# CORNET
## SWITCHING SYSTEMS

# Red Conference/Red Digital Split Backplane Switch



The Cornet Switching Systems' MTX-R RCS/RDS combines the functionality of the Red Conference (RCS) and Red Digital (RDS) switch into a single compact package that is ideal for applications where space is limited. This combined switch fits into our standard ruggedized military chassis and will hold any combination of nine RCS style I/O cards and five RDS style I/O cards. All RCS and RDS functions are supported. The switch is easily VoIP upgradable. The RPS-24 can detect that both main and backup routers are down. In this admittedly very rare event, a port failure trap is issued indicating the critical need for engineer on site attendance.

## Red Conference Switch Functions

The Red Conference Switch section of the split-engine can connect to a maximum of 198 dual sourced ISDN telephones (18 PRIs) and a maximum of 144 crypto devices. A conference call may include up to 30 parties on a single crypto device. A switch will handle 144 simultaneous conference calls from any telephone supported by the conference switch. Phone supported include TA/970 analog telephones, PICT 7300s and 7500s, IVUT ISDN dual homing terminals, the Cornet Switching Systems family of ISDN phones (CT-2100/2200/2250 and 5000), and VoIP terminals. Any connection made through the conference switch may be recorded using the Analog I/O card with a Cornet Switching Systems' Red 12-Wire Analog PCU and a recording device.

The switch design allows any available input (phone) to connect to any available output (crypto). Connections can be made in either full duplex or simplex mode. Install an Intercom Card and any ISDN telephone may call any other locally attached ISDN telephone through the switch. The RCS can be easily upgraded to VoIP with seven software selectable VoIP CODECs.

## Red Digital Switch Functions

The Red Digital Switch section of the split engine operates under the same principals as those of the Black Tactical switch. This version allows the interconnection of 160 nonsecurebdigital ports. The Red Digital switch may be populated with either Fiber Optic or Copper I/O cards which can connect up to ten 16-port PCU's. To minimize the impact of a path failure, a "spare" switch card can be configured to perform automatic or manual backup. For ease of maintenance, all MTX-RTS cards are hot swappable, allowing replacement or addition of cards without first turning off the power.

## Control

Control of the MTX-R RCS/RDS is managed by using a Pentium PC, while running Cornet Switching Systems's CorScan® 400 control software. CorScan-400 operates in a multiuser, client-server environment with up to 32 remote clients accessing each server. The software is compatible with Microsoft Windows NT, 98, 2000, or XP Professional.

## Key Features

- Non-Blocking Design
- Dual Terminal Control
- SNMP Control
- Dual Homing Capability
- Redundant Control Cards
- Battery-Backed Dual NVRAM
- Control Card Status LEDs
- Direct PRI input to switch
- Direct Analog I/O to crypto device
- Built-in Conference and Intercom capability
- Selectable Conference Member Limitation
- Built-in μ-law CODEC
- Interfaces Analog, ISDN and VoIP Telephones in same chassis
- Full recording capability of all voice traffic
- Non-intrusive expansion capability
- Hot Swappable cards
- State-of-the-art surface mount technology
- IP Interface controlled with Session Initiative Protocol (SIP)
- Automatic cross point testing
- Test and Monitor bus function
- Built-in Spare Switching
- Fiber or Copper Extension
- Broadcast Mode
- Multi-Point Switching

## Specifications

### Matrix General

| | |
|---|---|
| Matrix Type: | Single Crosspoint, Electronic |
| Blocking Factor: | None |
| Broadcast Capability: | 1 to All |
| Shock and vibration: | MIL-STD-901D Grade A, MIL STD-167-1 |

| Temperature: | Operating: | 0° C to +50° C |
|---|---|---|
| | Non-Operating: | -50° C to +100° C |

| | |
|---|---|
| Humidity: | 98% RH non-condensing |

| | |
|---|---|
| Altitude: | Up to 3050m above sea level |

### Power Requirements

| | |
|---|---|
| Matrix Input Power: | 1.5A @+/-12VDC |
| PCU: | 5.5A @+5VDC |

### Physical Dimensions

| | |
|---|---|
| Engine Chassis: | 19" W x 15.75" H x 20" D |
| PCU2: | 19" W x 5.25" H x 11" D |

### Weight

| | |
|---|---|
| Matrix Engine: | 75 lbs |
| PCU2: 30 lbs | |

### MTBF Figures

Matrix Engine

| | |
|---|---|
| Chassis: | 59,669 Hours |
| Switch Card: | 103,219 Hours |
| DS-1 Switch I/O Card: | 55,973 Hours |
| Recorder Switch I/O: | 15,184 Hours |
| Control Card: | 292,552 Hours |
| Control I/O Card: | 173,930 Hours |