RT – SECURE COMMUNICATIONS FOR ANY RADIO

GPS

Audio / Control / Power

Radio

Handset   Intercom

Key Fill

FUNCTIONS AND APPLICATIONS:

o **Voice Encryptor:** Secure Digital Voice for Radio

o **Position Broadcasts:** Force tracking

o **Secure Military PDA:** On-device Messaging

o **Deployment:** SOF, Dismounted, Vehicle and Base

FEATURES & BENEFITS:

o **Robust Modem:** STANAG 4538, 3G ALE & ARQ

o **Extended Range:** 300 to 2400 bps VOCODER

o **Security:** AES-256 Encryption

o **Address Book:** Selective and Broadcast calls

o **Position Transfer:** Built-in GPS Module

o **Any HF or V/UHF Radio:** Using 3 kHz audio

o **Radio Remote Control:** Ease of use

o **Interoperates with:** *RT7, RT3 & RT1*

o **RapidM PC Software:** Extends capability

o **RT CommandPoint** support

VOICE, MESSAGE, POSITION

The **RT5** is an ultra-rugged Tactical Terminal that works with any HF or V/UHF radio to provide secure voice, position and data messaging services. The **RT5** is purpose-built to meet a commander and team leader's critical Secure voice & data communication and navigation needs in extreme environments and under challenging conditions.

SECURE DIGITAL VOICE

The robust voice solution has superior performance in adverse channels. The Vocoder rate is adapted dynamically to allow optimal quality in all channels. Broadcast and Private-Line (point-to-point) modes are supported, as well as automatic late entry.

SECURITY

All over-the-air communications, messages and positions are encrypted. Access to the unit is restricted with an Access Code. A Zeroize function is provided to erase all data and keys.

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RapidM

RT5 Secure Digital Voice

The robust voice solution is designed for BLOS secure digital voice communication with superior performance in adverse channels. The Vocoder rate is adapted dynamically to allow optimal quality in all channels. Broadcast and Private-Line (point-to-point) modes are supported, as well as late entry.

RT5 Modem

The *RT5* has a built-in high performance data modem that connects to HF or V/UHF transceivers via the audio interface.

RT5 Secure Messaging

Chat and QuickCodes - provide flexibility and robustness, point-to-point or broadcast. Predefined Forms structure information for ease-of-use and drastic data compression.

RT5 Position Transfer

Position transfer can be configured to occur with every SDV and Chat transmission and on periodic intervals.

RT5 Configuration & Key Management

The Key Management Software (*KMS256*) includes Key Management Tools and is provided along with the necessary cable and Key Fill Device. *KMS256* is part of the Configuration Bundle.

The System Configuration Software (*SCS*) allows Network, Address Book and CALLSIGN Configuration.

RT5 Email: MessagePoint, GatePoint & CommandPoint

The *RT5* can connect with *MessagePoint, GatePoint* or *CommandPoint* Software via the Local Ethernet port to provide end-to-end Email (with attachments) and GSM SMS connectivity (via GatePoint).

RT5 Accessories

Radio Cable (required): Contact *RapidM* for appropriate cables to support your radio models.

Mounting: Vehicle mounts, shock mounts, pouches, cables, etc. Please contact *RapidM* for more information.

RT5 Hardware			RT5 Environmental	
Size & Weight	148 x 82 x 28 mm (w x d x 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**	2 x Standard AA-size cells or 2 x NiMH AA-size, internal charger	**Environmental**	MIL-STD-810F Humidity, Shock, Vibration, Dust
	Extern.	5 – 36 V DC MIL-STD-1275B vehicle power protection	**EMC / EMI**	MIL-STD-461
Battery Life	>12 hrs (Operational profile dependant)		**Safety**	IEC/EN 60950

RT5 Software & Modem	
Messaging	Chat, Text, QuickCodes, File Transfer, Template Forms, Position Transfer. Email and SMS via GatePoint.
Security	AES 256-bit. Zeroize 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 resynchronization.
Vocoder	300, 600, 1200 & 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			Understand-ability Limit SNR [dB]	
					Intelligibility	Speaker Recognition	Latency & Emotional	CCIR Poor	AWGN
	2 400	1.6	3.1	Gnd/W	Very Good	Good	Acceptable	6.5	0.5
	1 200	2.2	3.0	Sky/W	Good	Acceptable	Fair	4.0	-0.5
	600	2.2	2.4	Sky/W	Acceptable	Fair	-	0.5	-3.0
	300	4.4	1.7	Sky/W	Fair	-	-	-2.0	-6.0

RT5 Software & Modem (cont.)	
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. Zeroize key sequence. Dim to black.
	Display	2.4” Colour OLED, QVGA resolution (320 x 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. RxD, TxD.
	Power	5 – 36 V DC. From the radio or other supply.

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

Ordering Information	Stock Number	Description
RT5 Tactical Terminal	RT5–TU–SB5DCVE4	RT5: Term Green Modem 256b GPS S/B EN V4

Distributed by:

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