# KENWOOD

## NEXEDGE®

**One Repeater with Multi-Protocol Support**

# NXR-1700E

## VHF ANALOG & DIGITAL REPEATER

NXDN® DMR

### MULTI-MODE, SPACE SAVING SOLUTION

The Kenwood NXR-1700E repeater continues the line of migration friendly and forward thinking infrastructure to offer the ultimate in modern scalability and security for analog, NXDN and DMR two-way systems in a new and compact form-factor. Whether you are managing a single repeater, a wide area multi-site system or are managing multiple systems remotely, the NXR-1700E brings forward the same great digital two-way system capabilities while introducing the native ability to network analog and digital voice and data calls, enhanced secure remote programming, support for SSL certificates, SNMP monitoring, event and hardware logging, as well as tiered user management roles. For IT managers, this powerful repeater easily fits within modern organizational and technical requirements for support. For RF professionals the NXR-1700E is the perfect solution for an extensive range of customer needs.



## Features

50 – 1 W RF Output Power (Up to 50 W @ 50%, 25 W @ 100% Duty Cycle)
Light, Compact and Space-Efficient
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[*2, *3] (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 Digitall[*2, *3]
Hot Standby System Redundancy
Built-in IP Network Adapter
Unicast and Multicast Call Routing
SNMP Protocol for Direct Reporting to a Generic System[*3]
Supports G.711 Audio Codec (for Test onsole 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]
IP Networking Compatible with NXR-5000 (NXDN)[*2,*3], legacy KTI-3 (NXDN)[*2,*3] and KTI-5 (DMR)[*2]

## Digital – Common

Built-in AMBE+2™ Vocoder
Mixed Analog / Digital Operation
Site Roaming with 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® Mode

NXDN Digital Voting[*2 *3]
NXDN Digital Site Roaming[*3]
NXDN RF Link[*3]

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

## Digital – DMR Mode

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

DMR Site Roaming
DMR Auto Slot Select

## FM Modes – General

FM Conventional Operation
Multiple QT/DQT

Analog call routing
Voting

[*1] Requires version upgrade of terminal to obtain compatibility with this model
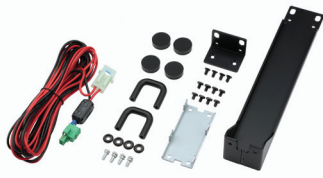[*2] Software option
[*3] Future release

## Accessories

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

**Supplied Accessories**

DC Power Cable
Single mounting bracket
Dual mounting bracket
Rack handles



Example of rack mount options.

## Specifications

| General | NXR-1700E |
|---|---|
| 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 |
| 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 ºC to +60 ºC) |
| Frequency Stability | ± 0.5 ppm |
| Antenna Impedance | 50 Ω |
| Dimensions | (W x H x D) Projections Not Included |
| | 8.21 x 1.73 x 8.33 in |
| | (208.5 x 44.0 x 211.5 mm) |
| Weight Radio | 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.
Analog measurements made per TIA603. Specifications are measured according to applicable standards.
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-1700E |
|---|---|
| Sensitivity | |
| DMR (5 % BER) | 0.22 μV |
| DMR (1 % BER) | 0.28 μV |
| NXDN 12.5 / 6.25 kHz (3% BER) | 0.25 / 0.20 μV |
| Analog (12dB SINAD) | 0.25 μV |
| Selectivity | |
| Analog @ 25 / 12.5kHz (TIA603) | 83 / 77 dB |
| Analog @ 25 / 12.5kHz (TIA603E) | 80 / 50 dB |
| FM Hum & Noise | |
| Analog @ 12.5kHz | 50 dB |
| Analog @ 25kHz | 55 dB |
| Intermodulation | 80 dB |
| Spurious Rejection | 90 dB |

| Transmitter | NXR-1700E |
|---|---|
| RF Power Output | 50 - 1 W (50 W @ 50% Duty, 25 W @ 100 % Duty) |
| Spurious Emission | -80 dB |
| FM Hum & Noise | |
| Analog @ 12.5kHz | 50 dB |
| Analog @ 25kHz | 55 dB |
| Audio Distortion | 1% |
| Emission Designator | 16K0F3E, 11K0F3E, 7K60FXD, 7K60F7D, 7K60FXE, 7K60F7E, 7K60FXW, 7K60F7W, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D |

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## MIL-STD & IP

| MIL Standard | MIL 810F Methods/Procedures | MIL 810G Methods/Procedures | MIL 810H Methods/Procedures |
|---|---|---|---|
| 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 |