

# NX-5200/5300/5400 NXDN™ P25 DMR Gen2 Bluetooth® FleetSync™

## VHF/UHF/700-800MHz MULTI-PROTOCOL DIGITAL & ANALOG PORTABLE RADIOS

The NX-5000 Series offers unsurpassed interoperability for a wide variety of users as it supports three digital CAIs — NXDN™, DMR (Tier 2 & 3) and P25 (Phase 1 & 2) — plus FM analog in a single radio. Best of all, a desired CAI can be selected at will, giving you the freedom to migrate at your own pace — whether you are intent on going fully digital, undecided about which digital system to pick, or just wanting to maintain both digital and analog for a while. A NX-5000 radio can simultaneously support two digital protocols plus analog, offering the following combinations: FM/DMR/NXDN, FM/NXDN/P25, and FM/DMR/P25.

### Features

- Multi-Digital operation in NXDN, DMR (Tier 2 & 3), and P25 (Phase 1 & 2)
- Any combination of two digital protocols may be selected from NXDN, DMR, and P25
- Mixed Digital & FM Analog Operation allows intelligent migration in mixed sites and easy migration with digital radios in other sites
- Large, Color 1.74" (240 x 180 pixels) Transflective TFT Display for better interface even in direct sunlight and with use of polarized sunglasses
- Easy to follow GUI for at-a-glance operational status and Multi-line Text to convey information
- 4-way Directional-pad (D-pad) and 2-Position Lever Switch for intuitive control
- Built-In GPS Receiver/Antenna for effective fleet and incident management
- Bluetooth® Module Built-in for hands-free and IoT applications operation
- Renowned KENWOOD Audio Quality achieved with Active Noise Reduction (ANR) that utilizes built-in DSP with two microphones for suppression of ambient noise
- Built-in 56-bit DES Encryption
- Optional 256-bit AES Encryption
- Built-in Motion Sensor for man down detection
- microSD/microSDHC Up to 2GB/32GB Memory Card Slot for increased memory capacity for "Voice & Data"
- IP67/68 and MIL-STD-810 C/D/E/F/G
- 6 W (136-174 MHz) Models
- 5 W (380-470, 450-520 MHz) Models
- 3 W (700/800 MHz) Models
- Full Key Models (w/numeric keypad) and Standard Key Models (w/o numeric keypad)
- Maximum of 1024 CH, 128 Zones (4000 Ch. Opt)
- 1 W Speaker Audio

### Digital – NXDN™ Mode

- |                             |                                 |
|-----------------------------|---------------------------------|
| NXDN Conventional           | Remote Stun/Kill                |
| NXDN Type-C & Gen2 Trunking | Remote Check                    |
| 6.25 & 12.5 kHz Channels    | Over-the-Air Alias (OAA)        |
| Paging Call                 | Over-the-Air Programming (OTAP) |
| Emergency Call              | Short & Long Data Messages      |
| All Group Call              | NXDN Digital Scrambler          |
| Status Messaging            | 2-Tone (Digital)                |

### Digital – DMR Mode

- |                                    |                          |
|------------------------------------|--------------------------|
| Two-slot TDMA in 12.5 kHz channels | Call Interruption        |
| DMR Tier 2 Conventional            | Dual-slot Direct Mode    |
| DMR Tier 3 Trunking                | Energy Efficient         |
| DMR Over-the-Air Programming       | Optional ARC4 encryption |

### Digital – P25 Mode

- |  |                                    |
|--|------------------------------------|
| P25 Phase 1 Conventional/Trunked Operation | Remote Monitor / Check / Inhibit   |
| P25 Phase 2 Trunked Operation              | Encryption Key Zeroize & Retention |
| Talk Group ID Lists                        | P25 Over-the-Air Re-keying         |
| Individual ID Lists                        | P25 Over-the-Air Programming       |
| Caller ID Display                          | Optional ARC4 encryption           |
| 2-Tone (Digital)                           |                                    |

### FM Modes – General

- |   |  |
|---|--|
| Conventional & LTR Zones  | MDC-1200: PTT ID ANI / Caller ID Display, Emergency, Radio Check / Inhibit |
| NPSPAC (USA only) Channels (±4.0 Modulation)  | QT / DQT & Two-Tone  |
| FleetSync®/II: PTT ID ANI / Caller ID Display, Selective Group Call, Emergency Status / Text Messages | Built-in Voice Inversion Scrambler   |

