KENWOOD

NEXEDGE®

Release Notes

NXR-1000 series R2.0

KPG-D7 R2.0

Last Updated: 20. July. 2023
Language: English
Document No. RN-23-0002

Contents

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1. Release information

1.1. Outline Features

The NXR-1000 series R2.0 is scheduled to be released in July 2023. A significant additional feature is the NXDN Conventional Mode. Now users can choose from two options: NXDN Conventional Mode and DMR Conventional Mode. In addition to the already available features of our Conventional Repeaters (TXR-D710/810, NXR-710/810, NXR-5700/5800), this Version Update provides new features which are new to the NXDN Conventional Mode/DMR Conventional Mode. This document will introduce an overview of the new features.

1.1.1. NXDN Conventional Mode Availability

Since the NXDN Conventional Mode is available from this Version, the NXR-1000 series can be used as the successor model of the NXR-710/810. Note that using this feature requires a License (NXDN Conventional License: KWD-NX10NC). Therefore, please load it to the Repeater using the KPT-300LMC via an IP Network.

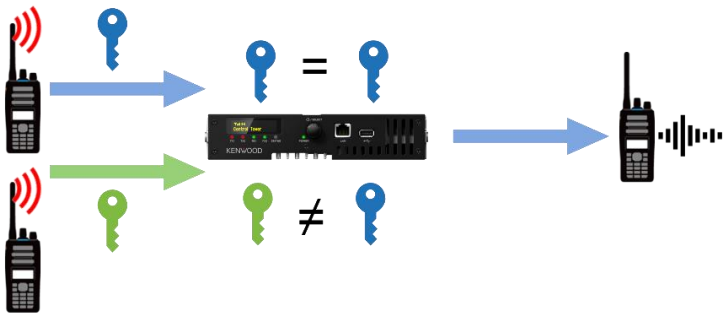
1.1.2. Restricting the Use of Repeater-with Access Control Key

Applicable System

NXDN Conventional

Feature Overview

This feature configures an identical authorization key to the Subscriber Unit (SU) and Repeater to prevent unauthorized access to the NXDN Conventional system constructed by the NXR-1000 series. Voice calls and data transmission from a SU with an unmatched authorization key or those without it will be rejected.



[Supported Subscriber Unit (SU)]
NX-5000 Series R5.10 or Later
NX-3000 Series R4.10 or Later

