

KAIROS DMR System

Release Note

IP Gateway KPG-1013GW Version 1.00

AVL/Dispatch System Software KAS-20 Version 2.00

Last Updated:	12 th July 2019
Language:	English
Document No.:	RN-19-0006

Document Copyrights

Copyright 2019 by JVCKENWOOD Corporation. All rights reserved.

No part of this manual shall be reproduced, translated, distributed or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, for any purpose without the prior written permission from JVCKENWOOD Corporation.

Disclaimer

This document is intended to provide basic and general information about the specifications of the products listed above and the system configuration. The intended purpose of all technical descriptions herein shall be, to improve your understanding of the product specifications and system configuration.

The descriptions provided in this document are carefully examined and are believed to be entirely reliable. JVCKENWOOD Corporation shall be entirely free from any responsibility and liability for inapplicability, damage or loss arising from inaccuracies in this document and reserves the right to change the product specifications herein in order to improve readability, function or product design.

Applicability of the descriptions in this document may vary depending upon the product specifications and configurations of relevant equipment.

Furthermore, you are neither licensed nor entitled to use and/or divert any descriptions in this document to your application.

Contact JVCKENWOOD Corporation for further details.

Table of Contents

1. RELEASE INFORMATION	4
1.1. Product Version.....	4
1.2. System Diagram.....	4
2. IP GATEWAY (KPG-1013GW)	5
2.1. Model Information	5
2.2. Features	5
2.3. PC Server Information.....	6
2.4. Maintenance/Field Support	6
3. AVL/DISPATCH SYSTEM SOFTWARE (KAS-20S / KAS-20C)	8
3.1. Release Information	8
3.2. Features	9
3.3. License.....	10

1. Release Information

IP Gateway designed based on DMR AIS (Application Interface Specification) works with Radio Activity KAIROS System is released. IP Gateway is interface of KAIROS system to connect a console and a Voice Logger. In addition, IP Gateway stores various logs for maintenance.

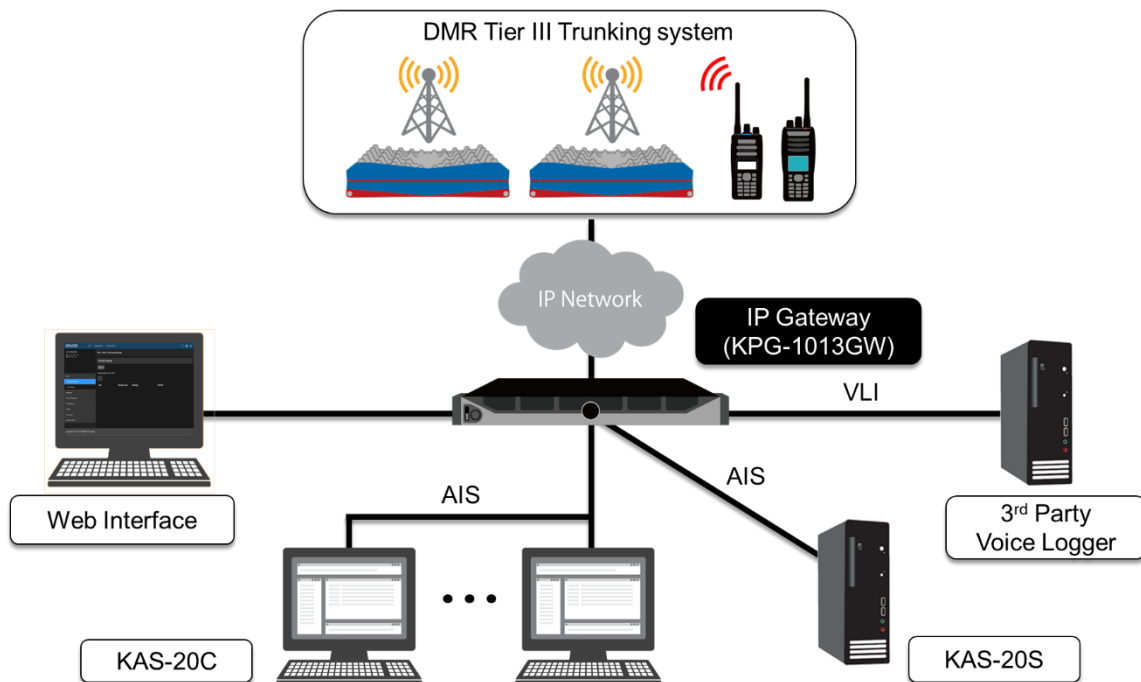
1.1. Product Version

This document describes IP Gateway and KAS-20 that KAIROS system supports. Product version is as follows:

Product	Supported Version in Release
KAIROS system	TBA
IP Gateway	KPG-1013GW Version 1.00
KAS-20	KAS-20S/KAS-20C Version 2.00

1.2. System Diagram

KAIROS DMR Tier III Trunking system connects consoles and voice loggers via IP network. It can connect to 3rd party products which designed based on AIS as well. As a reference, system diagram is as follows:



2. IP Gateway (KPG-1013GW)

IP Gateway (KPG-1013GW) supports to connect between KAIROS system and consoles/voice loggers. It works only for KAIROS DMR Tier III Trunking system with this software version. Tier II and S-Trunking will be supported soon.

2.1. Model Information

IP Gateway model name is “KPG-1013GW”. To enable PC Server as an IP Gateway is required a license activation. “KWD-1013T3” shows the software license key for DMR Tier III Trunking.