### Intelligent Battery System (option)

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|--|--|
| System consists of the Rapid Charger (KSC-Y32), and Battery Reader (KAS-12) software Up to 60 Rapid Chargers can be chain-connected to a PC installed with the KAS-12. | KAS-12 Battery Reader software can display and manage information including battery type, model name, voltage, temperature, discharge cycle, expected life, and remaining capacity Up to 5,000 batteries can be managed at a time. (Requires an additional option) |
|--|--|



Full-Keypad & Standard Models

# Accessories

All accessories may not be available in all markets. Contact an authorized KENWOOD dealer for details and complete list of all accessories.

<p><b>KNB-L1/L2/L3</b> Li-ion Battery Pack (IP67/68 Immersion)</p> 	<p><b>KSC-Y32</b> Rapid Charger</p> 	<p><b>KRA-22</b> VHF Helical Antenna (Low Profile)</p> 	<p><b>KRA-32</b> 700/800MHz Whip Antenna</p> 	<p><b>KMC-70M</b> Speaker Microphone (with dual-sided 2-mic for superior ANR, IP67)</p> 
<p><b>KNB-N4</b> Ni-MH Battery Pack (IP67/68 Immersion)</p> 	<p><b>KSC-32</b> Rapid Charger</p> 	<p><b>KRA-23</b> UHF Helical Antenna (Low Profile)</p> 	<p><b>KRA-41</b> UHF Stubby Antenna</p> 	<p><b>KBH-11</b> Belt Clip (2.5")</p> 
<p><b>KNB-LS5CU</b> Li-ion Battery (2,000mAh)</p> 	<p><b>KSC-326AK</b> Rapid Charger (6-unit Rapid Rate)</p> 	<p><b>KRA-26</b> VHF Helical Antenna (Standard Length)</p> 	<p><b>KRA-42</b> UHF Stubby Antenna</p> 	<p><b>KWD-AE30/AE31</b> Secure Cryptographic Module</p> 
<p><b>KNB-LS7M</b> Li-ion Battery (3,800mAh) CSA US Intrinsically Safe</p> 	<p><b>KAS-12/PRO</b> Battery Reader (PC Software)</p> 	<p><b>KRA-27</b> UHF Whip Antenna (Standard Length)</p> 	<p><b>KMC-72W</b> Speaker Microphone (IP67)</p> 	<p><b>KPG-180AP</b> OTAP Manager</p> 
<p><b>KBP-8</b> Alkaline Battery Case</p> 				

# Specifications

General	NX-5200	NX-5300	NX-5400
Frequency Range	136-174 MHz	Type 1: 450-520 MHz Type 2: 380-470 MHz	RX: 763-776, 851-870 MHz TX: 763-776, 793-806, 806-825, 851-870 MHz
Max. Channels Per Radio	1024 (Up to 4000 CH with option)		
Number of Zones	128		
Max. Channels per Zone	512		
Channel Spacing	Analog: 12.5/15/20/25/30* kHz Digital: 6.25 kHz/12.5 kHz		
Power Supply	7.5V DC ± 20%		
Battery Life	(5-5-90/10-10-80 duty cycle)		
KNB-L1 (2,000 mAh)	10 hours / 6.5 hours		
KNB-L2 (2,600 mAh)	12.5 hours / 8.5 hours		
KNB-L3 (3,400 mAh)	17 hours / 11 hours		
KNB-N4 (2,500 mAh)	12 hours / 8.5 hours		
KBP-8 (w/AA x12)	High Power 11 hours / 8 hours / Low Power 26 hours / 18.5 hours		
Operating Temperature	-22°F to +140°F (-30°C to +60°C)		
Frequency Stability	± 0.5 ppm		
Dimensions/Weight Radio w/battery	(W x H x D) Projections Not Included		
KNB-L1 (2,000 mAh)	2.28 x 5.47 x 1.44 in. (58.0 x 138.9 x 36.5 mm)		13.5 oz (382 g)
KNB-L2 (2,600 mAh)	2.28 x 5.47 x 1.56 in. (58.0 x 138.9 x 39.5 mm)		14.3 oz (406 g)
KNB-L3 (3,400 mAh)	2.28 x 5.47 x 1.77 in. (58.0 x 138.9 x 44.9 mm)		15.8 oz (449 g)
KNB-N4 (2,500 mAh)	2.28 x 6.55 x 1.78 in. (58.0 x 166.4 x 45.2 mm)		20.4 oz (579 g)
KBP-8	2.64 x 8.59 x 2.12 in. (67.0 x 218.3 x 53.9 mm)		51 oz (712 g)
FCC ID	Type 1: K44431400 Type 2:	K44431500 K44431501	ALH442000
IC Certification	Type 1: 282F-431400 Type 2:	282F-431501	282D-442000

