

Loud, clear and customisable audio in a rugged, dependable and connected device. The R7 Provides next-level noise cancelling, loudness and clarity, excelling where audio communications can be challenging, so your team can hear and be heard anywhere you operate.

Available with a 2.4 inch display and keypad or without depending on the users needs. All models feature front and rear microphones for advanced noise cancelling, front speaker behind the keypad and a slim long-lasting battery.



## Specifications

General				
	R7 FULL KEYPAD MODEL (FKP)		R7 AND R7A NO KEYPAD MODEL (NKP)	
Band	UHF	VHF	UHF	VHF
Frequency	400-527 MHz	136-174 MHz	400-527 MHz	136-174 MHz
High Power Output	4 W	5 W	4 W	5 W
Low Power Output	1 W			
Channel Spacing	12.5 kHz, 20 kHz, 25 kHz			
Channel Capacity	1000 Channels		64 Channels	
Display	2.4" 320 x 240 px. QVGA display, with up to 10 lines of text		N/A	
FCC Description	AZ489FT7143	AZ489FT7144	AZ489FT7143	AZ489FT7144
IC Description	109U-89FT7143	109U-89FT7144	109U-89FT7143	109U-89FT7144
Power Supply (Nominal)	7.5 V			
<b>R7 w/ 2200 mAh Slim IMPRES Li-Ion battery (PMNN4807)</b>				
Dimensions (H x W x D)	132 x 56 x 35 mm		132 x 56 x 31 mm	
Weight	316 g		289 g	
Digital / Analogue Battery Life	19 / 14.5 hrs	20 / 15 hrs	19 / 14.5 hrs	20 / 15 hrs
Operating Temperature	-20 °C to 60 °C			
<b>R7 w/ 2450 mAh Li-Ion battery (PMNN4808)</b>				
Dimensions (H x W x D)	132 x 56 x 41 mm		132 x 56 x 37 mm	
Weight	346 g		319 g	
Digital / Analogue Battery Life	21.5 / 16.5 hrs	22 / 17 hrs	21.5 / 16.5 hrs	22 / 17 hrs
Operating Temperature	-20 °C to 60 °C			
<b>R7 w/ 2850 mAh IMPRES Li-Ion battery (PMNN4809)</b>				
Dimensions (H x W x D)	132 x 56 x 35mm		132 x 56 x 31mm	
Weight	333 g		306 g	
Digital / Analogue Battery Life	25 / 19 hrs	26 / 19.5 hrs	25 / 19 hrs	26 / 19.5 hrs
Operating Temperature	-20 °C to 60 °C			
<b>R7 w/ 3200 mAh HazLoc IMPRES Li-Ion battery (PMNN4810)</b>				
Dimensions (H x W x D)	132 x 56 x 41 mm		132 x 56 x 37 mm	
Weight	366 g		339 g	
Digital / Analogue Battery Life	28 / 21.5 hrs	29 / 22 hrs	28 / 21.5 hrs	29 / 22 hrs
Operating Temperature	-20 °C to 60 °C			

### Call Systems Technology Ltd

Unit 240, Centennial Park, Elstree, Hertfordshire, WD6 3SJ  
Registered address: 50 Seymour Street, London W1H 7JG  
Registered in England No. 4025235 • VAT Reg. No. GB 220 8954 10

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# Specifications

## Transmitter Specifications

<b>Channel Spacing</b>	12.5 kHz, 20 kHz, 25 kHz
<b>4FSK Digital Modulation</b>	<ul style="list-style-type: none"><li>- 12.5 kHz Data Only: 7K60F1D &amp; 7K60FXD</li><li>- 12.5 kHz Data &amp; Voice: 7K60F1E &amp; 7K60FXE</li><li>- Combination of 12.5 kHz Voice and Data: 7K60F1W</li></ul>
<b>Digital Protocol</b>	<ul style="list-style-type: none"><li>- ETSI TS 102 361-1, -2, -3, -4</li><li>- DMR Tier II, III</li></ul>
<b>Conducted/Radiated Emissions (TIA603D)</b>	<ul style="list-style-type: none"><li>- -36 dBm &lt; 1 GHz</li><li>- -30 dBm &gt; 1 GHz</li></ul>
<b>Adjacent Channel Power</b>	<ul style="list-style-type: none"><li>- 60 dB @ 12.5 kHz</li><li>- 70 dB @ 20 kHz / 25 kHz</li></ul>
<b>Frequency Stability</b>	<ul style="list-style-type: none"><li>- +/-0.5 ppm</li></ul>