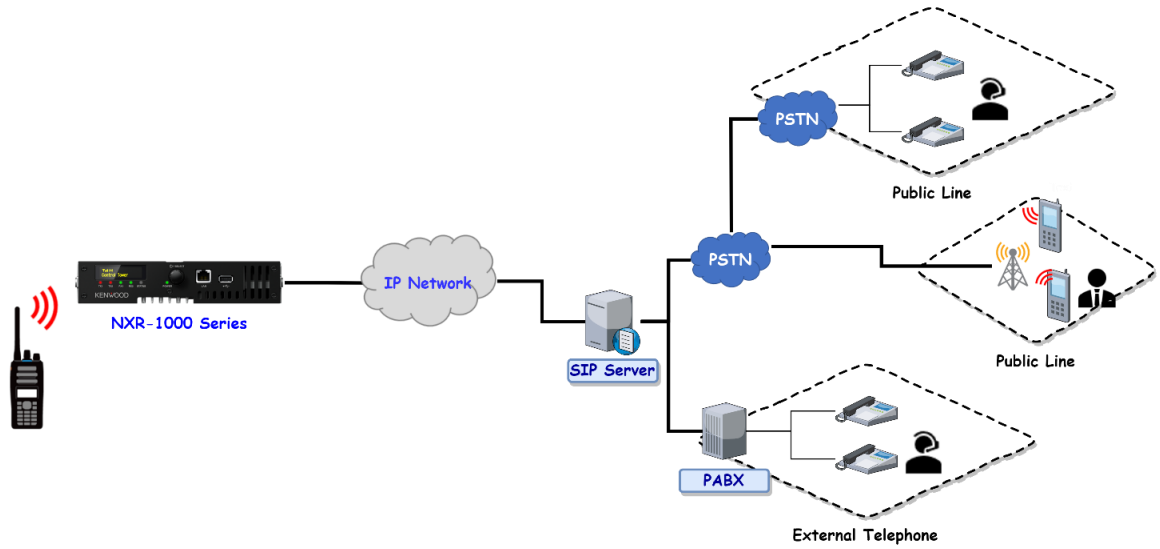
1.1.3. Connection to SIP Server

Applicable System

NXDN Conventional
DMR Conventional

Feature Overview

The NXR-1000 series can be connected to the SIP Phone Server after this Version Upgrade. Now it is possible to make calls to PSTN and PABX SIP Phones. Note that using this feature requires a SIP Phone License (KWD-NX10SP) (*1) (*2). Therefore, please load it to the Repeater using the KPT-300LMC via an IP Network.



(*1): To establish a connection with the SIP Phone Server, please confirm the User ID and the necessary parameters with a Server Administrator beforehand.

(*2): The NXDN Conventional Mode requires the SIP Phone License and the NXDN Conventional License (KWD-NX10NC). DMR Conventional License (KWD-NX10DC) will be required instead in the DMR Conventional Mode.

From the Subscriber Unit, you can choose between two methods to make a call to the telephone: using DTMF dialing or Paging Call. The table below shows the compatibility status of the calling methods in each system.

[Supported Subscriber Unit (SU)]
NX-5000 Series R5.10 or Later
NX-3000 Series R4.10 or Later

Protocol	Paging Call	DTMF Dialing
DMR	**Yes**	*See Note
NXDN	n/a	**Yes**

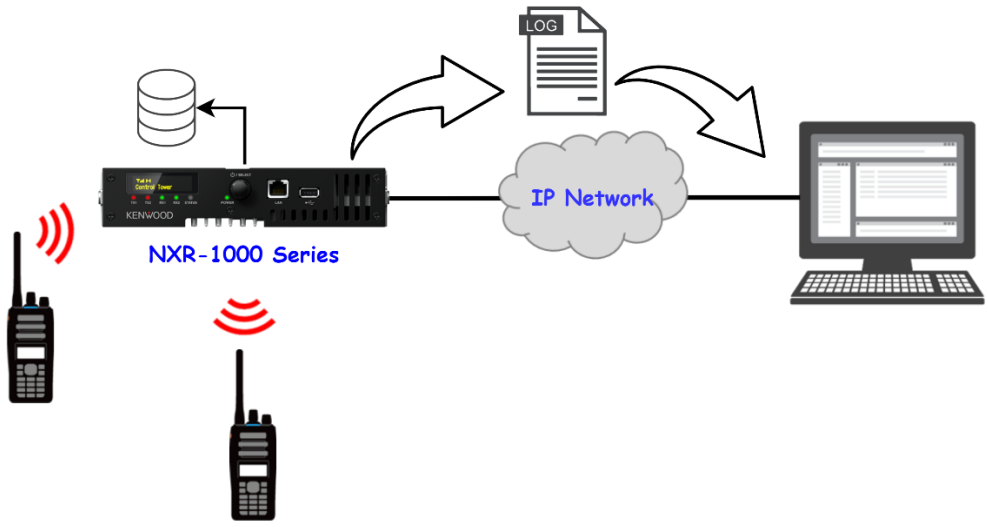
Note

DTMF Dialing is available with the NXDN single-site, NXDN multi-site, and DMR single-site system, but it will be supported for the DMR multi-site system in the future update: NX-5000 and NX-3000 updates by the end of 2023.

1.1.4. Maintenance Enhancement (Log Information)

Applicable System

Analog Conventional
NXDN Conventional
DMR Conventional



Feature Overview

The NXR-1000 Series in this version offers enhanced maintenance features (Log information) in the Conventional Mode, which were not available in our previous models (NXR-5000 Series, NXR-710/810, TKR-D710/810).

