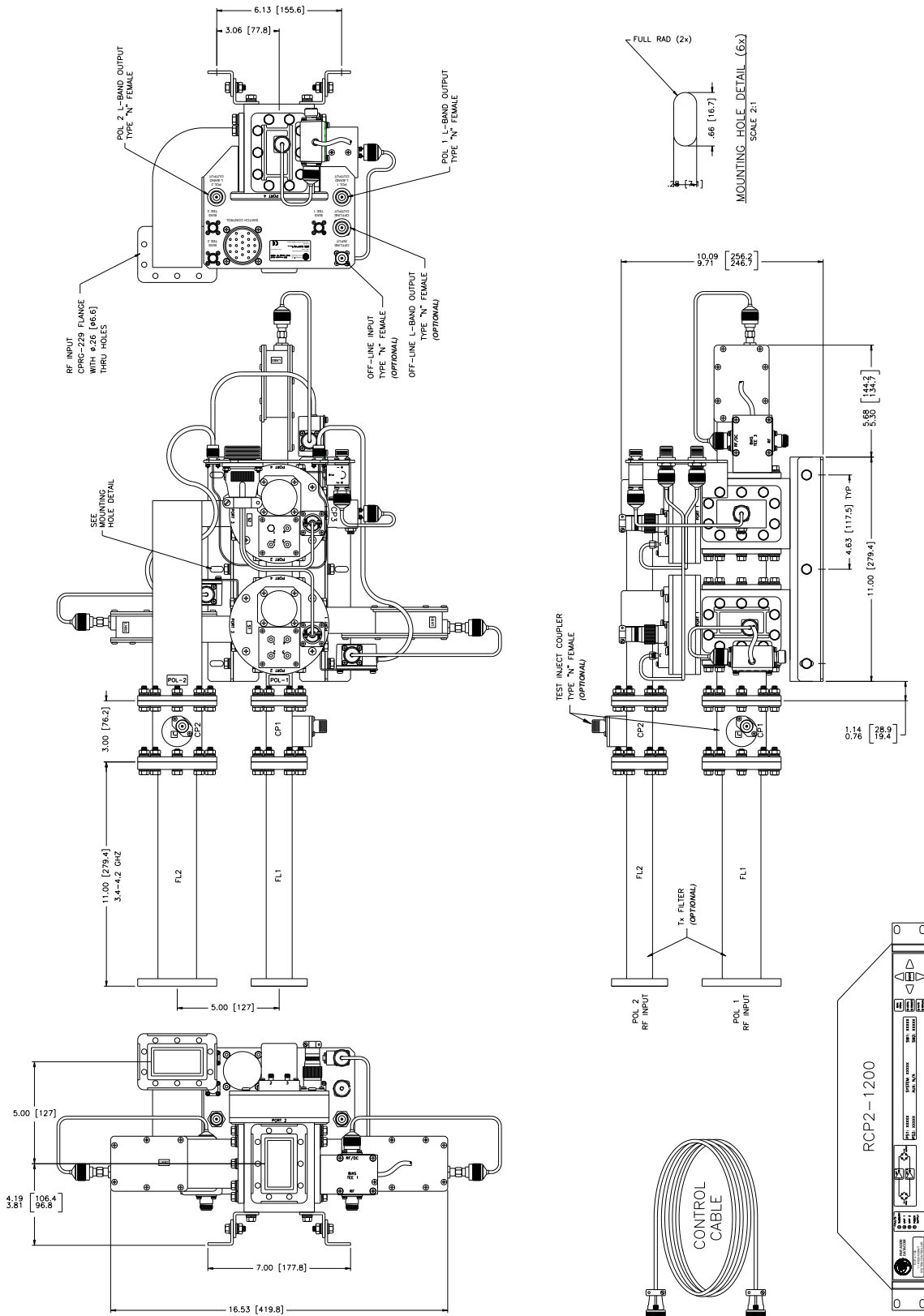


1:2 Redundant System, shown with RCP2-1200 controller, reference distribution box, optional Offline Input & Output, optional Tx Reject Filter and optional Test Input

