

REDCOM HDX-C

POWERED BY
TRANSip

Converged capabilities in a single platform
for Government & Defense Communicators



REDCOM IS INTEROPERABILITY

- ✓ Certified as a Local Session Controller and listed on DISA's Approved Products List
- ✓ Priority and Preemption Capabilities
- ✓ Interoperable with VoIP, TDM, SATCOM, Cellular, GSM, Radios, WiFi, & WiMax
- ✓ SIP-Based Industry-Standard Architecture
- ✓ Extreme Conferencing Capabilities
- ✓ Secure Tactical and Strategic Communications

REDCOM: Proven and Battle-Tested

For more than 30 years, REDCOM has provided rugged and reliable communications systems for the U.S. military and its allies. REDCOM has a long history of successful deployments in leading Department of Defense communications programs such as DTC, JECCS, JNN, TDC-ICAP and TSM as well as the Virginia Class submarine and British Navy's Astute Class Submarine.



Certified as a Local Session Controller (LSC)

REDCOM's HDX.C Version 4.0 is certified as a Local Session Controller (LSC) by the Defense Information Systems Agency (DISA) Unified Capabilities Certification Office (UCCO) and is listed on the Unified Capabilities (UC) Approved Products List (APL). Warfighters on today's battlefields can be confident their calls will get through when backed by the extensive interoperability of the HDX.C.

Interoperability & IP Convergence

Interoperability and the need for a low risk migration to IP, necessitates that legacy devices/networks continue to be supported to retain communications integrity. REDCOM's HDX.C is designed as a fully integrated TDM/VoIP platform that converges tactical and strategic networks for maximum interoperability including: SIP, AS-SIP/UC-SIP, SCIP, V.150.1, GSM, Radio, SATCOM, ISDN PRI, Euro PRI, IPv4, IPv6, and Magneto. Warfighters can leverage existing communications functionality while migrating to current and next generation communications.

Precedence & Preemption

The HDX.C provides Multi-Level Precedence and Preemption (MLPP), including industry standard ANSI 619a, for comprehensive end-to-end warfighter communications. This essential element of Command and Control ensures that the most important calls get through during critical situations.

TRANSip® IP Technology Suite

TRANSip is REDCOM's IP telephony technology suite that integrates the benefits of IP and TDM technologies, providing Call Management, Media Gateway Services, Media Gateway Controller, IP Subscriber Database, and Call Detail Records. REDCOM's Media Gateway provides warfighters with gateways between multiple legacy interfaces and current generation communications platforms.

Secure Communications

HDX.C with TRANSip connects multi-technology networks and supports secure communication via SCIP and V.150.1. In addition, Secure Real-Time Protocol (SRTP) and Transport Layer Security (TLS) are available to provide media and SIP signaling encryption as well as client authentication. REDCOM's Secure Device Interface board ensures HDX.C interoperability with commercially available voice encryption devices. HDX.C allows a Type 1 secure IP phone to directly and securely call a secure analog device.

Extensive Conferencing

REDCOM's HDX.C supports several conferencing styles, including *progressive* (participants added one at a time), *meet-me* (participants meet at a specified time), *preset* (conference controller initiates the event, adding participants as they answer) or any combination of these methods.

Advanced Secure Gateway

With REDCOM's Advanced Secure Gateway Application, a warfighter on the DSN network using a SCIP device can simply dial the published station number of a user on a classified network. The published number is translated and delivered to the classified user without requiring a secondary dial tone or over-dialing. When SCIP devices on the DSN and REDCOM Gateway go secure, a classified conversation can be held between the two users. Additionally, REDCOM's Advanced Secure Gateway provides secure conferencing between users on multi-technology networks, facilitating secure conferencing between Joint, NATO and Coalition Forces. This was successfully demonstrated at the 2012 Joint Users Interoperability Communications Exercise (JUICE).

Administration & Control

REDCOM offers products to facilitate a single point of OA&M at your Network Management Operations Center.

- **Link Command System (LCS)** is a PC-based GUI call management system that delivers extensive call control, call handling, directory assistance requests, and call queue management.
- **ClusterNet™** technology connects multiple sites allowing them to function as a single, integrated switching system.
- **MAUI (Maintenance Administration and User Interface)** is a PC-based GUI which provides a single point for OA&M, simplifying the task of administering your REDCOM HDX•C.

Military and Commercial Radio Interface

The HDX•C's Radio Interface Card allows any REDCOM system phone to dial out to a remote radio, and allows a radio to dial directly into the system and ring a phone, make an outside call, or call another remote radio system. Full two-way calling with Push to Talk (PTT), Voice Operated Transmission (VOX) or Carrier Operated Relay (COR) is supported. REDCOM technology also removes the repeater squelch found in commonly used analog radios. REDCOM's Radio Interface is interoperable with encrypted military radios and verifies the radio is secure before the voice transmission is enabled.

