Redundant Control Panel for Dual 1:1 Systems
RCPD-1100

PARADISE DATACOM
AN INTELEK PLC COMPANY

DESCRIPTION

Paradise Datacom's Redundant Control Panel for Dual 1:1 Systems (RCPD-1100) provides control of an entire VSAT Transceiver system.

Its combination of switch drive output and LNB bias along with its capacity for external alarm inputs enable the RCPD-1100 to be enabled in a variety of system configurations.

To achieve this functionality, the RCPD-1100 can control two waveguide switches for the outdoor portion of the system, and optionally two coaxial switches at the system input.

Control of the RCPD-1100 can be handled through front panel operation, or remotely through a parallel or serial connection to a computer.

Two separate power supplies are provided for fully redundant operation. Either of the two supplies is capable of operating the system and its associated switches.

If fault alarms are detected in the on-line transceiver system, the RCPD-1100 can be programmed to provide immediate switchover to the stand-by transceiver.

FEATURES

- Front panel or remote operation.
- Redundant power supplies.
- A wide range of I/O connections from the rear panel.
- User-programmable fault resolution.
- 2 line by 40 character Liquid Crystal Display
- Easy-to-navigate firmware menu structure
- 2 Rack Units high

AT A GLANCE

The front panel displays which unit in a redundant system is online, and allows monitoring of the following fault states:
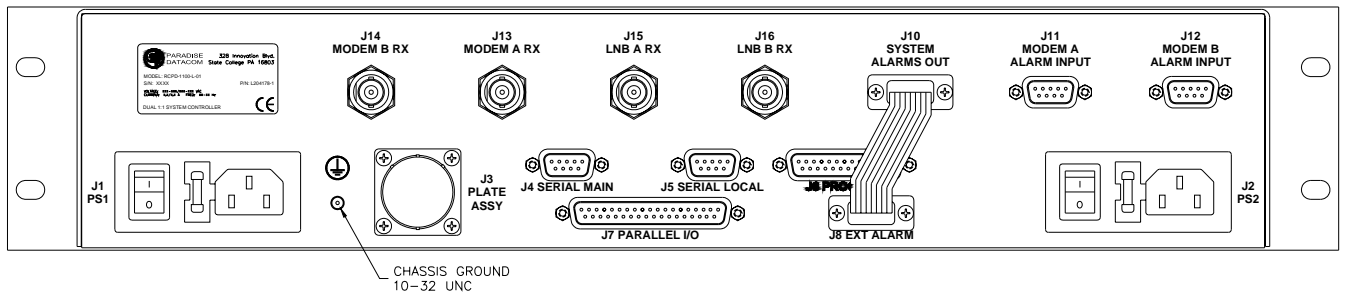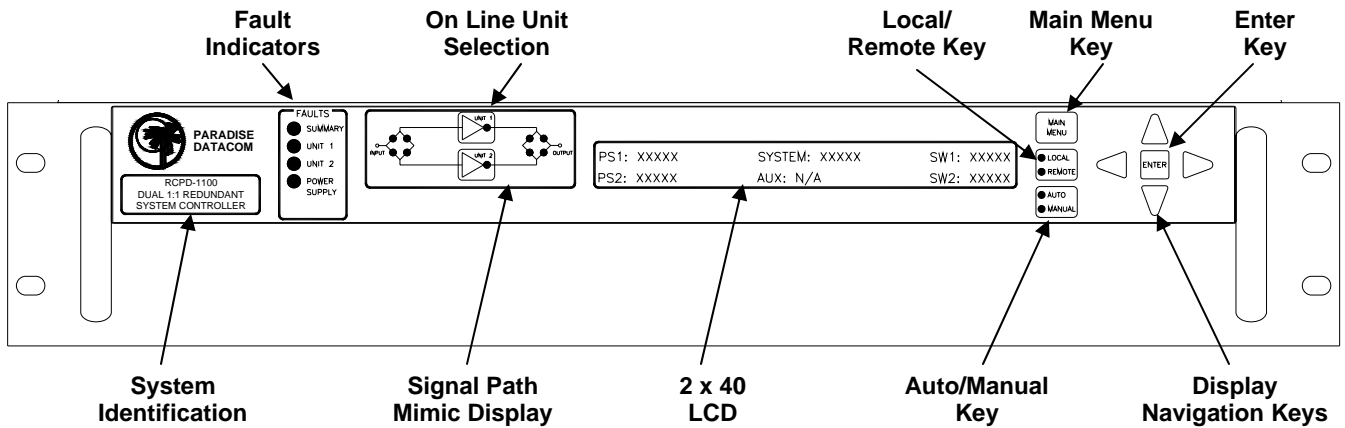
- Summary
- Unit 1
- Unit 2
- Power Supply
- Auto / Manual Switch Mode
- Local / Remote Control

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Fault Indicators • **On Line Unit Selection** • **Local/ Remote Key** • **Main Menu Key** • **Enter Key**

System Identification • **Signal Path Mimic Display** • **2 x 40 LCD** • **Auto/Manual Key** • **Display Navigation Keys**

RCPD-1100 Front and Rear Panels
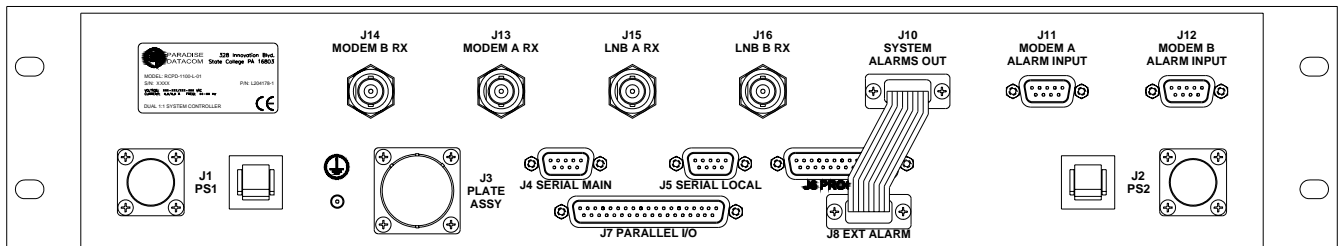
RCPD-1100 Rear Panel, with 48VDC Option

