Overview
The CRS-300 1:10 Modem Redundancy Switch provides fully automatic or manual redundancy for the following modems:

<table>
<thead>
<tr>
<th>Modem Type</th>
<th>Modem Type</th>
<th>Modem Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDM-570A &amp; CDM-570AL</td>
<td>CDM-625 &amp; CDM-625A</td>
<td>CDM-700</td>
</tr>
<tr>
<td>CDM-570 &amp; CDM-570L</td>
<td>CDM-Qx &amp; CDM-QxL</td>
<td>CDM-710</td>
</tr>
<tr>
<td>CDM-600 &amp; CDM-600L</td>
<td>SLM-5650A</td>
<td>CDM-710G</td>
</tr>
</tbody>
</table>

The protection system consists of a maximum of 10 traffic modems, a redundant modem, and the CRS-300 redundancy switch. Two companion (slaved) 1:10 switches are also available: the CRS-280/280L IF switch and the CRS-350 ESC switch. The IF switch is used in multiple transponder applications. The CRS-350 is used for open network ESC redundancy switching.

Compatibility
The CRS-300 supports a wide range of terrestrial data interface types including: EIA-422/530, V.35, EIA-232, LVDS, G.703 (balanced or unbalanced), ASI, 10/100/1000 Ethernet and HSSI. In many cases, each traffic modem can have a different terrestrial data interface type.

Key Features
- Twin, independent AC or DC power supplies
- Passive backplane for signal path
- Non-interruption of normal traffic upon power failure
- Non-interruption of user data when other traffic modem Interface circuit cards are removed
- Data and clock provided to the redundant modem when in Bridge Mode
- Programmable holdoff times to backup or restore
- Audible alarm programmable to activate, based on various changes in status
- Provides single-point remote Monitor and Control (M&C) to switch and traffic modems
- Simplified configuration and control
- 2 line x 24 character vacuum fluorescent display
- Front panel keypad
- LED system status display showing unit and modem status, online/offline status, and bridge status

Superior Functionality
The configuration of each traffic modem is stored in the CRS-300 controller. This information is used to program the redundant modem if the traffic modem fails. The modem information is copied to the controller through a serial cable. The CRS-300 also controls the traffic and redundant modem IF output. All modem outputs are ON if the CRS-280 or CRS-280L IF switch is used in the system. The downlink path through the CRS-280/CRS-280L is completely passive. External monitor and control may be connected to the CRS-230 controller board. The CRS-300 and each traffic modem may be monitored or controlled through this remote serial 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 occurs. 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 online when a traffic modem failure occurs.

Modular Construction
The redundancy switches are modular in construction. All replaceable modules insert into slots in the back panel, including the controller, TMIs, Redundant Modem Interfaces (RMIs), and Power Supply Units (PSUs). Power consumption is so low, even for fully populated units that no fan cooling is required.

www.comtechefdata.com
Specifications

Type
1:10 Redundancy Switch system, N=10 max., bridging architecture.

Operating Modes
Fully automatic or manual
Force traffic modem to redundant modem
Remove selected traffic modem from control
Programmable hold-off to backup and hold - off to restore (from 2 to 99 seconds)

Switching Conditions
Switch to redundant modem following a unit fault
TX traffic alarm or RX traffic alarm

IF Switching
With CRS-280 IF Switch; all modems outputs on all the time
Without CRS-280 IF Switch: IF on/off control to modems

Redundant Modem Signal Source
Any one of the 10 traffic paths (bridge mode)
(bird RX IF and TX data)

Front Panel
Vacuum fluorescent display, 2 lines, 24 characters
LED status display showing, for all modems
Unit status, TX status, RX status, online and bridge status

Audible Alarm
Programmable to activate following various changes of state

Common Faults
Dry relay contacts

Prime Power
Two independent inputs, (AC or DC versions available): 90 to 264 VAC, 50/60 Hz, or
48 (38 to 60) VDC < 25 W

Dimensions (Rack Mount – 4U) (height x width x depth)
6.75” x 19” x 11.75”
(17.15 x 48.26 x 29.85 cm)

Weight
< 20 lbs (- 9.07 kg)

Temperature
0 to +50°C (32 to 122°F) operating
50 to 100°C (122 to 212°F) storage

Humidity
95% at +40°C (104°F), non-condensing

CE Mark
EMC and Safety

Modem vs Terrestrial User Data Interface

<table>
<thead>
<tr>
<th>Modem</th>
<th>TMI</th>
<th>User Type</th>
<th>User Data Connector(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDM-570A</td>
<td>CRS-320</td>
<td>EIA-422, V.35, EIA-232</td>
<td>(1) DB-25F</td>
</tr>
<tr>
<td>CDM-570AL</td>
<td>CRS-330</td>
<td>G.703 (balanced/unbalanced)</td>
<td>(1) DB-15F/ (2) BNC</td>
</tr>
<tr>
<td>CDM-570</td>
<td>CRS-340</td>
<td>EIA-422, V.35, RS-232</td>
<td>(1) DB-25F</td>
</tr>
<tr>
<td>CDM-600</td>
<td>CRS-320</td>
<td>G.703 (balanced/unbalanced)</td>
<td>(1) DB-15F/ (2) BNC</td>
</tr>
<tr>
<td>CDM-600L</td>
<td>CRS-330</td>
<td>G.703 bal. (DDI, IDO, DDO, IDI)</td>
<td>(1) DB-25F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G.703 unbal. (DDI, IDO, DDO, IDI)</td>
<td>(1) DB-15F/ (4) BNC</td>
</tr>
</tbody>
</table>

Notes:
1. SLM-5650 (non "A" version) see Legacy 1:10 Switch Datasheet

CRS-350 – Engineering Service Channel Switch (optional)

Applicable Modems
CDM-600/600L/625, SLM-5650A

User Data Interfaces
(1) DB-25M connector - ESC, overhead signals
(1) DB-15F connector - IDR alarms
(1) DB-9F connector - audio

Power
From CRS-300

Dimensions (Rack Mount – 4U) (height x width x depth)
7” x 19” x 4.0”
(18 x 48.26 x 27.5 cm)

Weight
5 lbs (2.2 kg)