

^ 1:1 X-Band LNA Compatible Plate Assembly

Description

At the heart of all Paradise Datacom redundant LNA systems are the field-proven low noise amplifier product lines.

Available in all common X-Band frequencies, and offering state-of-the-art noise temperature performance, these LNAs can be configured for use in 1:1, 1:2 and custom redundant systems.

System monitoring and control is provided through the microprocessor-based RCP2-1100 and RCP2-1200 redundant control panels.

LNA plate assemblies are designed for convenient integration into any antenna hub or facility with RF and user interfaces readily accessible.

Common feed interfaces are offered as standard and isolation is provided at all RF interfaces. A range of RF hardware options and custom plate configurations are offered to meet specific system requirements.

LNA PLATE

- Compact plate assemblies facilitate convenient antenna hub mounting
- Standard feed orientations
- State-of-the-art noise temperatures provided by Paradise Datacom LNAs
- All LNAs contain integral RF isolators

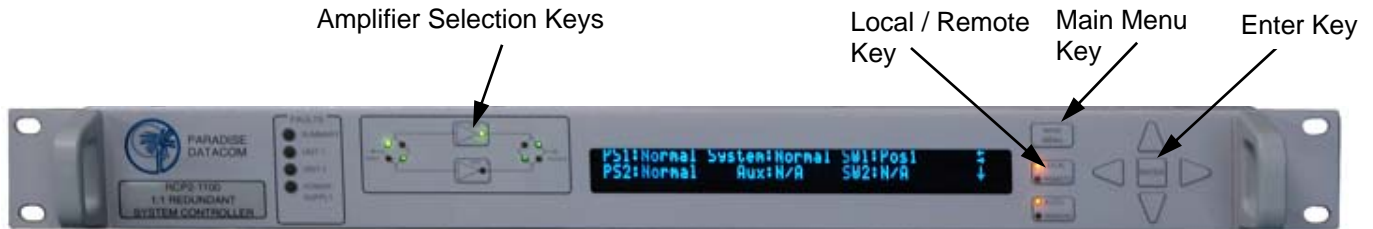
CONTROL PANEL

- User-friendly M&C provided locally as well as through a standard serial I/O (RS232, RS485 or optional Ethernet interfaces)
- Auto-ranging redundant power supplies: 85-264 VAC @ 47 to 63 Hz
- High system level reliability

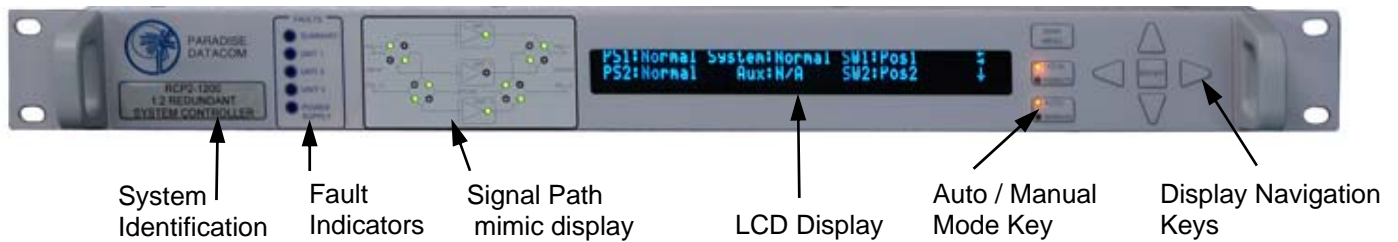
OPTIONS

- LNB Redundant Systems
- Transmit-band Reject Filter
- Off-line RF I/O
- Waveguide Test Inject Input Coupler
- Coaxial Output Coupler
- Custom LNA Plate Configurations
- -48 VDC Operation
- Remote Control Panels