## Receiver Specifications

<b>Analogue Sensitivity (12dB SINAD)</b>	0.16 µV (typical)
<b>Digital Sensitivity (5% BER)</b>	0.14 µV (typical)
<b>Intermodulation (TIA603D)</b>	70 dB
<b>Adjacent Channel Selectivity, (TIA603A)-1T</b>	<ul style="list-style-type: none"><li>- 60 dB @ 12.5 kHz</li><li>- 70 dB @ 20 kHz / 25 kHz</li></ul>
<b>Adjacent Channel Selectivity, (TIA603D)-2T</b>	<ul style="list-style-type: none"><li>- 45 dB @ 12.5 kHz</li><li>- 70 dB @ 20 kHz / 25 kHz</li></ul>
<b>Spurious Rejection (TIA603D)</b>	70 dB

## Gnss Specifications

<b>Constellation Support</b>	GPS, GLONASS, BEIDOU, GALILEO
<b>Time To First Fix, Cold Start</b>	≤ 60 seconds
<b>Time To First Fix, Hot Start</b>	≤ 10 seconds
<b>Horizontal Accuracy</b>	< 5 metres

## Wi-Fi Specifications

<b>Frequency Range</b>	2.4 GHz, 5 GHz
<b>Standards Supported</b>	Wi-Fi 5 / IEEE 802.11a/b/g/n/ac
<b>Security Protocol Supported</b>	WPA-3, WPA-2
<b>Maximum Number of SSIDs</b>	128 (64 for NKP Models)

## HAZLOC CERTIFICATION

ANSI/UL TIA 4950 and CAN/CSA C22.2 No. 157-92 as intrinsically safe for use in Class I, II, III, Division 1, Groups C, D, E, F, G, Division 2, Groups A, B, C, D

## Bluetooth Specifications

<b>Version</b>	5.2
<b>Range</b>	Class 2, 10 m
<b>Supported Profiles</b>	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Personal Area Network (PAN), Generic Attributes (GATT), In-door location (Bluetooth LE Passive Scanning)
<b>Simultaneous Connections</b>	1 audio accessory and up to 4 data devices

## Audio Specifications

<b>Digital Vocoder Type</b>	AMBE+2
<b>Audio Response (TIA603D)</b>	+1, -3 dB
<b>Audio Output Power (Rated/Max)</b>	1 W / 3 W
<b>Audio Distortion at Rated Audio</b>	≤1.5%
<b>Maximum Speech Loudness by Default (ISO5326)</b>	102 phon @ 30 cm
<b>Maximum Programmable Speech Loudness (Extra Loud Mode, Level 3)</b>	107 phon @ 30cm
<b>Hum and Noise</b>	<ul style="list-style-type: none"><li>- -40 dB @ 12.5 kHz</li><li>- -45 dB @ 20 kHz / 25 kHz</li></ul>
<b>Conducted Spurious Emissions (TIA603D)</b>	-57 dBm

## Environmental Specifications

<b>Operating Temperature</b>	-30°C to 60°C
<b>Storage Temperature</b>	-40 °C to 85 °C
<b>Thermal Shock</b>	Per MIL-STD
<b>Humidity</b>	Per MIL-STD
<b>Electrostatic Discharge</b>	IEC 61000-4-2 Level 4
<b>Dust and Water Intrusion</b>	IP68 (submersion up to 2m, 2hrs) IP66 for high pressure-water resistance per IEC 60529
<b>Salt Fog</b>	5% NaCl for 8 hrs at 35 °C, 16 hrs standing
<b>Packaging Test</b>	MIL-STD 810D and E

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