

# HL7 Gateway

## Full connectivity to hospital systems, HIS, CIS, and EMR

Nihon Kohden's HL7 Gateway server allows for data communication between the hospital or clinical information system (HIS, CIS) and a Nihon Kohden patient monitoring system. The new gateway server provides strong support for automatic patient charting and a solution for managing EMR (electronic medical records). All Nihon Kohden patient monitoring devices can connect to the HL7 Gateway. A connection to Nihon Kohden monitoring network is mandatory.

# HL7 Gateway



## HL7, the global standard for healthcare information

The HL7 Gateway server uses the HL7 (Health Level 7) communication protocol. HL7 is a global standard for communication of healthcare information between different types of devices and systems.

With the HL7 Gateway server, you can enter the patient ID at the bedside monitor and receive the patient information from the HIS. The HL7 gateway server transfers the monitored data to HIS and EMR including transport time data acquired by Life Scope PT.

In addition to patient information and vital data, the HL7 Gateway server can handle alarm history, arrhythmia and ST recall, 12-lead analysis reports, and waveforms\*. Nihon Kohden's HL7 Gateway supports any kind of medical documentation systems and diagnostics by providing ECG waveforms in MFER format to Stroke Risk Analysis software (SRAclinic by apoplex medical technologies), for example.

## MFER, the new standard for medical waveforms

Waveforms are transferred by the new MFER (Medical waveform Format Encoding Rules) standard. HL7, DICOM, or IEEE1073 can

also be used to encode medical waveforms, but implementation is not always easy. MFER has become the standard in the medical field and it is also an ISO standard (ISO/TS 11073-92001).

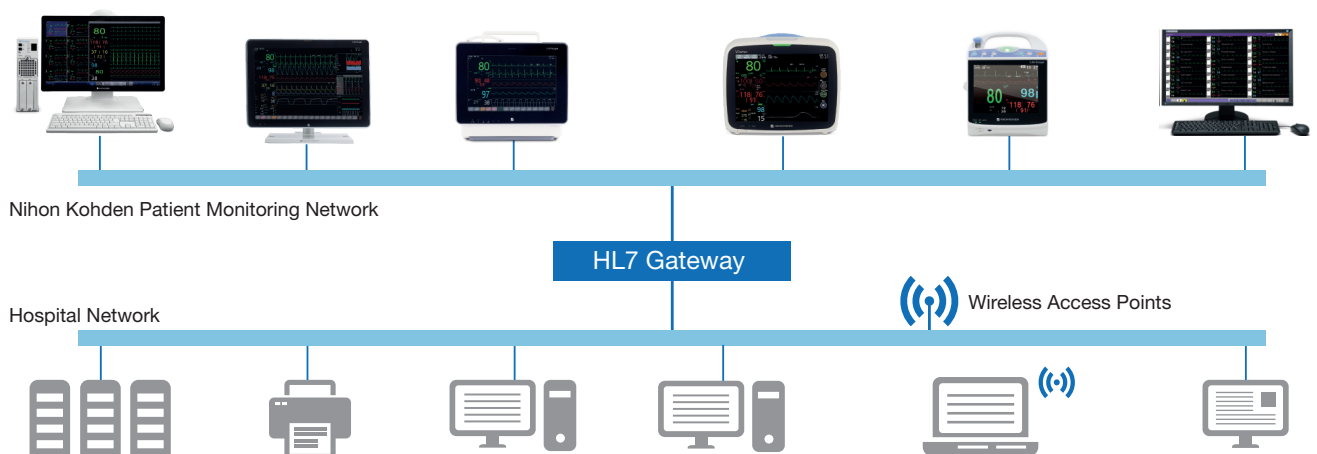
MFER is designed to handle medical waveforms simply and easily. It can encode ECG, EEG, respiratory, and many other kinds of waveforms so they can be used by other applications in the hospital or stored in a database.

## Supporting the hospitals of today and tomorrow

The HL7 Gateway server allows you to integrate the monitoring system into all kinds of hospital information systems. Nihon Kohden offers a gateway to the smoothly integrated hospital of tomorrow.