RCP2-1100 Front Panel Overview; used with 1:1 Redundant Systems



RCP2-1200 Front Panel Overview; used with 1:2 Redundant Systems



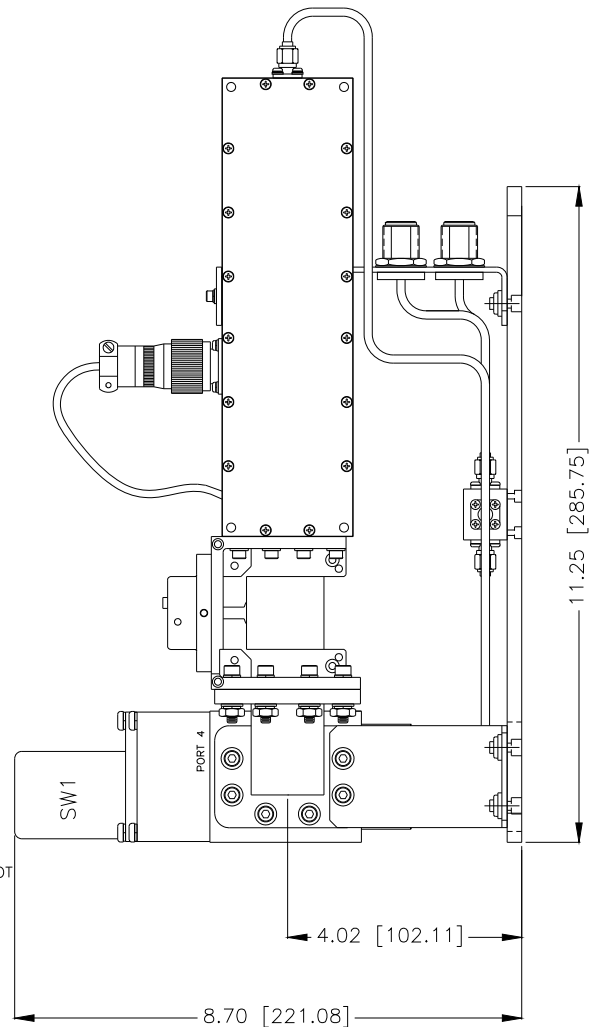
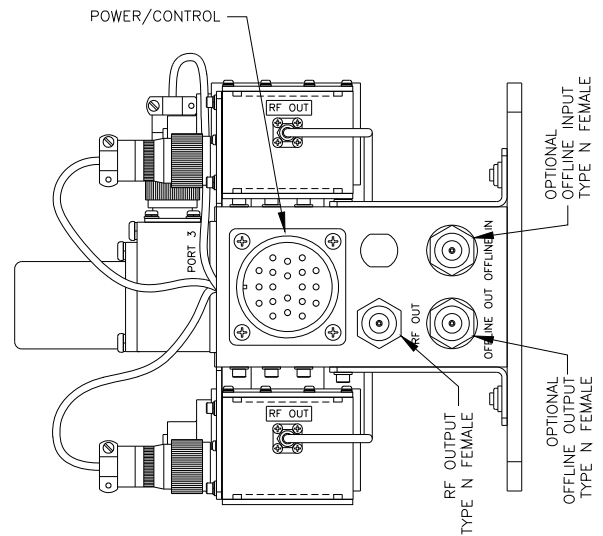
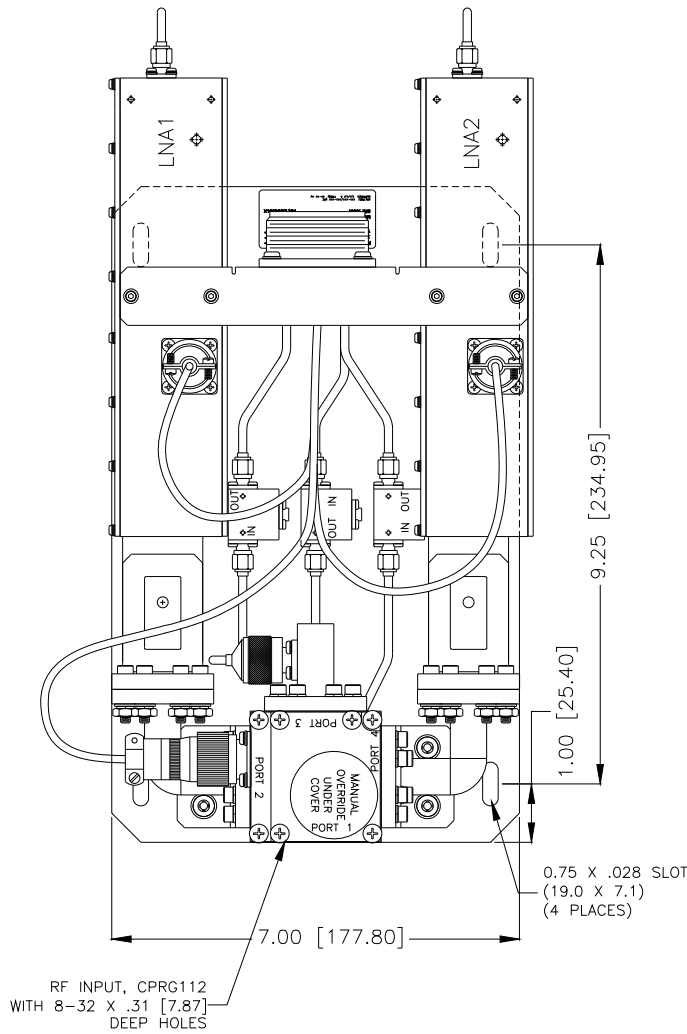
RCP2-1100/1200 Rear Panel



