KENWOOD

NXR-1000 series
Radios – For each and every

NXDN™ DMR

NXR-1700
VHF REPEATER

MULTI-MODE, SINGLE-MINDED, SPACE-SAVING SOLUTION

This compact, multi-mode conventional repeater – key digital communications equipment that is a KENWOOD specialty – supports the features and performance to make it a worthy successor to the existing DMR and NXDN repeaters. The CAI is chosen when ordering to set up individual units for either DMR or NXDN, with the option of keeping the factory default setting of FM analog.

GENERAL FEATURES

- 50 – 1 W RF Output Power (Up to 50 W@50%, 25 W@100% Duty Cycle)
- Light, Compact and Space-Efficient to Fit 2 Repeaters in a 1U Height, 19-inch Rack
- Large 1.71-inch OLED with Icons and Numeric Displays
- Thermal-Controlled Cooling Fan
- External Power Supply
- Up to 32 Channels
- Dual Digital Protocol: DMR Tier II / NXDN Conventional (programmable one at a time)
- USB-A Connector Ready for Audio Accessories
- External In/Out Pin from DB25
- Non-repeat Simplex / Semi-Duplex Mode for Analog and NXDN Digital
- Hot Standby System Redundancy
- Built-in IP Network Adapter
- Multicast Routing
- SNMP Protocol for Direct Reporting to a Generic System*3
- Supports G.711 Audio Codec (for Test Console and Third-party Applications)
- IP Remote Management (Monitor / Control / Programming / Test Console)
- Ready for IPIF to External Applications (for IP Console, OTAP) / Voice Logging
- Built-in SIP IF without External IP Console or Gateway (Digital Only)*1, *2, *3
- IP Remote Control Interface (IPRCI)*3
- Enhanced Security (HTTPS)
- CW ID
- Hang Timer
- Multi-Site Conventional IP Network up to 16 Sites (for both Digital and Analog)*2
- Voting Repeater + Up to 15 Receivers (Analog / NXDN / DMR)*2, *3
- IP Networking Compatible with NXR-710/810 & TKR-D710/D810 Series Repeaters (Able to Swap/Add-on as a part of existing digital conventional systems in the field)

DIGITAL – COMMON

- Built-in AMBE+2™ Vocoder
- Mixed Analog / Digital Operation
- Site Roaming Using Beacon
- RF-Link: NXDN / DMR*3
- Repeat Encrypted Voice/Data (AES / DES / DMR Enhanced Encryption)
- User List / Site Group Table
- Radio Access Control*1, *3

DIGITAL – NXDN

- FDMA – Very narrow 6.25 kHz & narrow 12.5 kHz bandwidths
- NXDN Conventional Operation*2, *3

DIGITAL – DMR

- TDMA 2-slot 12.5 kHz bandwidth equivalent to 6.25 kHz very narrow bandwidth
- DMR Tier II Conventional Operation*2
- Call Interruption

FM ANALOG

- FM Conventional Operation
- Multiple QT/DQT

*1: Requires version upgrade of terminal to obtain compatibility with this model
*2: Software option
*3: Later available



Informative Front OLED Display



A large OLED display featured on the front panel is capable of displaying the following information: MAC/IP Address, RSSI/TX Power Setting Icon, Channel Number/Name, and RF Frequency as well as Firmware/ESN/License/Error information and other statuses.

Size Comparison with Conventional Repeaters

Volumetric capacity can be reduced even when compared with the NXR-710 and TKR-D710 repeaters.



The NXR-1000 Series repeaters require only a quarter of the rack space compared to the NXR-710/810 or TKR-D710/D810 Series models.



In addition, the NXR-1000 Series repeaters take up only half the rack space of other 1U repeaters that are 19-inch wide.

SPECIFICATIONS

GENERAL		NXR-1700
Frequency Range		136 - 174 MHz
Channel Capacity		32
Channel Spacing	Analog	30* / 25 */ 15 / 12.5 kHz
	Digital	12.5 / 6.25 kHz
PLL Channel Step		2.5 / 3.125 / 5 / 6.25 kHz
Frequency Stability		± 0.5 ppm
Power Supply		10.8 - 15.6 V DC
Current Drain	Standby	0.6 A
	Transmitting	12.0 A (Max. power), 9.0 A (25 W)
Operating Temperature		-22 °F to + 140 °F (-30 °C to +60 °C)
Antenna Impedance		50 Ω
Dimensions (W x H x D)	Incl. Projections	8.44 x 1.73 x 9.56 in (214.5 x 44.0 x 242.9 mm)
	Excl. Projections	8.21 x 1.73 x 8.33 in (208.5 x 44.0 x 211.5 mm)
Weight (net)		4.18 lb (1.9 kg)
FCC ID		K44513100
ISED Certification		282F-513100

* 25 / 30 kHz in VHF Band excluding T-Band are not included in the models sold in the USA or US territories.

Specifications are measured according to applicable standards.
Analog measurements made per TIA603.
Specifications shown are typical and subject to change without notice, due to advancements in technology.
Details and timing of firmware and software updates are subject to change without notice.

RECEIVER		NXR-1700
Sensitivity	DMR (5 % BER)	0.22 µV
	DMR (1 % BER)	0.28 µV
	NXDN (3 % BER) 12.5 / 6.25 kHz	0.25 / 0.20 µV
	Analog (12 dB SINAD)	0.25 µV
Selectivity	Analog 25 / 12.5 kHz (TIA603)	83 / 77 dB
	Analog 25 / 12.5 kHz (TIA603E)	80 / 50 dB
FM Hum & Noise	Analog 25 / 12.5 kHz	55 / 50 dB
Intermodulation		80 dB
Spurious Rejection		90 dB
TRANSMITTER		**NXR-1700**
RF Output Power		50 - 1 W (50 W @ 50% Duty, 25 W @ 100 % Duty)
Spurious Emission		-80 dB
FM Hum & Noise	Analog 25 / 12.5 kHz	55 / 50 dB
Audio Distortion		1 %
Digital Protocol (DMR)		ETSI TS 102 361-1, -2, -3
Emission Designator		16K0F3E, 11K0F3E, 7K60FXD, 7K60F7D, 7K60FXE, 7K60F7E, 7K60FXW, 7K60F7W, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D

APPLICABLE ENVIRONMENTAL SPECIFICATIONS

MIL-STD	810F	810G	810H
High Temperature	501.4/Procedure I , II	501.5/Procedure I , II	501.7/Procedure I , II
Low Temperature	502.4/Procedure II	502.5/Procedure II	502.7/Procedure II
Temperature Shock	503.4/Procedure I , II	503.5/Procedure I	503.7/Procedure I

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