2.2. Features

IP Gateway is operated on a PC Server and must be activated to work with KAIROS DMR Tier III Trunking System. Configuration is done on web interface. IP Gateway Service specifications are as follows:

Item	Spec.
Unit ID Range	1 to 16776415
Group ID Range	1 to 16776415
Number of connectable system ^{*1}	1
Number of configurable repeaters ^{*2}	5000
Maximum Number of connectable Voice Loggers	10
Maximum Number of connectable Consoles	100
Maximum Number of registrable Group IDs per one console ^{*3}	100
Maximum number of sessions ^{*4}	1000
Maximum Number of configurable Console IDs ^{*5}	100
Maximum Number of configurable Group IDs ^{*6}	10000
Number of storable communication logs ^{*7}	Depend on HDD capacity
Number of storable system logs	200000

*1: IP Gateway connects one system.

*2: The number of repeaters that can be listed by web interface.

*3: 100 Group IDs can be performed group registration per one console.

*4: IP Gateway can process 1000 sessions simultaneously.

*5: The number of consoles that can be listed by web interface.

*6: The number of Group IDs that can be listed by web interface. The Group IDs are calculated by 100 console IDs and 100 registrable Group IDs.

*7: 500GB HDD about 300GB (About 10 months / 480,000 calls per day)

1TB HDD about 800GB (About 2 years / 480,000 calls per day)

2.3. PC Server Information

PC server requirement specification for IP gateway is as follows.

PC Server Hardware: Dell PowerEdge R340 Rack Mount Server

Operating System (OS): Cent OS 7.6

Requirement Specification:

CPU	Intel Xeon E-21xx (3.0GHz) or more
Memory	4GB or more
HDD	500GB or more
Optical Drive	DVD-ROM

2.4. Maintenance/Field Support

IP gateway has logging functions for trouble shooting. Communication log, System log and Diagnostic Data can be stored in IP gateway and downloaded at Maintenance menu. These log functions are always active. There is no configuration for storage.

Moreover, Field Support function is available when a system operator does login as “admin” user. Packet Capture/Syslog can be downloaded at Field Support menu. These log information are very useful to look into a system issue by QA/Engineer. The Field Support function describes below.

➤ Packet Capture

Packet Capture is function to capture a packet data that IP Gateway sends/receives. By enabling Packet Capture function, it can be stored/downloaded the internal packet data of IP Gateway and among external devices.

➤ Syslog

Syslog is function to output debug log file of IP Gateway. Syslog is included in Diagnostic Data. To output the log must be enabled the following functions. “Log Type” means a type of internal process of the IP Gateway. Because “Option” is able to decide output level of the log, it’s used to output a detailed log information. “Log type” and “Option” configuration is specified by QA/Engineer. After QA/Engineer investigate a customer’s issue report, QA/Engineer announce to system operator the proper configuration for “Log type” and “Option”.

Maintenance > Field Support > Syslog

Syslog

Check

No.	Log Type	State	Option	
1	maintenance	☒ ON ☐		Change
2	process control	☒ ON ☐		Change
3	call control	☒ ON ☐		Change
4	rtp control	☒ ON ☐		Change

Note:

- The server PC performance for IP Gateway might be lower during enabling Syslog function because the PC consumes a system resource by activation Syslog function. It's not recommended to use this function other than issue investigation.

3. AVL/Dispatch System Software (KAS-20S / KAS-20C)

KAS-20 AVL/Dispatch System Software version 2.00 has interface to connect to KAIROS DMR Tier III Trunking system.

3.1. Release Information

KAS-20 AVL/Dispatch System Software is upgraded to version 2.00 for DMR Tier III Trunking System.

- New Features
Connect KAIROS DMR Tier III Trunking System. Function is listed on “3.2. Features”.
- New License : KWD-20S-T3
This is license to use "protocol DMR Tier III". KAS-20S Server Software needs this license to connect the Tier III Trunking System.

Note:

- IP Gateway server is needed for the KAS-20 AVL/Dispatch System Software to connect to the DMR Tier III Trunking system.

3.2. Features

KAS-20 AVL/Dispatch System Software 2.00 works bellow functions. Individual Call, Short Data Message and Status Message between consoles will be supported soon.

Features		KAS-20 AVL/Dispatch System Software for DMR Tier III Trunking System
Call Type – Destination		
Group Call		✓
Individual Call (OACSU/FOACSU)		✓
Broadcast Call		✓
All Call		✓
Call Type – Status		
Status Message		✓
Emergency Status Message		RX Only
Call Type – Short Data		
Short Data Message		✓
GPS Data Message		RX Only
Voice with GPS Report		RX Only
Call Type – Other		
Priority Call		✓
Emergency Call		RX Only
Emergency Alarm		RX Only
Dialing (Fleet Dialing Plan)		RX Only
Radio Check		TX Only
Remote Control (Stun/Kill/Revive)		TX Only
Remote Monitor (Ambient Listening)		TX Only
Over-the-Air Alias		✓
Dispatch Console Function		
Patch	Same Protocol	✓
	Different Protocol	✓ (NEXEDG Conventional, NEXEDGE Type-C Trunking, DMR Conventional)
	Patch On/Off	✓
Voice Logging		Received voice by the KAS-20C
Map function (AVL Window)		✓

3.3. License

“KWD-20S-T3” is license to connect KAIROS DMR Tier III Trunking System. A few notes to use this License is below.

- License ” KWD-20S-T3”
If KAS-20 AVL/Dispatch System Software connects to KAIROS DMR Tier III Trunking System, “KWD-20S-T3” License is required.
- In case of multi-client KAS-20C
Case of multi-client KAS-20C, one computer for KAS-20S Server Software is required and new License must be installed on the computer.
- In case of multiple DMR Tier III KAIROS Systems
In case of multiple-systems of KAIROS DMR Tier III, KAS-20S server computer must be installed number of new Licenses, KWD-20S-RS and another KWD-20S-T3 for additional systems. (Up to 8 systems)