The followings are the additional features:

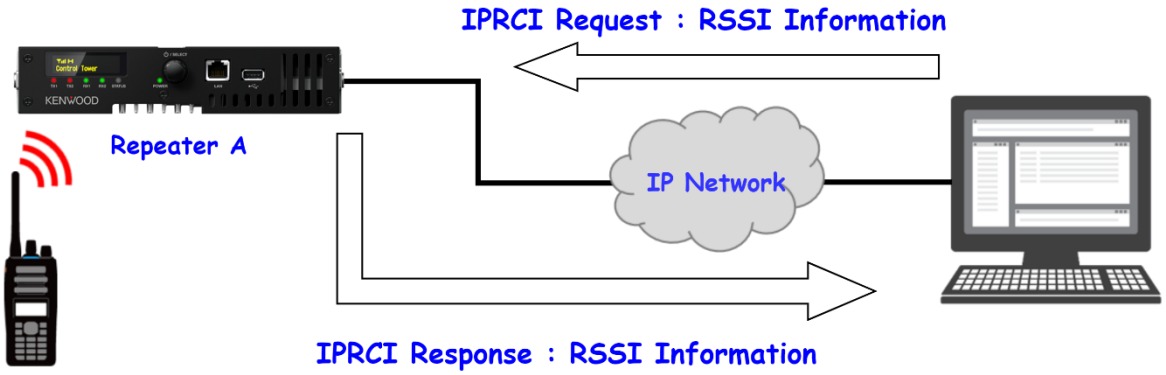
- Log Information acquisition:
  Provides various log information to grasp the detailed system operation status.
  You can obtain Communication Log and System Log. Recording critical events and errors helps troubleshoot and solve problems.

The enhanced functionality of maintenance improves system stability and operation efficiency, and System Administrators can carry out maintenance more effectively.

1.1.5. Remote Control of Radio via IP Interface (IPRCI)

Applicable System

Analog Conventional
NXDN Conventional
DMR Conventional



Feature Overview

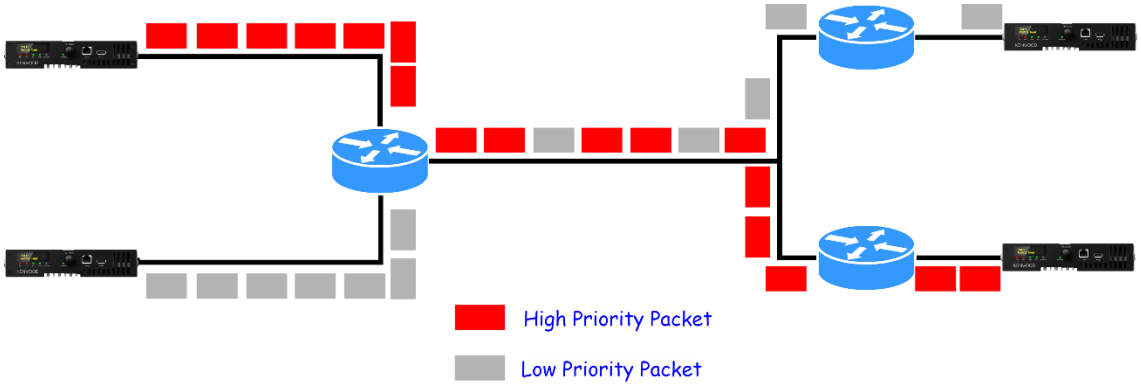
This Version Upgrade provides the IP Remote Control Interface (IPRCI). By this, Repeaters can be controlled via an IP network. An IPRCI-compatible Console sends and receives an IPRCI command to control NXR-1000 Series Repeater.

※This feature inherits the Serial PC Interface features. Please use the IPRCI as an alternative to the Serial PC Interface.