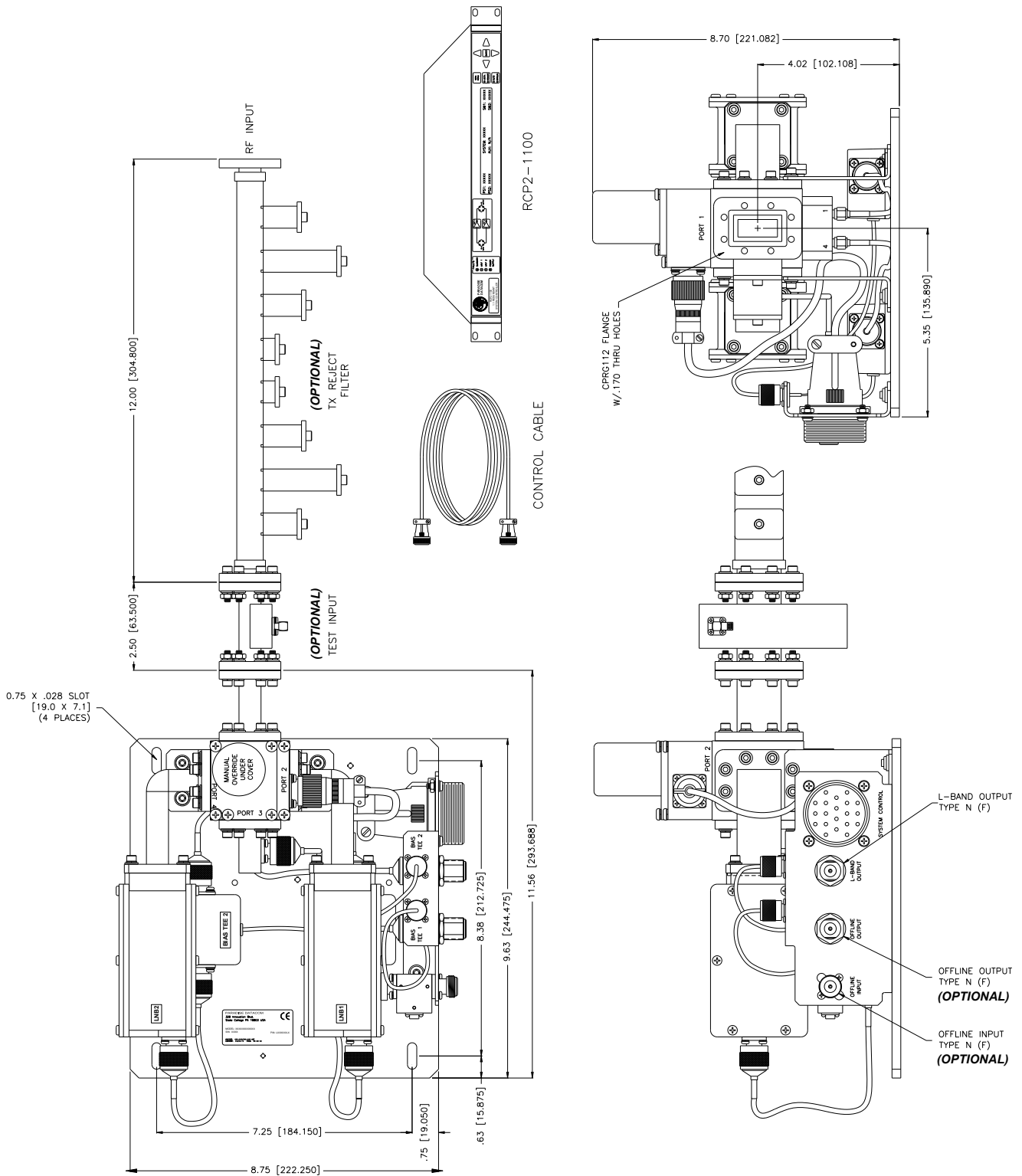
Typical Outline Drawing



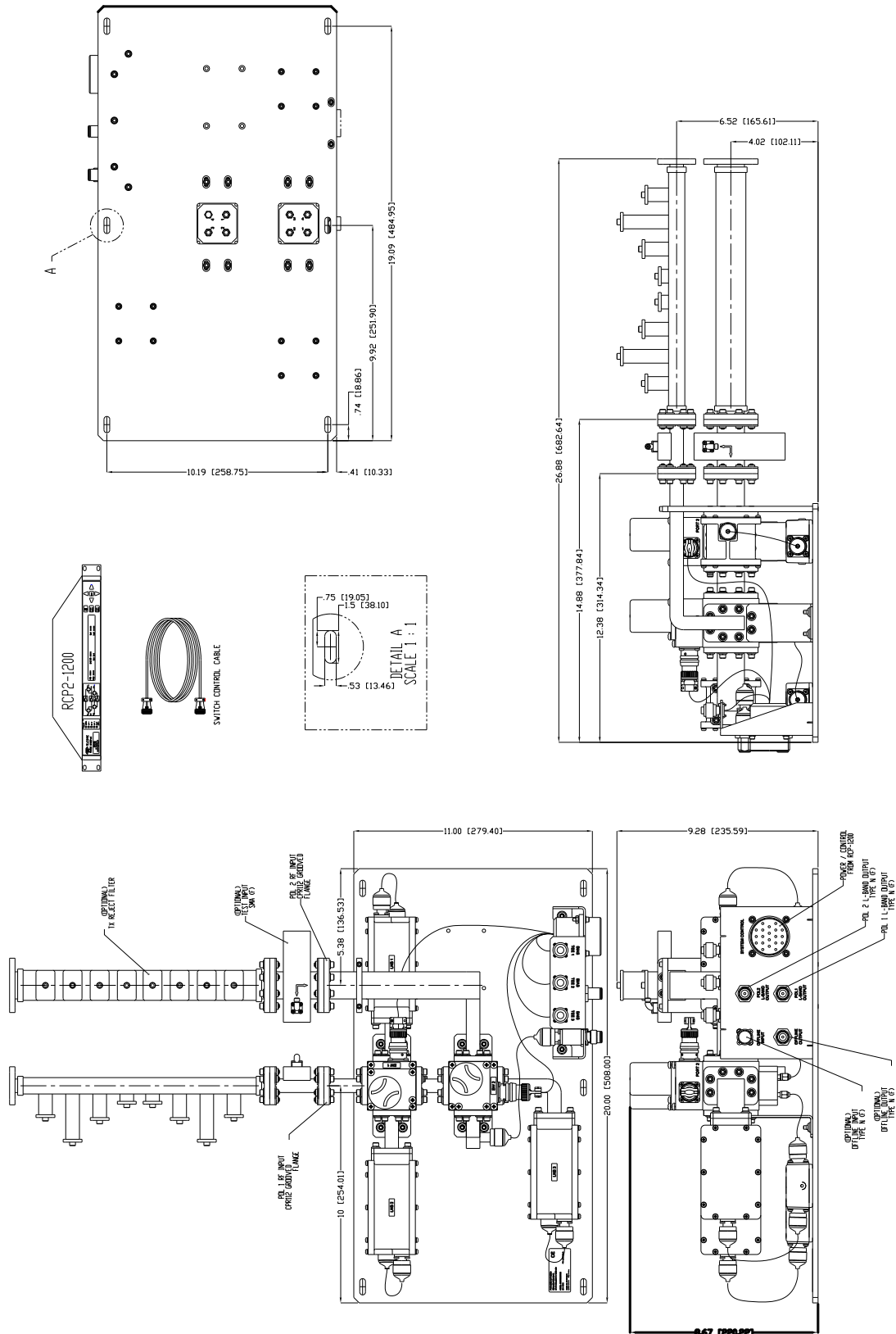
Ku-Band 1:2 Redundant LNB with RCP2-1200 and control cable



C-Band 1:2 Redundant LNB System with RCP2-1200 and control cable



X-Band 1:1 Redundant LNB with RCP2-1100 and control cable



X-Band 1:2 Redundant LNB System with RCP2-1200 and control cable

Typical LNB Specifications

| PARAMETER | C-Band | X-Band | Ku-Band | Ka-Band |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| IF Output Frequency | 950-1750 MHz | 950-1450 MHz | 950-1450 MHz | 950-1950 MHz |
| Input Waveguide/Flange | CPR-229 Grooved | WR-112 Grooved | WR-75 Grooved | WR-42 Grooved |
| Output Connector Internal Reference LNB External Reference LNB | Type N female Type N female | Type N female Type N female | Type N female Type N female | Type N female Type N female |
| RX Noise Figure (typical) | 25 K | 0.7 dB | 0.7 dB | 1.4 dB |