\*25/30 kHz in VHF/UHF Bands (except T-Band) are not included in the models sold in the USA or US territories. Analog measurements made per TIA603. Specifications are measured according to applicable standards. P25 Digital measurements made per TIA 102CAAA and specifications shown are typical. Specifications are subject to change without notice, due to advancements in technology.

Receiver	NX-5200	NX5300	NX-5400
Sensitivity	NXDN 6.25 kHz Digital (3% BER): 0.20 µV NXDN 12.5 kHz Digital (3% BER): 0.25 µV DMR Digital (5% BER): 0.25 µV DMR Digital (1% BER): 0.40 µV P25 Digital (5% BER): 0.25 µV P25 Digital (1% BER): 0.40 µV Analog (12dB SINAD): 0.25 µV		
Selectivity	Analog @ 12.5kHz: 67 dB Analog @ 25kHz:	73 dB	64 dB
Intermodulation	73 dB		75 dB
Spurious Rejection	80 dB	75 dB	
Audio Distortion	3%		
Audio Output Power	500 mW/8Q (3% Distortion) / 1000 mW/8Q (5% Distortion)		
Transmitter	NX-5200	NX-5300	NX-5400
RF Power Output	6 W to 1 W	5 W to 1 W	3 W to 1 W
Spurious Emission	-70 dB		
FM Hum & Noise	Analog @ 12.5kHz: 20.4 dB (579 g) Analog @ 25kHz: 45 dB	40 dB	
Audio Distortion	Less than 2%		
Emission Designator	16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W, 8K30F1E, 8K30F1D, 8K30F7W, 7K60FXE, 7K60FXD, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D	16K0F3E, 14K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W, 8K30F1E, 8K30F1D, 8K30F7W, 7K60FXE, 7K60FXD, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D	

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# MIL-STD & IP

MIL Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures	MIL 810G Methods/Procedures
Low Pressure	5001/Procedure I	5002/Procedure I, II	5003/Procedure I, II	5004/Procedure I, II	5005/Procedure I, II
High Temperature	5011/Procedure I, II	5012/Procedure I, II	5013/Procedure I, II	5014/Procedure I, II	5015/Procedure I, II
Low Temperature	5021/Procedure I	5022/Procedure I, II	5023/Procedure I, II	5024/Procedure I, II	5025/Procedure I, II
Temperature Shock	5031/Procedure I	5032/Procedure I	5033/Procedure I	5034/Procedure I, II	5035/Procedure I
Solar Radiation	5051/Procedure I	5052/Procedure I	5053/Procedure I	5054/Procedure I	5055/Procedure I
Rain	5061/Procedure I, II	5062/Procedure I, II	5063/Procedure I, II	5064/Procedure I, III	5065/Procedure I, III
Humidity	5071/Procedure I, II	5072/Procedure II, III	5073/Procedure II, III	5074	5075/Procedure II
Salt Fog	5091/Procedure I	5092/Procedure I	5093/Procedure I	5094	5095
Dust	5101/Procedure I	5102/Procedure I	5103/Procedure I	5104/Procedure I, III	5105/Procedure I
Vibration	5142/Procedure VIII, X	5143/Procedure I	5144/Procedure I	5145/Procedure I	5146/Procedure I
Shock	5162/Procedure I, II, V	5163/Procedure I, IV	5164/Procedure I, IV	5165/Procedure I, IV	5166/Procedure I, IV
Immersion				5124/Procedure I	5125/Procedure I

## International Protection Standard

Dust & Water Protection	IP54/55
Immersion	IP67/68*

\*Conditions: Portable radio immersed for 2 hours at a depth of 1 meter (IP68=1m/2H)

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