1.1.6. QoS Support with DSCP (Differentiated Services Code Point)

Applicable System

Analog Conventional
NXDN Conventional
DMR Conventional



Feature Overview

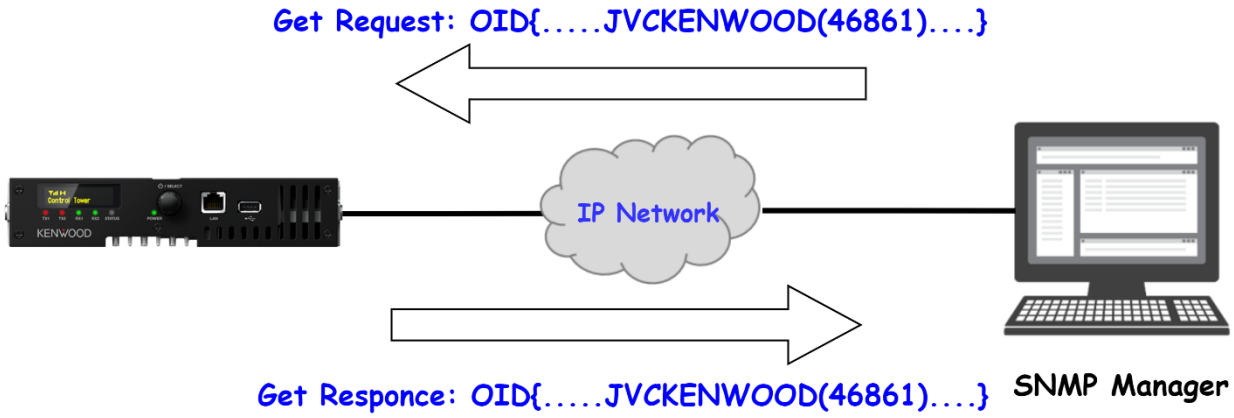
The DSCP setting feature is an additional feature that supports QoS. DSCP (Differentiated Services Code Point) controls data communication quality and priority on the network. Also, this is a value that indicates a packet processing method.
The NXR-1000 Series Repeater with the DSCP value configuration effectively manages the bandwidth of Voice Call, Data Calls, and other communications on the network, and it gives priority order to different traffics and guarantees their service quality. This optimizes crucial communication performance and improves the communication quality of the network.

Note:
The bandwidth of DSCP-labeled packet data can be managed only on the network composed of a DSCP-supported device(s).

