CORNET
SWITCHING SYSTEMS

TVCS-L

Voice Conferencing Switch

The TVCS-L switch, a primary component of the Tactical Voice Communications System (TVCS), is a non-blocking, high-speed digital conferencing switch ruggedized for military installation and applications. The conference switch is designed to allow up to 128 VoIP Tactical Communications Terminals (TCTs) to conference with up to 256 encryption/decryption devices (cryptos) in a military environment. Recording links are automatically configured when a call is placed, allowing all voice communications (radio and telephone) to be recorded. The recording device is configured through the Voice Ethernet. The system can interface with up to 32 IP Speakers.

For maximum redundancy, the TVCS-L is offered with a dual homed configuration which has one primary and one secondary switch chassis connected with up to 16 PCU chassis. Each PCU chassis (TVCS-L PCU/2) will interface with up to 16 crypto devices. A fully loaded system with 16 PCU chassis allows up to 256 cryptos (devices).

In addition to the TVCS-L switch, a basic TVCS systems consists of dual redundant power supplies, a fan panel, Port Concentrator Units (PCUs), VoIP Tactical Communications Terminals (TCT), and Communications Interface Panel (CIP) applications software running on a PC. Two Ethernet networks, one for Voice and one for Control, link the TCT and CIP of each operator station to the TVCS-L switch and the recording device.

Features

- Non-Blocking Design
- Redundant Configuration (option)
- Dual Homing Capability
- Scalable Architecture
- Automatic Failover and Fallback
- Built-in Conference and Intercom
- Capability
- Built-in µ-Law CODEC
- Ethernet Control
- VoIP Interface
- Failure Detection
- Managed and Configured by IntelView
- Automatic Recording Capability
- Hot Swappable Cards
- Hardware is Military Shock and Vibration Compliant

The TVCS-L's **non-blocking design** means that a call is always completed to a non-busy receiver. This ability maximizes service availability.

A **redundant configuration** of the TVCS-L switch assures that if the primary switch fails the system can change to the secondary switch.

Dual-homing allows the establishment of two communication path or connections through the primary and secondary switch to be created simultaneously for all CIP initiated calls.

A **scalable architecture** enables the TVCS-L switch to have up to a total of 16 Conference card and I/O card pairs.

If there are two TVCS engines in a redundant configuration, should any card on the primary switch fail, the TVCS-L will automatically switch to the secondary TVCS-L switch, referred to as **Automatic Failover and Fallback.**

The TVCS-L has a Conference and I/O card that facilitate **Conference and Intercom calls.** These cards are paired on the TVCS-L mid-plane.

A **built in μ-Law CODEC** uses a Pulse Code modulation standard for audio coding and decoding.

The TVCS-L is **10/100/1000BaseT Ethernet LAN network compatible.**

The TVCS-L **VoIP interface** uses Session Initiated Protocol (SIP), Real-time Protocol (RTP), and Real-Time Transport Control Protocol (RTCP).

Ethernet and card failure detection is offered with failures reported via LEDs on the unit and via IntelView software.

The TVCS-L is managed through Cornet Switching Systems's **IntelView** configuration, maintenance and control software.

The TVCS-L offers **automatic voice recording capability.** All members on a call are linked to the Voice Recorder via the channel dedicated to the monitor function (over the Voice Ethernet).

All cards are **hot swappable** and can be inserted and removed without rebooting or restarting the system.

The TVCS-L is **military shock and vibration compliant** (MIL-S-901 Grade A and or MIL-STD-167-1).

Specifications

Matrix Type:	Dual Homing Electronic Conference
# of Terminals:	128 Operators (CIPs), and 256 Crypto/STE-R devices (Up to 512 users supported by EI sharing)
Members per Conference:	TVCS is design limited to 32 members per conference.
# of Conferences:	32 per Conference Card.

NOTE: Each Operator station has 2 – 32 member conferences (1 for headset, 1for optional speakers). Each device (Radio, Crypto) has 1 – 32 member conference.

NOTE: Fully loaded system will handle maximum of 128 each 32 member conferences.

Blocking Factor:	None
Conference Types:	Headset, Speaker, and other devices (i.e. Radios, Cryptos/STE-Rs).
# of Cryptos/STE-Rs:	16 per I/O Card
# of Operators:	8 VoIP Workstations per I/O Card, 128 per system.
Control Method:	Ethernet link to TCT, CIP software and IntelView.
I/O Type:	Multi-mode Optical Fiber
Connector Type:	High density, small form factor LC connectors.

POWER

DC Voltage Input:	+5 VDC
Current:	20 amps (fully populated chassis)
Power:	100 Watts

MECHANICAL

Dimensions:	15.75" (H) x 19" (W) x 19" (D)
Weight:	Approximately 75-79 lbs (fully populated chassis)

PART NUMBERS

Chassis:	CCHA40324-2
Control Card:	C04211C-3
Control I/O Card:	C11055A-1
VoIP Conference Card:	C08348A-1
VoIP I/O Card:	C08347A-1
Echelon Card:	C11080B-2