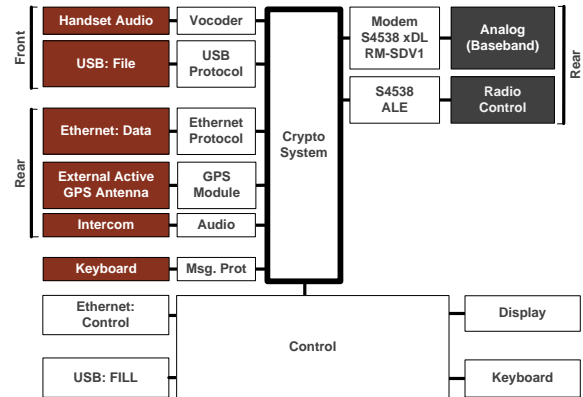




### SYSTEM DIAGRAM AND INTERFACES



### FUNCTIONS AND APPLICATIONS:

- **Voice Encryptor:** Secure Digital Voice for Radio
- **Position Transfer:** Asset tracking over vast areas
- **Secure Data Modem:** Used by external laptop or PC

### FEATURES & BENEFITS:

- Robust Modem: STANAG 4538, 3G ALE & ARQ
- Vocoder Options: TWELP\* / MELPE\*\*
- Security: AES-256 Encryption
- Address Book: Selective and Broadcast calls
- Position Transfer: Built-in GPS Module
- Connects to: Any HF or V/UHF radio
- Interoperates with: RT5, RT3 & RT1
- RapidM PC Software: Extends capability
- 19" Rack Mount: Strategic use
- Front Panel: Full operator interface
- Rear Panel: Intercom and Data interface
- Extended Range: 300, 600, 1200 & 2400 bps Vocoder

\* TWELP voice coding by DSP Innovations Inc.(www.dspini.com)

\*\* MELPe for USA customers only

### VOICE, MESSAGE, POSITION

The **RT7** is a ½ 19" rack-mount Strategic Terminal intended for use in command centres, base stations and ships. The **RT7** is part of the **RT** family and connects to a single HF or V/UHF radio to provide secure voice, data and position services. Services include:

Robust Secure Voice, Text, Forms, File Transfer, QuickCodes, Navigation, Situational Awareness, Email

### RT7 SECURE DIGITAL VOICE

The Vocoder rate is adapted dynamically to allow optimal quality in all channels. Broadcast and Private-Lines selective call modes are supported, as well as automatic Late Entry.

### USAGE MODES

**Local User:** The operator uses a handset connected to the **RT7** front panel. The **RT7** provides an Address Book to initiate Private Line calls or to send locally entered Messages or files.

**Remote User:** The operator is situated away from the **RT7**. Audio input is via the Intercom connector. The **RT7** can then be operated via **MessagePoint, GatePoint or CommandPoint XL**.

### RT7 SECURITY

All over-the-air communications, locally stored messages and positions are encrypted. Access to the unit is restricted by means of an Access Code. A Zeroize function is provided from the keypad which erases all data and keys.



## VOICE/DATA MODE

Any time when PTT is pressed or a Voice call is initiated, the **RT7** will automatically go into 'Voice Mode'. Once voice communications is inactive for a time, the **RT7** will start or resume sending Data. The Voice/Data mode is indicated by an icon on the user interface.

## RT7 MODEM

The **RT7** has a built-in high performance data modem that connects to a single HF or V/UHF transceivers via the radio audio interface. This combined with a low-rate vocoder and built-in cryptography creates a robust secure digital voice (SDV) solution.

## JOINT OPERATIONS INTEROPERABILITY

The **RT7** interoperates with other **RT-Family** devices, providing seamless interoperability between various forces. The same Key Management System is used on all devices.

## EMAIL: MESSAGEPOINT, GATEPOINT, COMMANDPOINT XL

The **RT7** can connect with **MessagePoint, GatePoint or CommandPoint XL** Software via the Local Ethernet port to provide end-to-end Email (with attachments) and GSM SMS connectivity (via Gatepoint) or Situational Awareness capability.

## KEY MANAGEMENT & SYSTEM CONFIGURATION

The **RT Key Management Software (KMS256)** includes Key Management Tools and is provided on a CD along with the necessary cable and USB Key Fill Device.

The **RT System Configuration Software (SCS)** includes Network Configuration, Periodic position transfer, Address Book and CALLSIGN configuration.

**SCS and KMS256** is part of the **Configuration Bundle** which includes all required manuals, cables, Fill device and software for system start-up.

## POSITION TRANSFER

If configured to do so, position information is included with every Chat transmission and is sent periodically (configurable).

## RT7 ACCESSORIES

**Accessories - Included:** H-250 Handset (PAM17W), GPS Active Patch Antenna (TNC), Connector interface kit, FILL Device.