1.1.7. Implementation of SNMP

Applicable System

Analog Conventional
NXDN Conventional
DMR Conventional



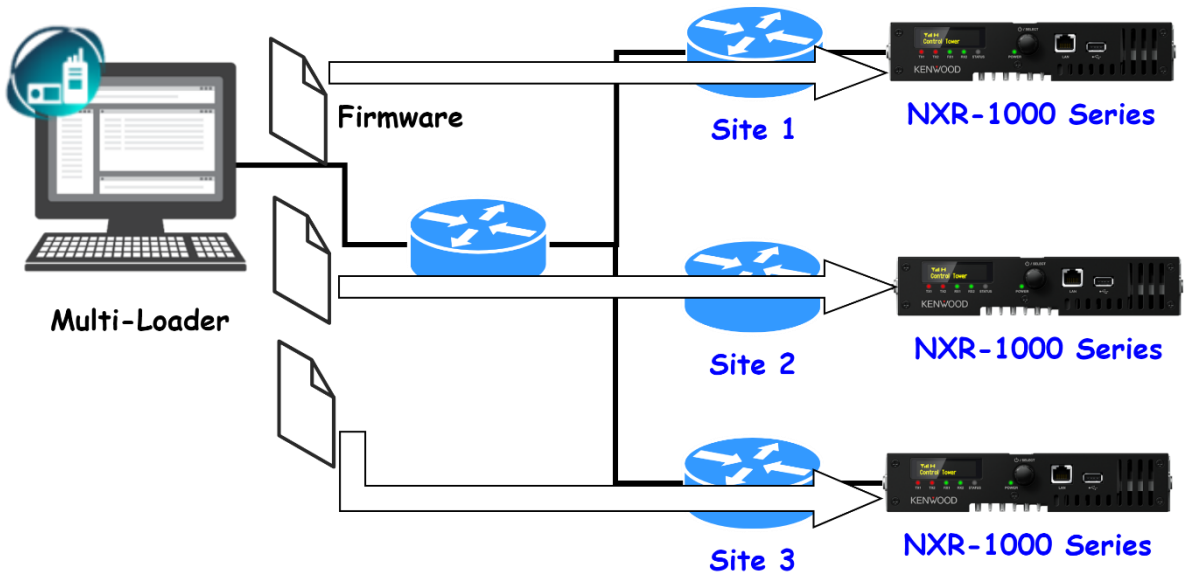
Feature Overview

SNMP is available from this Version. The NXR-1000 Series can be monitored and managed by the SNMP Manager. With this, status monitoring of the NXR-1000 series and prompt troubleshooting can be possible. And as a result, the reliability and performance of the NXDN Conventional system and DMR Conventional system will be improved.

1.1.8. Firmware Update for Multiple Repeaters

Applicable System

Analog Conventional
NXDN Conventional
DMR Conventional



Feature Overview

The Multi Loader Software will be available after installing the KPG-D7 R2.0. By this, Firmware can efficiently be loaded to the NXR-1000 Series Repeater via an IP Network. Also, the Firmware is loadable to several units of Repeaters located at different places, which reduces effort in the loading process.

1.1.9. Version up Feature List

Features	Description	System(*1)		
		DMR	NXDN	Analog
Channel Type	**NXDN is added.** Several Channel Types can be configured. You may select between Analog or DMR, or Analog or NXDN. The Digital Mode can only use either one of the DMR/NXDN Channel Types.	✓	✓	✓
Radio Access Control	**Available on NXDN.** When the communication data from the Subscriber Unit does not have a Key (explained below) identical to that of the Repeater, the Repeater rejects to do the Repeat Transmission.	**N/A**	✓	**N/A**
Radio Access Control Key	This is to set a Key for verifying communication data when the Repeater Access Control is Enabled. The same setting must be applied to the Subscriber Unit using the Repeater.	**N/A**	✓	**N/A**
SIP Phone Server	Necessary settings for SIP Phone Server connection.	✓	✓	**N/A**
SIP User ID	User ID setting registered in the SIP Phone Server. The SIP Phone Server will be available upon completion of the SIP Phone Server connection settings and this User ID setting.	✓	✓	**N/A**
Communication Log	The Repeater's memory stores communication logs via a Repeater.	✓	✓	✓
System Log	The Repeater's memory stores events that occurred to the Repeater.	✓	✓	✓
IPRCI	The Interface for controlling the Repeater via an IP network is now available.	✓	✓	✓
QoS (DSCP)	DSCP is supported. The network equipment, such as a Router, manages IP packets sent from the Repeater.	✓	✓	✓
SNMP	SNMP for monitoring the Network device status by an SNMP manager is supported.	✓	✓	✓
Multi Loader	The firmware of the Repeater can be loaded to different sites via an IP Network.	✓	✓	✓

(*1): The list shows which system supports which features, and a tick mark is given in the "System" column if supported.

1.2. Licenses

License Key	Description	System(*1)
KWD-NX10DC	・DMR Conventional License ・Required when constructing the DMR Conventional System.	DMR
KWD-NX10NC	・NXDN Conventional License ・Required when constructing the NXDN Conventional System.	NXDN
KWD-NX10MS	・Conventional IP Network License ・Required when constructing the Multi-Site System using an IP Network.	Common
KWD-NX10SP	・SIP Phone License ・Required for SIP Server connection for both DMR and NXDN systems.	Common(*2)

(*1): "Common" in the System Column means that the License can be used with any system (DMR Conventional, NXDN Conventional, and Analog Conventional Systems). With the other Licenses, their functionalities are available only on the specified system.
(*2): The Analog Conventional System is excluded.

Revision History

Version	Date of issue	Note
1.00	30 June 2023	First Release
1.01	20 July 2023	Additional publication of restrictions on release contents and correction of mistakes