| LNB Conversion Gain, 60dB typical | 55-70 dB | 55-70 dB | 55-70 dB | 56 dB |
| Gain Flatness (any 40 MHz band) | ± 0.5 dB | ± 0.55 dB | ± 1.5 dB pp | ±0.5 dB |
| Output Power, P _{1dB} | +5 dBm | +5 dBm | +5 dBm | +5 dBm |
| Input / Output VSWR | 2.2:1 | 2.0:1 | 2.5:1 / 2.2:1 | 2.2:1 / 2.0:1 |
| Output Third Order Intercept | +15 dBm | +15 dBm | +15 dBm | +15 dBm |
| Image Rejection | 40 dB | 45 dB | 50 dB | 45 dB minimum 60 dB typical |
| Group Delay Variation (any 40 MHz band) | < 10 ns | < 30 ns | < 30 ns | < 1 ns |
| Spurious | -50 dBc | -50 dBc | -50 dBc | -50 dBc |
| Typical Phase Noise | 100 Hz | -60 dBc /Hz | -60 dBc /Hz | -60 dBc/Hz |
| | 1 KHz | -75 dBc/Hz | -75 dBc/Hz | -65 dBc/Hz |
| | 10 KHz | -80 dBc/Hz | -85 dBc /Hz | -80 dBc/Hz |
| | 100 KHz | -90 dBc/Hz | -95 dBc /Hz | -95 dBc/Hz |
| Input Power, +15 to +24 VDC | 350 mA max | 230 mA max | 200 mA max | 300 mA max |