Distributed Architecture for survivability

HDX•C system architecture distributes resources system-wide and network-wide, using multiple direct access points, which minimizes the single point of failure risk. Moreover, the HDX•C provides continuous service with innovative alternate routing that combines IP and TDM trunks and routes.



REDCOM HDX TCP

RUGGED.

REDCOM's Tactical Communications Package (TCP), equipped with the REDCOM HDX•C, is interoperable, battle-tested, and portable. The case-mounted switches meet stringent government and defense specifications for impact and vibration, able to endure the harsh conditions of airlift, seaborne and off-road transport.

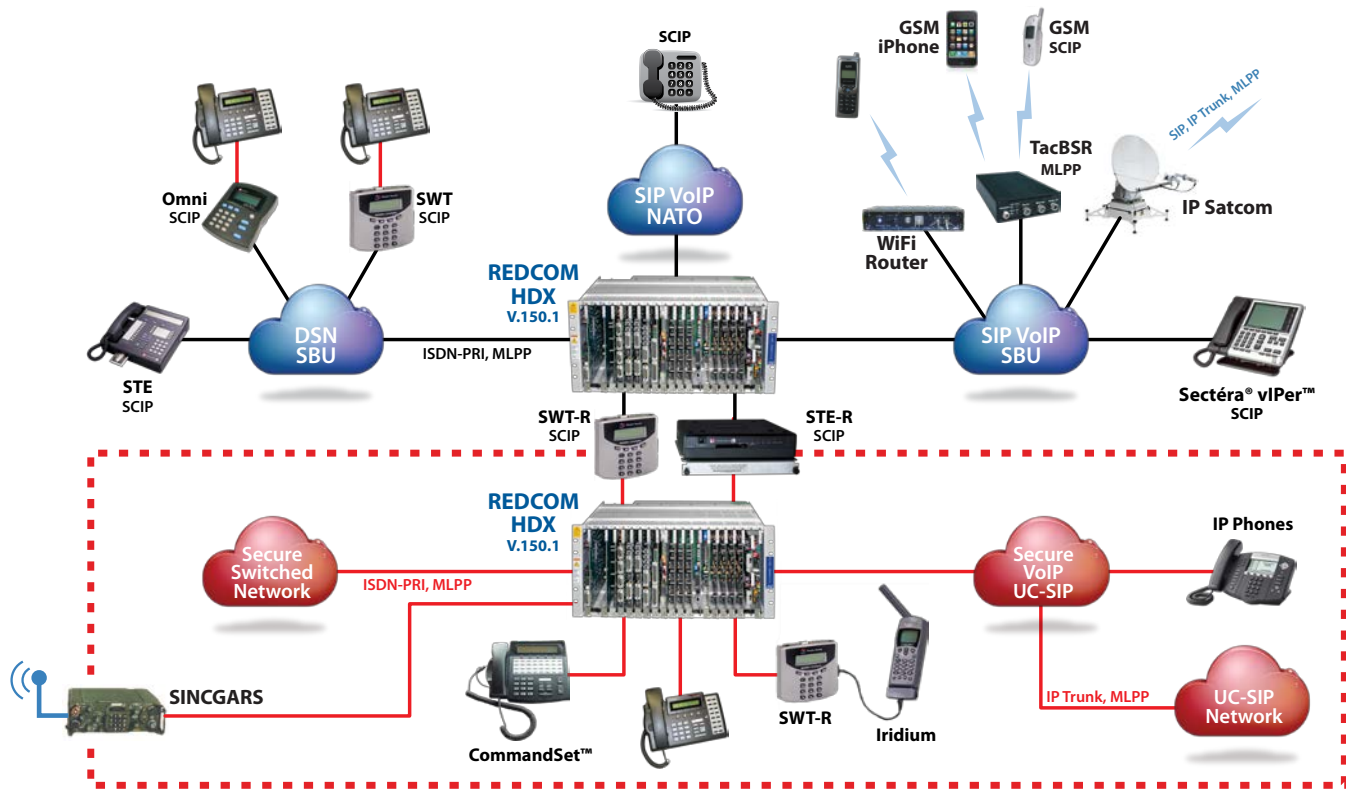
RELIABLE.

Military, emergency responders, carriers and utilities rely on REDCOM's 99.999% ("five nines") Carrier-Class reliability for dependable performance. The most challenging conditions on earth: Alaskan cold, South Pacific heat/humidity and Middle East desert heat/sand are all home to REDCOM systems.

READY.