RCP2-1100/1200 General Specifications

| Characteristic | Specification |
|--------------------------------------|--|
| Configurations | RCP2-1100 ; 1:1 Redundant System RCP2-1200; 1:2 Redundant System |
| Switch Time | Fault Detection, 20 - 50 msec Total Switchover (including mechanical switch) - 100 msec maximum |
| Switch Drive | 26 VDC @ 5 Amps |
| Alarm Input | Closure to Ground, (Ground=OK / Open=Fault) |
| Serial Communication | RS-232 / RS-485 4 wire / Ethernet |
| Parallel I/O | |
| Status Outputs | Form C Relay Contacts (10 sets) |
| Control Inputs | Contact Closure to Ground |
| AC Input Power | 85-265 VAC, 47-63 Hz, 1 A max, > 0.93 power factor |
| DC Input Power (48 VDC Input Option) | 36-72 VDC, Maximum DC Input current @ 48V - 2 Amps |

X-Band 1:1 LNA Compatible Plate Outline



System level equipment

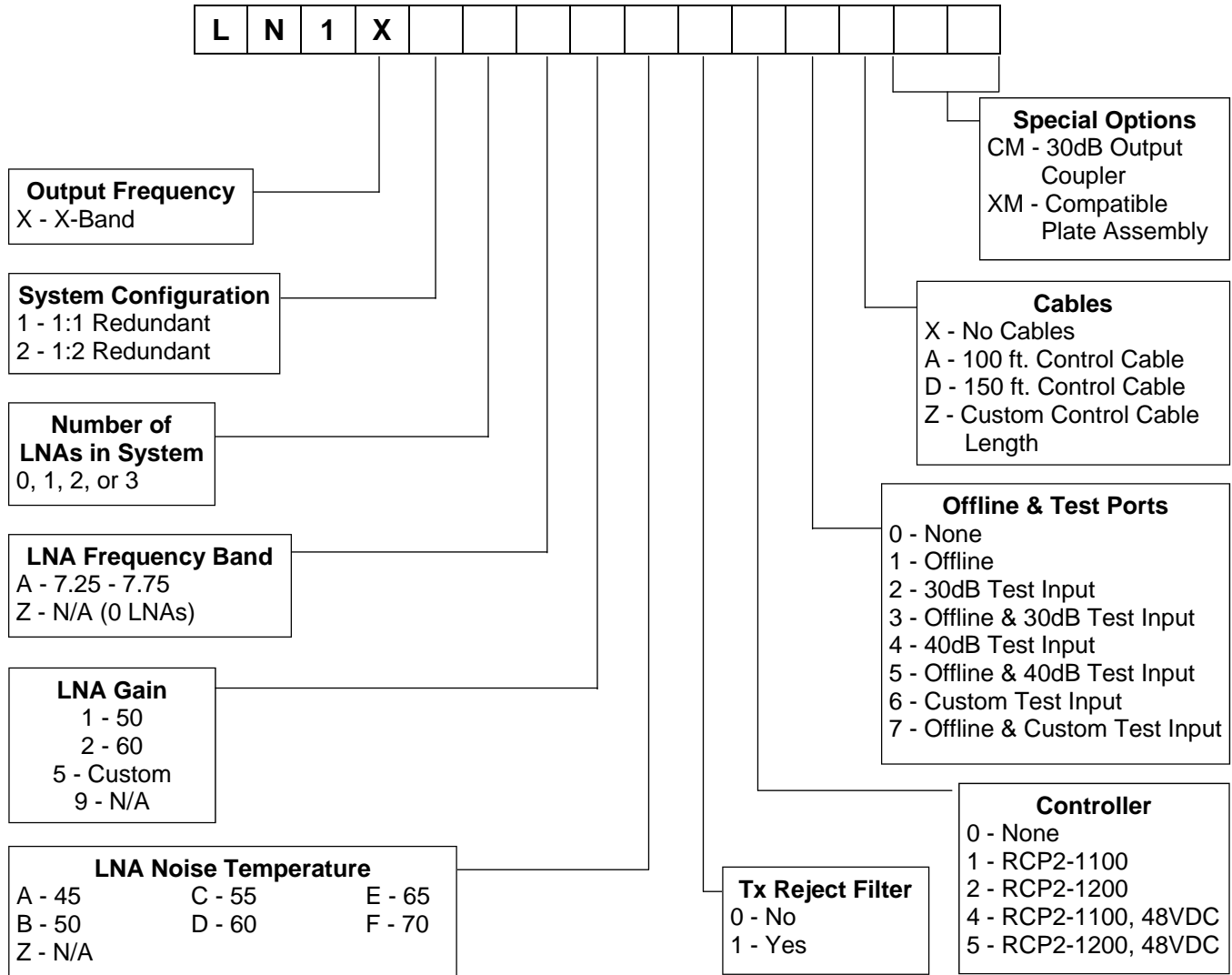
| DESCRIPTION | QUANTITY PER SYSTEM | | NOTES |
|---|---------------------|--------|--|
| | 1:1 | 1:2 | |
| Antenna hub-mount plate assembly | 1 | - | 1:1 system includes 1 ea. dual waveguide-coaxial protection switch. 1:2 system includes 2 ea. dual waveguide-coaxial protection switch. |
| RF7 Series X-Band LNAs | 2 | - | Customer specified noise temperature and gain |
| Redundant control panel RCP-1100 (1:1) RCP-1200 (1:2) | 1 - | - - | |