Pin Outs for J1, J2 DC Power Input

Pin	Function
A	+48 VDC
B	+48 VDC
C	-48 VDC
D	-48 VDC
E	Ground
F	Ground

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RCPD-1100 General Specifications

CHARACTERISTIC	SPECIFICATION
Configurations	RCPD-1100; Dual 1:1 Redundant System
Switch Time	Fault Detection, 20-50 msec
	Total Switchover, 100 msec maximum
Switch Drive	26 VDC @ 4 amps
Alarm Input	Closure to Ground, (Ground=OK / Open=Fault)
Serial Communications	RS-232 / RS-485 4-wire
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
Mechanical Dimensions	3.5 in. H x 19 in. W x 13.3 in. D [2 RU]
	(89 mm H x 483 mm W x 338 mm D)
Weight	6 lbs. (2.8 kg)
Environmental temperature	0-50 ^{o}C

Control Cable Connector Port (J3) Pin Outs
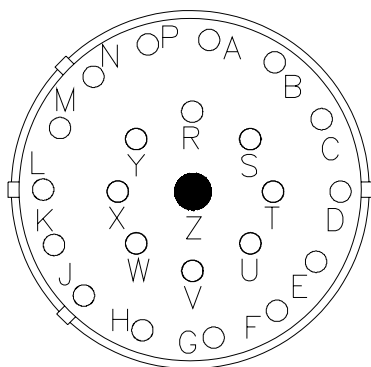
Pin	Function	Pin	Function
L	Amp #1 +15 VDC, 0.6A	F	Switch Common, +26 VDC, 5A max
J	Amp #2 +15 VDC, 0.6A	H	Switch Common, +26 VDC, 5A max
G	Not Applicable	T	Switch #2, Position 1
E	Detected RF (option)	V	Switch #2, Position 1
B	Switch Common, +26 VDC, 5A max	N	Switch #2, Position 2
D	Switch Common, +26 VDC, 5A max	R	Switch #2, Position 2
W	Switch #1, Position 1	A	AMP Support GND
U	Switch #1, Position 1	C	AMP Support GND
P	Switch #1, Position 2	K	Switch Common, +26 VDC, 5A max
S	Switch #1, Position 2	M	Switch Common, +26 VDC, 5A max

Main Serial Port (J4) Pin Outs

Function	Pin	Notes
RS-232 In or RS-485 RX-	2	
RS-232 Out or RS-485 TX-	3	
RS-485 TX+	4	
RS-485 RX+	1	
Termination (120 Ohm)	9	Connect to pin 4 to terminate unit on end of bus
Ground	5	

Local Serial Port (J5) Pin Outs

Function	Pin	Notes
RS-232 Out or RS-485 TX-	2	
RS-232 In or RS-485 RX-	3	
RS-485 RX+	4	
RS-485 TX+	1	
Service Request 1	6	Closed on Fault
Service Request 2	8	Open on Fault
Service Request Common	7	Form C Common
Termination (120 Ohm)	9	Connect to pin 1 to terminate unit on end of bus
Ground	5	

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Parallel I/O Port (J7) Pin Outs

Identification	Signal	Pin	Function	Notes
Amp 1 Alarm	Output	1	Closed on Fault	Relay Contacts: 30VDC @ 0.5A
		20	Common	
		2	Open on Fault	
Amp 2 Alarm	Output	21	Closed on Fault	Relay Contacts: 30VDC @ 0.5A
		3	Common	
		22	Open on Fault	
Not Applicable		4 23 5		
Auto / Manual Mode	Output	24	Closed on Manual	
		6	Common	
		25	Closed on Auto	
Local / Remote Mode	Output	7	Closed on Local	
		26	Common	
		8	Closed on Remote	
Switch #1 Position	Output	27	Switch #1, Position 1	
		9	Common	
		28	Switch #1, Position 2	
Switch #2 Position	Output	10	Switch #2, Position 1	
		29	Common	
		11	Switch #2, Position 2	
Power Supply #1 Alarm	Output	30	Closed on Fault	
		12	Common	
		31	Open on Fault	
Power Supply #2 Alarm	Output	13	Closed on Fault	
		32	Common	
		14	Open on Fault	
Priority Setting	Output	33	Closed on Priority 2	
		15	Common	
		34	Closed on Priority 1	
Auxiliary Input	Input	16	Ground to Activate	5mA max current on all inputs
Priority Select	Input	17	Ground to Activate	Toggle Function
Auto / Manual	Input	18	Ground to Activate	Toggle Function
Amp 3 Standby	Input	35	Ground to Activate	
Amp 2 Standby	Input	36	Ground to Activate	
Amp 1 Standby	Input	37	Ground to Activate	
Ground	Common	19		

External Alarm Port (J8) Pin Outs

Function	Pin	Notes
External Alarm 1	1	
External Alarm 2	2	Closure to Ground, 5mA max short circuit current, 5 VDC open circuit voltage
External Alarm 3	3	
Ground	4	
Auxiliary Alarm 1	5	
Auxiliary Alarm 2	6	
Auxiliary Alarm 3	7	Closure to Ground, 5mA max short circuit current, 5 VDC open circuit voltage
Auxiliary Alarm 4	8	
Auxiliary Alarm 5	9	

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