The HDX•C TCP is completely customizable, enabling integration of specific communication equipment, including encryption devices, for unique operational requirements. REDCOM's HDX•C TCP can be prewired and configured to be set-up and operational within minutes of deployment and a flip of the power switch.

Secure Converged Networks in an Unsecured World



HDX•C Specifications

Shelf Dimensions

- Height: 8.75 in / 22 cm
- Width: 19 in / 48 cm
- Depth: 17 in / 44 cm
- Cable tray: 3.5 in high / 9 cm

Environment

- Operating temperatures: 32–122 °F / 0–50 °C ambient
- Operating humidity: 5%–95% (non-condensing)
- Operating elevation: Fully tested at 10,000 ft (3048 m)

Power

- -48 VDC
- 100/120/240 VAC, 50–60 Hz

System Architecture

- Multiprocessor distributed processing
- Optional redundant control per shelf
- Computer Telephony Integration (CTI)
- Hot-swappable interfaces and processor boards
- Max. 4,096 ports (non-blocking) per stack
- Max. 2,048 ports per shelf

Signaling & Protocols

- DTMF & RFC 2833
- MF/R1
- ISDN PRI (4ESS, 5ESS, NI1, DMS100, DSN & Euro)
- ISDN BRI (5ESS, NI1 & Euro)
- ANSI SS7 & ITU C7 (up to 4 SS7 links)
- SIP RFC 3261
- E&M
- GSRD/LSRD
- Radio Interface (Military and Civilian Radios)
- Supports 619a

Access Solutions

- AS-SIP/UC-SIP
- SIP
- GR-303
- V5.2
- FXO/FXS
- ISDN BRI
- Direct wire 2-wire subscribers
- Broadband Loop Carrier (BLC)

Network Management

- SNMP support for alarms and system monitoring
- Management of multiple systems via REDCOM MAUI

Subscribers

- IP subscribers
- Loop lengths up to 1900 ohms
- GR-303
- V5.2
- FXO/FXS
- ISDN BRI

Telephony Features

- ISDN PRI / BRI
- EURO ISDN
- Conferencing: Secure, Preset, Meet-me, Progressive
- ClusterNet™ Network Technology
- CLASS™ Features
- Monitor
- LNP
- Emergency Services (911)
- Supports MLPP
- Centrex
- Percentage Trunking

Network Interfaces

- Auto-detecting 10/100 Ethernet port
- T1/E1
- Management: Ethernet and serial console access

IP Capabilities

- Up to 3,000 registered IP subscribers per unit
- SIP Trunking
- Dual Stack IP (IPv4, IPv6)
- Dynamic Host Configuration Protocol (DHCP)
- Domain Name System (DNS)
- Network Time Protocol (NTP)
- Secure Telnet (SSL/TLS)
- SIP Call Controller
- Bandwidth Management (IP Subscribers & IP Trunks)
- RFC 3261, 3326, 4028
- SIP Telephones (hardphone & softphone)
- Fax over IP: T.38
- Modem over IP: V.150.1
- Call Data Records
- Audio Streaming RTP (RFCs 3550, 3551, 3389)

• SRTP

- Packet Loss Concealment
- Silence Suppression: VAD/CNG
- Telephony Tones: RFC 2833
- Quality of Service (QoS): DiffServ
- Echo Cancellation

Codecs

- G.711A&μ (64kbps PCM)
- G.723.1H&L
- iLBC
- G.726 (16, 24, 32, 40kbps ADPCM)
- G.729A&B (8kbps CS-ACELP)
- RFC 4040 (64 kbps)
- Fax over IP: T.38, Media Gateway Conversion (MGC) & Auto
- Modem over IP: V.150.1

Government & Defense Interoperability

- **Networks:** DSN (ANSI 619a), PSTN, ISDN, SS7, R2, E1, E1 Priority
- **Wireless:** Federal & Civil Radios, GSM
- **Secure Interoperability:** SWT, SCIP, Iridium Type I, GSM Type I, STE, NBS, STE-R, LTU-TED, Secure Tactical Radios
- **TRI-TAC Networks:** Secure Dial, Secure Access, KY-68 2nd Dial, Red T1

Note: Some features are optional. Please contact REDCOM for a more detailed description of product features and capabilities.

©2013 REDCOM Laboratories, Inc. REDCOM, the REDCOM logo, SLICE and TRANSip are registered trademarks of REDCOM Laboratories, Inc. CLASS is a service mark of Telcordia. Subject to change without notice or obligation.

One Redcom Center, Victor, NY 14564, USA

www.redcom.com sales@redcom.com +1.585.924.6500

085000-007-20130325



PROUDLY DESIGNED, BUILT & SERVICED IN THE USA

REDCOM®