| Interface control cable | 1 | - | 100 ft. (30 m) standard Customer specified up to 1000 ft. (300 m) |
| Standard test data | 1 lot | - | Customer specified special testing available |

System level performance

| PARAMETER | SYSTEM PERFORMANCE* | | | WITH OPTION(S) |
|--|----------------------------|------------------|------------------|---|
| | 1:1 | 1:2 | | |
| | | Pol. 1 | Pol. 2 | |
| System Noise Temperature Contribution (above LNA noise temperature) | 5 K 15 K 7 K 18 K | - - - - | - - - - | None Tx Filter Input Test Coupler Tx Filter & Input Test Coupler |
| System Noise Temp. vs, Ambient Temp. (approx.) | 0.40 K/°C | - | - | Option-independent |
| System Gain vs. Ambient Temp. (approx.) | - 0.04 dB/°C | - | - | Option-independent |
| System VSWR | | | | |
| Input | | | | |
| on-line RF thru-paths | 1.3:1 | - | - | |
| off-line and coaxial coupled input ports | 1.5:1 | - | - | |
| Output | | | | |
| all RF output ports (except cpld. out) | 1.25:1 | - | - | |

* System level performance based on use of Paradise Datacom RF7 Series X-band low noise amplifiers (LNAs). Specifications are subject to change.

System Configuration



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Specifications are subject to change without notice.