

ESN REF: HH-ACC-045 (A)

ESN RSM



- The RSM device is engineered to meet the Home Office requirement for ESN and the design is such that it replicates user familiarity of Tetra terminals
- Design is based on moulded halves sealed to IP67 standard using piston seal arrangement
- Different surface finish zones aid blind find of controls when used with or without gloves and is aesthetically engineered to promote a robust design
- All buttons use metal snap domes and have been carefully selected for reliability for more than 2 million actuations and a Crisp Tactile Feel
- Provision for lanyard attachment is incorporated with design
- Bluetooth 4.2 version
- Battery operation of in excess 15 hours under heavy audio traffic usage
- Wired USB version is also available with internal battery so as not to impact on the battery life of smart phone
- Wired/wireless version both have 'voice annunciation' capability. This can be useful for the user to hear 'Talk Group' selection, whisper mode on/off etc
- The popular Klickfast fixing or alternative makes it easy for the attachment to uniforms
- Design conceals a pressure vent to manage the internal pressure of RSM enclosure – supporting long service life, increasing reliability, and preventing deformations that could cause component failure
- Speaker and microphone ports are fitted with acoustic vents for protection from environmental contaminants that could impair their effectiveness. The acoustically transparent vents are engineered from a special 3M material that provides protection from dirt, dust, oils, perspiration and water with excellent sound transmission
- The side buttons are protected/ isolated from each other with a ribbed design which makes it easier to find and activate

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BT RSM is based on Dual Mode BT 4.2 Module and is the newest generation of fully integrated Dual Mode Bluetooth and Bluetooth Low Energy (BLE) modules. This offers better performances in every single aspect to the other Bluetooth Classical Modules. This module is based on the Qualcomm CSR 8670 RF Chip and is controlled by a Texas Instruments MSP430 processor.

The BT module offers the highest audio quality with ability to stream audio and includes a digital interface at a user defined sampling rate or differential analogue output with 96dB SNR integrated DAC and -87dB Stereo separation. Class2 provides 20m range and lowest power consumption with ability to work with Bluetooth Low Energy.

BT Features:

- Dual Mode: Bluetooth and Bluetooth Low Energy (BLE)
- Backwards compatible with 1.1, 2.0, 2.1 + EDR and 3.0
- Embedded Bluetooth Protocol Stack
- Supports HFP, A2DP Sync, AVRCP, PBAP
- Supports HFP-Ag and A2DP Source for Transmit
- Supports IAP1/AP2 profiles for connection to iOS devices
- Supports aptX, (inc. Low latency), aac, sbs and mp3 codecs
- Simple UART and GPIO interface for command and control

BT Specification:ecifications

- Antenna Type: Integrated, Chip
- Current - Receiving:15mA
- Current - Transmitting:15Ma
- Current - Sleep Mode: <1mA
- Data Rate:3Mbps
- Frequency:2.4GHz
- Memory Size:16MB Flash
- Modulation: DPSK, DQPSK, GFSK
- Mounting Type: Surface Mount
- Operating Temperature:-40°C ~ 85°C
- Package / Case: Module
- Power - Output:10dBm
- Protocol: Bluetooth v4.2 Dual Mode
- Transmit Power: BER/EDR Class 2 <4dBm, BLE < 10 dBm
- Sensitivity:-88dBm
- Serial Interfaces:I²C, I²S, SPI, UART, USB
- Voltage - Supply:3.3 V ~ 4.7 V
- DAC Resolution: 16 bits
- DAC Output Sample Rate: 8kHz to 90 kHz
- DAC SNR: 96 Db
- APPROVALS: Regulatory – CE, FCC, IC, JRF, KC

Features:

- Talk Group Selector with volume control
- Large PTT Button
- Emergency Key
- 2x Un-Assigned Button Function
- Superb receive audio quality
- High quality microphone with immunity from GSM/TDMA noise.

Mechanical Characteristics

Weight	160 grams
Operating Temperature	-30 °C to +70 °C
Cable USB C	Polyurethane, colour black
Cable Pull	30 lbs
Molding :	Black ABS
Size:	81x65.5x32 mm
USB C Coiled Cord (5 mm in	Black polyurethane)

Electrical Characteristics (Microphone)

Type	Electret Noise Cancelling
Sensitivity	-44dB +/- 2dB @ 1KHz
Frequency Response	100 to 5 KHz (-8dB)
Operating Voltage	1.0V to 10V
Impedance	2K2 ohms

Electrical Characteristics (Speaker)

Type: Mylar Moving Coil	
Impedance:	4 ohms @ 1500 Hz
Sensitivity (1kHz):	95 +/- 3 db
Max output:	2.5 W
Frequency Response:	100 to 5.4KHz
SNR:	104 dB

Battery Type:	1000 mA/Hr Li-ion
Depth of Charge:	80% after 500 charge cycles
Battery Life: 1000 cycles (if properly charged/ discharged)	