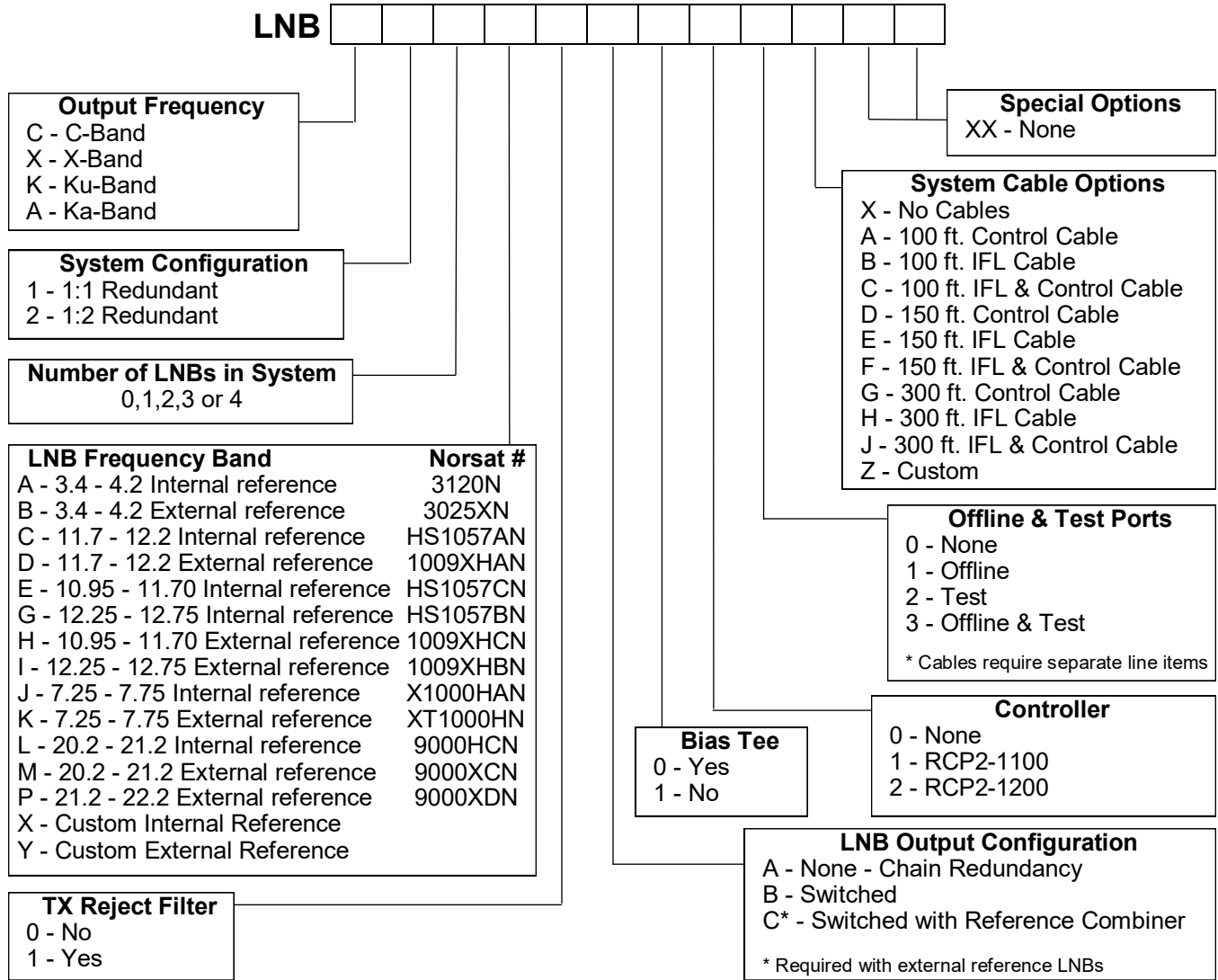
OEM LNB Operation

Teledyne Paradise Datacom LNB systems are configured with OEM LNBs, which are powered by +15 VDC current through the control cable, provided via the RCP redundant controller (if ordered with the system).



OEM C-Band LNB

Model Number Configuration



Example: A 1:1 C-Band chain redundant system with two internally referenced LNBs, optional TX reject filter, bias tees, with a RCP2-1100 controller and 100 ft. control cable; the part number is:
LNBC12A1A010AXX

COMMENTS:

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