

CRS-200



CRS-280



## INTRODUCTION

The CRS-200 1:10 modem redundancy switch provides fully automatic or manual redundancy of CDM-550 satellite modems.

The protection system consists of a maximum of 10 traffic modems, a redundant modem, and the CRS-200 redundancy switch. A CRS-280 IF switch is available if multiple satellite transponders are used.

## COMPATIBILITY

The CRS-200 supports interface types of EIA-422, V.35, EIA-232, and G.703\*, offering users the flexibility of mixing data interface types within the same redundancy group.

## KEY RELIABILITY FEATURES

- Dual, independent AC power supplies.
- Passive back-plane for signal path
- Normal traffic is not interrupted upon power failure
- Non-interruption of user data when other traffic modem Interface circuit cards are removed
- Data and clock are provided to the redundant modem when in bridged mode
- Programmable hold-off times to backup or restore

*\* Supporting G.703 T1 or E1 requires the use of the CIC-50, EIA-422 to G.703 interface converter.*

## SUPERIOR FUNCTIONALITY

The configuration of each traffic modem is stored in the CRS-200 controller. This information is used to program the redundant modem if the traffic modem fails.

The modem information is copied to the controller through an EIA-232 pair in the data cable. Each modem in the system is configured for address zero, allowing for EIA-232 communications to each modem from the controller.

The CRS-200 controls the traffic and redundant modem IF output. All modem outputs are On if the CRS-280 IF switch is used in the system.

The downlink path through the CRS-280 is completely passive.

External monitor and control may be connected to the controller board. Each modem may be monitored or controlled through the remote interface.

The data and clock signals to and from a traffic modem are routed through a Traffic Modem Interface (TMI), via a set of relays. This allows the data signals to pass directly through to the traffic modem in the event of a power failure. If the system's power supplies are lost, or if a TMI carrying traffic is removed, no interruption of traffic take place.

The bridge mode may be used to verify the user data on a specific traffic modem. The redundant modem locks to the traffic modem receive IF input signal

The operator can program a delay interval for the backup modem to wait before coming on line when a traffic modem failure occurs. This is useful for circuits subjected to expected, frequent or short outages.



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## SPECIFICATIONS

Type	1:N redundancy switch system, N=10 max, bridging architecture. C161 control processor	Front Panel	Vacuum fluorescent display, 2 lines, 24 characters, tactile keypad LED system status display showing, for all modems: Unit fault RX traffic alarm TX traffic alarm on-line/off-line status Bridge status
Operating Modes	Fully automatic or manual Force traffic modem to redundant modem Force redundant modem to bridge traffic modem Remove selected traffic modem from control Programmable hold-off to backup and hold-off to restore from 0 to 99 seconds	Audible Alarm	Can be programmed to activate following various changes of state
Redundant Modem signal source	Any one of the 10 traffic paths (bridge mode), both RX IF, and TX data	Power Supply	Two independent inputs: 100 to 250 volts AC, Autosensing Fused IEC connectors, 25 Watts maximum
Switching conditions	Switch to redundant modem following a unit fault, TX traffic alarm or RX traffic alarm	Dimensions and weight	4U chassis - 10.8 in. deep (275 mm), 18.5 lbs. (8.4 kg.)
IF Switching	CRS-200 without CRS-280 IF switch; IF ON / OFF control through the switch controller. CRS-200 with CRS-280; all modem outputs on all the time.	Compatible modems	CDM-500 BPSK/QPSK modem (2.4 to 512 kbit/s) CDM-550 BPSK/QPSK/OQPSK modem (2.4 to 2048 kbit/s) CDM-550 Turbo Codec Modem (2.4 to 2048 kbit/s)
Switching time	7 seconds max (Delay interval set to zero)	EMC and Safety Standards:	EN 55022 CLASS B (Emissions) EN 50082-1 (Immunity) EN 60950 (Safety) FCC Part 15 Class B
Modem Interface	25-pin D subminiature type male connector carrying all data, alarm and remote control signals	Environmental	Operating temperature range 0° to 40°C
Data Interfaces using 25-pin 'D' type female connector, conforming to the EIA-530 standard	EIA-422/EIA-530 DCE V.35 DCE X.21 DCE and DTE EIA-232 (synchronous or asynchronous) Interface types may be mixed in a redundancy group		



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