**Accessories – Required one per unit:** Radio Cable - Contact RapidM for list of radio specific cables.

**Accessories - Required one per network:** Configuration Bundle.

**Accessories - Optional:** 19" Mounting Tray.

RT7 HARDWARE					RT7 ENVIRONMENTAL				
SIZE & WEIGHT	212 x 178 x 89 mm (w x d x h), 2U, 19"/2, 3.4 kg				TEMPERATURE	Operating: -20°C to +60°C, Storage: -55°C to +85°C			
COLOUR	Saddlewood Black (RAL9004)				ENVIRONMENTAL	MIL-STD-810F Humidity, Shock, Vibration, Dust, IP65			
POWER	AC & DC (62IN-57A-8-3P)	90 – 264 VAC, 47 – 440 Hz, 100 – 370VDC			EMC / EMI	MIL-STD-461			
	DC (62IN-57A-8-4P)	9 – 36 VDC (MIL-STD-1275B)			SAFETY	IEC/EN 60950			
RT7 SOFTWARE & MODEM									
SERVICES	Chat, Text, QuickCodes, File Transfer, Template-based Forms, Position Transfer. Email and SMS via <b>MessagePoint, GatePoint or CommandPoint XL</b>								
SECURITY	Access code. Zeroize function for Emergency Clear. Tamper detection.								
CRYPTOGRAPHY	AES 256-bit (FIPS PUB 197). 256x different COMSEC and LINKSEC keys.								
MODEM	STANAG 4538 (3G), MIL-STD-188-141 App C, LDL, HDL & RDL Packet Mode, ARQ, Robust data extensions.								
ALE	STANAG 4538 (3G) Fast Link Set-up (FLSU), Linking Protection and Occupancy Detection.								
DIGITAL VOICE	Purpose-built Robust Digital Voice Waveform HF-2T. Automatic Rate Adjustment DRC. Automatic Late Entry resynchronization.								
VOCODER	300, 600, 1200 & 2400bps Low-rate Vocoder.								
DIGITAL VOICE PERFORMANCE	VOCODER RATE [bps]	END-TO-END LATENCY [s]	PESQ	CHANNEL USE	SPEECH QUALITY			UNDERSTAND-ABILITY LIMIT SNR [dB]	
					INTELLIGIBILITY	SPEAKER RECOGNITION	LATENCY & EMOTIONAL	CCIR POOR	AWGN
	2 400	1.6	3.1	Ground Wave	Very Good	Good	Acceptable	6.5	0.5
	1 200	2.2	3.0	Sky Wave	Good	Acceptable	Fair	4.0	-0.5
	600	2.2	2.4	Sky Wave	Acceptable	Fair	-	0.5	-3.0
300	4.4	1.7	Sky Wave	Fair	-	-	-2.0	-6.0	
OS AND BIT	Operating System: Linux. Comprehensive BIT (Built-In-Test), Continuous error detection.								
STORAGE	4 GB secure FLASH. Encrypted User Data Partition for Data-at-Rest secure storage.								
RT7 INTERFACES									
LINK INTERFACE (CMA14N)	Audio: 600Ω balanced TX & RX, PTT return (contact closure). Serial Interface: Control and Data port: RS-232 levels. RxD, TxD.								
ETHERNET (HOLIN RJ45)	Ethernet: 10/100 Base-T (IEEE 802.3U compatible), embedded TCP/IP Stack, Auto cross-over detection.								
INTERCOM (U-183)	Intercom Audio: 600Ω balanced.								
HANDSET	Front Panel, Mic (150 Ohm), Phone (300 - 1,000 Ohm), PTT, GND.								
USB FILL (PAM17W)	USB 2.0 Full Speed Host Port: 5 VDC (100 mA) output.								
GPS ANT. (TNC)	Connection for external active GPS Antenna. 3.0 VDC, 35 mA supply provided on connector.								
KEYBOARD	QWERTY layout with backlighting. Dedicated backlight control. Built-in ambient light sensor. Zeroize key sequence. Dim to black.								
DISPLAY	2.4" Colour OLED, QVGA resolution (320 x 240), 15-bit colour depth. Status LED shows new message and charge. Auto night mode.								

ORDERING INFORMATION	STOCK NUMBER	DESCRIPTION
RT7 TACTICAL TERMINAL – SDV & DATA: SERIAL LINK	RT7-TU-HSGPCVE4	RT7: Term 19"2U Modem 256b GPS BAU EN V4
CONFIGURATION BUNDLE: SCS, KMS256 & CABLES	RAP-BU-CFTKCVE4	Bundle: RT SCS, KMS256, Fill-D, Cbl EN V4

Distributed by:

**AUTHORIZED USA DISTRIBUTION BY:**

Cyntony Corporation  
195 Follen Road  
Lexington, Massachusetts  
sales@cyntony.com  
781-430-0675

cyntony  
customer attuned

RapidM

Copyright © 2021 Rapid Mobile (Pty) Ltd

Revision: RT7\_V4\_EN\_02D