

REDCOM HDX

Local Session Controller | Secure Gateway | Tactical Radio Gateway | Softswitch

The REDCOM HDX is a fully customizable purpose-built call controller for tactical and strategic operations. HDX can fulfill a variety of functions, including a Local Session Controller (LSC), secure gateway, tactical radio interface, softswitch, or as an interoperation point between networks, protocols, and devices. The REDCOM HDX is proudly engineered and assembled at our headquarters in Victor, NY, USA.



Fully interoperable

The REDCOM HDX is a fully integrated TDM/VoIP platform that is scalable between tactical and strategic networks. It offers maximum interoperability via SIP, AS-SIP, Secure Devices, V.150.1, RF, SATCOM, ISDN PRI, Euro PRI, IPv4, and IPv6.

The HDX integrates IP and TDM technologies in a single box, with robust call management and media gateway services. This enables multiple legacy interfaces and current generation communications platforms to interoperate seamlessly. This legacy interfacing also avoids the “rip and replace” approach to updating your network. HDX can provide older systems with a smooth and more methodical transition to IP networks.



Tested and validated

HDX has been certified as an LSC by the DoD Information Network (DoDIN) and is listed on the Approved Products List (APL). HDX's extensive interoperability functions will provide an added layer of confidence to even your most sensitive Command and Control (C2) architectures.



Highly flexible architecture

HDX is REDCOM's most flexible and customizable switch. Every aspect of the HDX can be customized for your specific mission by plugging in different boards. REDCOM has dozens of boards available for the HDX, including those for line circuits, trunks, Media Services, redundant controllers, and even remotes for secure encryptors. All boards are hot-swappable.



Radio Gateway

HDX's interoperability extends to tactical radio networks. HDX not only functions as a general media gateway, but also as a radio gateway for some of the most specialized tactical radios. The HDX radio interface is compatible with encrypted military radios and verifies the security of the endpoint before any voice transmissions are sent across the network.



Secure Voice Gateway

HDX can serve as a secure gateway between classification levels. If two disparate parties must communicate at a classified level, HDX can bridge the connection in a secured manner. This capability extends to conferencing as well, enabling secret-level conferences to take place between Joint, Coalition, or NATO forces.

HDX can also act as an ACC-compliant solution for Type 1 secure voice gateways. Equipped with REDCOM's new Secure Device Interface board, HDX can interface with up to four standard production GD Sectéra® vPer™ phones, which act as voice encryptors for TDM or SIP voice networks. The encryptors allow any HDX line, trunk, or conference port to conduct secure voice communications with any SCIP-capable device.



Built with security in mind

HDX leverages a myriad of secure protocols, communication standards, and authentication mechanisms to ensure critical communications remain secure. With HDX, security is baked in to every call or data transmission to and from your network. Security should be an automatic function of your communication devices, not a cumbersome set of instructions or a meaningless picture of a padlock. From commercially-available voice encryption to Type I compatibility, HDX's extensive compatibility and carefully-designed security features enable seamless communications for any mission.

HDX Features & 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
- Redundant ring generators
- 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
- FXO/FXS
- ISDN BRI
- Direct wire 2-wire subscribers
- Broadband Loop Carrier (BLC)

NETWORK MANAGEMENT

- SNMP support for alarms and system monitoring

SUBSCRIBERS

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

TELEPHONY FEATURES

- ISDN PRI / BRI
- EURO ISDN
- Conferencing: Secure, Preset, Meet-me, Progressive
- ClusterNet™ Network Technology
- CLASSSM 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