TELEDYNE PARADISE DATACOM
A Teledyne Technologies Company

Quick Start Guide
System Controllers

RCP2-1100 Redundant System Controller

Teledyne Paradise Datacom offers a robust family of system controllers which can be used for remote monitor and control of both indoor rack-mountable systems and outdoor systems.

The 1RU Redundant System Controllers include the RCP2-1100, used with 1:1 redundant systems, and the RCP2-1200, used with 1:2 redundant systems.

The FPRC-1100 system controller is used with 1:1 fixed phase combined systems, and the FPRC-1200 is used with 1:2 fixed phase combined systems.

Rack Mounting

The system controller may be installed in a standard IEC 19" equipment cabinet. The controller is available with optional rack slides. Follow the rack slide manufacturer's instructions on installation of the slide rails into the equipment cabinet. Secure the front panel of the controller to the cabinet frame mounting rails using 10-32x0.5 pan head screws, #10 flat washer and #10 nylon washer (placed against the surface of the unit).

Cable Connections

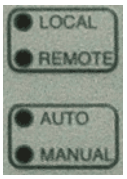
The primary connection between the controller and the LNA/LNB switch plate or SSPA switch assembly is through Port J3. This connector is a 23-pin circular MIL connector, type MS3112E16-23S. A standard 100 ft. (30m) cable is typically used to connect between Port J3 of the controller and the switch plate assembly.

Providing Prime Power

Most controllers are fitted with removable AC power supply modules which connect to a 110V power outlet using the supplied IEC power cords. A DC input option is also available.

Local Communication

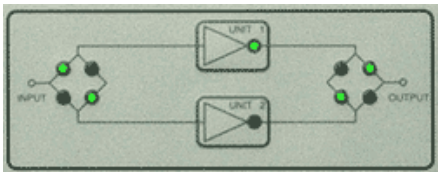
All Teledyne Paradise Datacom system controllers share a common local menu structure, which is detailed in the Operations Manual. Settings for Communication, Operation, Fault Setup, Options and Calibration may all be selected from the front panel menu. Operating conditions are also available for review in the 2x40 front panel display.



The Local/Remote key selects whether the controller is operational by front panel (local) control or by remote control. Remote control includes both the rear panel parallel control signals as well as the serial communication.

The Auto/Manual key selects between available switching Modes. In Auto mode, a unit failure will result in automatic switching of the system's transfer switches. In manual mode a unit failure will result in fault alarms but no switchover will occur.

The front panel signal path mimic display provides a visual representation of the redundant system block diagram. Green LEDs indicate the position of the transfer switches showing the RF signal path from the RF input to the RF output.



When in Local Mode, the operator may select which unit in the redundant system is transmitting to the RF output by pressing the appropriate Unit # key on the signal path mimic display.

Fault indicator LEDs illuminate RED when the corresponding fault condition occurs. There are fault lights for Summary, Unit 1, Unit 2, and Power Supply faults. The RCP2-1200 and FPRC-1200 also includes a fault light for Unit 3.

Remote Communication

The controller offers a wide range or remote communication capability, including serial interface over RS485 or RS232, and an Ethernet interface which supports IPNet, SNMP and a HTTP web interface. Parallel alarm contacts are also available.

See the Operations Manual for a complete description of the remote control interface, including the serial communication protocol.

The main serial port, J4, is used for remote connection with any host computer. This port contains both RS-232 and RS-485 communication in half duplex. A set

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SERIAL PORT, MAIN (J4) CONNECTOR PIN-OUTS

PIN	FUNCTION
1	RS-485 TX+
2	RS-232 out or RS-485 TX-
3	RS-232 in or RS-485 RX-
4	RS-485 RX+
5	Ground
6	Service Request 1 (closed on fault)
7	Service Request 2 (open on fault)
8	Service Request Common (Form C Common)
9	Termination (120 ohm) (connect to pin 4 to terminate unit on end of bus)

of Form C relay contacts are available at this port as a Service Request. Baud rate and other communication parameters are selectable via the front panel menu.

A RJ45 connector is also available at Port J9 for communication with the controller over Ethernet. This port becomes the primary remote control interface when the Interface option is selected to “IPNet” as described in the Operations Manual. This feature allows the user to connect the RCP to a 10/100 Base-T office Local Area Network and have full-featured Monitor & Control functions through a web interface.

ETHERNET PORT (J9) CONNECTOR PIN-OUTS

PIN	FUNCTION	PIN	FUNCTION
1	TX+	5	GND
2	TX-	6	RX-
3	RX+	7	GND
4	GND	8	GND

A description of the remote control protocol and associated settings, conditions and thresholds tables are detailed in the Operations Manual.

Maintenance

Follow the instructions in the Operations Manual for proper maintenance of the controller.

Download the operations manual and specification sheet for the controller from the Teledyne Paradise Datacom web site: http://www.paradisedata.com.

Safety Considerations

Potential safety hazards exist unless proper precautions are observed when working with this unit. To ensure safe operation, the operator must follow the information, cautions and warnings provided in the Operations Manual, and observe the warning labels placed on the unit itself.

High Voltage Hazards

High voltage is any voltage in excess of 30V. Voltages above this value can be hazardous and even lethal under certain circumstances. Care should be taken when working with devices that operate at high voltage.

Electrical Discharge Hazards

An electric spark can not only create ESD reliability problems, it can also cause serious safety hazards. Follow all ESD precautions when working with this unit.

High Current Hazards

Many high power devices are capable of producing large surges of current. This is true at all voltages, but needs to be emphasized for low voltage devices. Low voltage devices provide security from high voltage hazards, but also require higher current to provide the same power. High current can cause severe injury from burns and explosion.

Warranty

Refer to the manufacturer’s warranty document for specific warranty coverage by product. The warranty does not apply to any goods that, upon examination by the manufacturer, are found to have been (i) mishandled, misused, abused, or damaged by the Buyer or Buyer’s customer, (ii) altered from their original state, (iii) repaired without the manufacturer’s prior written approval, or (iv) improperly stored, installed, operated, or maintained in a manner inconsistent with the manufacturer’s instructions. This warranty does not apply to defects attributed to normal wear and tear.

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