



### Functions and Applications

- **Voice Encryptor:** Secure Digital Voice for Radio
- **Secure Data Modem:** Used by External Laptop or PC
- **Position Transfer:** Blue Force Tracking
- **Secure Military PDA:** On-Device Messaging
- **Deployment:** SOF, Dismounted, Vehicle and Base

### Features and Benefits

- **Robust Modem:** STANAG 4538, 3G ALE and ARQ
- **Extended Range:** 300 to 2400 bps Vocoder
- **Security:** AES-256 Encryption
- **Address Book:** Selective and Broadcast Calls
- **Position Transfer:** Built-In GPS Module
- **Any HF or V/UHF Radio:** Using 3 kHz Audio
- **Radio Remote Control:** Ease of Use
- **Interoperates with:** RT7, RT3 and RT1
- **RapidM PC Software:** Extends Capability
- **TacPoint Support**

\* TWELP Voice Coding by DSP Innovations Inc. ([www.dspini.com](http://www.dspini.com))  
 \*\* MELPE for USA Customers Only

### Voice, Position and Messaging

The RT5 is an ultra-rugged tactical terminal designed to provide secure voice, position and data messaging services using HF or V/UHF radios in the most challenging military environments.

### Modem

At its core, the RT5 incorporates the world-class RapidM embedded modem module, providing US MIL-STD and NATO STANAG standard waveforms. These waveforms guarantee robust reliability in transmitting critical information, such as target position coordinates, even in high radio spectrum noise environments or when radio signals are extremely weak.

### Secure Digital Voice

Leveraging next-generation radio speech encryption, RT Secure Digital Voice (SDV), utilises the new language-independent TWELP\*\* low-rate Vocoder. This is combined with powerful AES-256 encryption and modulated for HF/VHF/UHF use by a RapidM proprietary digital voice waveform, setting a new standard in secure tactical communication.

### Position Transfer

Deployed units promote situational awareness through periodic position broadcasts, allowing fellow RT5 units and TacPoint users to seamlessly track blue forces.

### Security

With a commitment to security, the RT5 ensures end-to-end encryption of all over-the-air communications through secure key generation and distribution. Access to the unit is further restricted with an access code and a zeroise function is provided to erase all data and keys.

## Key Management and System Configuration

The Key Management Software (KMS256) forms part of the configuration bundle and includes essential key management tools. It is supplied with the required cable and a key fill device for secure and efficient key loading.

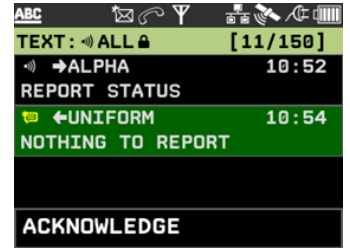
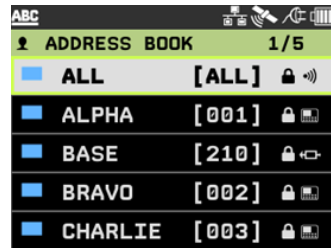
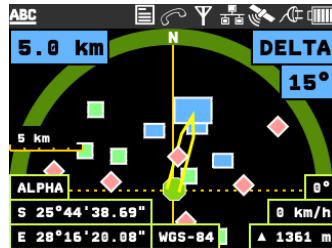
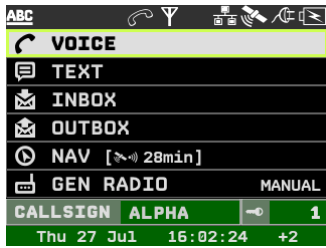
The System Configuration Software (SCS) enables streamlined configuration of the network, address book, and CALLSIGNS, ensuring seamless system setup and operation.

## Secure Messaging

The RT5 extends its capabilities beyond secure voice by offering fast, accurate messaging services such as real-time chat and QuickText, file transfers (e.g., images) and various report formats (e.g., CASEVAC, SITRAP). Moreover, it seamlessly integrates with email and SMS services over GSM networks.

## User Interface

The RT5 features an intuitive user interface that requires minimal training. Examples of the user-friendly design are shown below.



## Accessories

**Radio Cable (Required):** Please contact RapidM to select the appropriate cable compatible with your specific radio model.

**Mounting:** A range of accessories is available, including vehicle mounts, shock mounts, pouches, and cables. For detailed information and compatibility, please contact RapidM.



RT5 Hardware		RT5 Environmental							
Size and Weight	148 × 82 × 28 mm (W × D × H) 490 g Including Batteries	Temperature	Operating: -40°C to +60°C Storage: -55°C to +85°C						
Colour	Olive Drab (RAL6022)	Immersion	MIL-STD-810F Method 512.4 Proc 1, 30 Min at 1m						
Power	Battery	Environmental	MIL-STD-810F Humidity, Shock, Vibration, Dust						
	Extern.	EMC/EMI	MIL-STD-461						
Battery Life	>12 hrs (Operational Profile Dependant)	Safety	IEC/EN 60950						
RT5 Software and Modem									
Messaging	Chat, Text, QuickCodes, File Transfer, Template Forms and Position Transfer. Email and SMS via GatePoint.								
Security	AES 256-Bit. Zeroise Function. Tamper Detection. Access Control.								
Modem	STANAG 4538 3G LDL, HDL Packet Mode, ARQ, Robust Data Extensions.								
ALE	STANAG 4538 (3G) Fast Link Set-up (FLSU), Linking Protection, Occupancy Detection.								
Digital Voice	Purpose-Built Robust Digital Voice Waveform. Automatic Rate Adjustment. Late Entry Resynchronisation.								
Vocoder	300, 600, 1200 and 2400bps Low-Rate Vocoder *TWELP: Tri-Wave Excited Linear Prediction High Performance.								
Modem	High-Performance Serial Tone BLOS Modem (V/UHF Compatible) Featuring Adaptive Equalization. The Modem is Able to Deal with In-Band Interference and Multipath/Fading (Up to 10 ms, 30 Hz).								
Digital Voice Performance	Vocoder Rate [bps]	End-to-End Latency [s]	PESQ	Channel Use	Speech Quality			Understandability Limit SNR [dB]	
					Intelligibility	Speaker Recognition	Latency and 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.								
RT5 Interfaces									
Local	Keyboard	QWERTY Layout. Backlight Control. Built-In Ambient Light Sensor. Zeroise Key Sequence. Dim to Black.							
	Display	2.4" Colour OLED, QVGA Resolution (320 × 240), 15-Bit Colour Depth. Status LED for 'Message Waiting' and Charge Indication. Auto Night Mode.							
	GPS	16-Channel Receiver, -160 dBm Sensitivity, LNA, Embedded Active Patch Antenna.							
	USB Host	USB Host Port 5V (100mA) Output.							
	Ethernet	10/100 Base T (IEEE 802.3U Compatible), Embedded TCP/IP Stack, Auto Cross-Over Detection							
	Audio	10k Ohm Unbalanced 5 Vp-p Max.							
Link	Audio	Balanced, -40 to +0 dBm Adjustable into 600 ohm Load. PTT Output, Audio Return.							
	Serial	Control and Data Port: RS-232 Levels. Rx/D, Tx/D.							
	Power	5 – 36 V DC. From the Radio or Other Supply.							
Ordering Information		Stock Number	Description						
RT5 Tactical Terminal		RT5-TU-SB5DCVE4	RT5: Term Green Modem 256b GPS S/B EN V4						

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info@rapidm.com

+27 12 349 0000

https://www.rapidm.com/

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