All types of Nihon Kohden patient monitoring devices can connect to the HL7 Gateway. A connection to the Nihon Kohden monitoring network is mandatory.

\*Some limitations apply when transferring waveforms



# Specifications

## QP-993PK

### Transferred waveforms

ECG, IBP, respiration wave, EEG, CO<sub>2</sub>, pulse (SpO<sub>2</sub>), Flow/ Paw, anesthetic gas (O<sub>2</sub>, CO<sub>2</sub>, N<sub>2</sub>O, Agent)  
(Transferred waveforms depend on the measured parameters. Up to 3 waveforms can be transferred simultaneously.)

### Waveform format

MFER (Medical waveform format encoding rules)  
MFER is an ISO standard (ISO/TS 11073-92001).

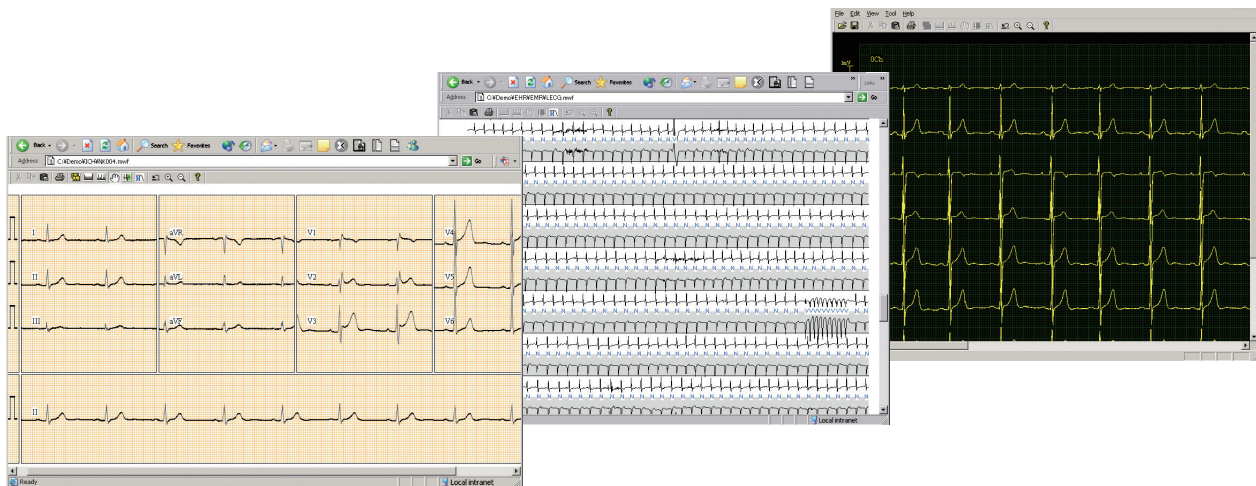
### Capabilities

- Patient query
- Periodic refresh of patient information
- Periodic output of vital data
- Periodic output of alarm events
- Output of vital data
- Output of recently stored vital data
- Output of transport data
- Sequential output of waveforms
- Output of full disclosure waveforms
- Output of review data, arrhythmia recall, ST recall, and 12-lead ECG analysis

### Hardware and software requirements

<b>CPU</b>	Dual-Core Intel® Xeon® Processor 2 GHz × 2
<b>Memory</b>	8 GB or more
<b>Hard disk</b>	160 GB × 2 (RAID 1: Mirroring)
<b>Disc drive</b>	Yes, for installation
<b>LAN</b>	2 × 10/100/1000BASE-TX compatible
<b>Operating system</b>	Microsoft® Windows Server® 2019 Standard (English)
<b>Arrhythmia recall</b>	Number of entries: 32,768 files
<b>Java</b>	Java™ 2 SDK 1.8.0_65
<b>Browser</b>	Internet Explorer® 11

## Medical waveform format encoding rules



MFER waveform application examples

HL7 is the registered trademark of Health Level Seven International. PDMS screenshots belong to the "ICUData" solution and are kindly supported by A.C.M. Consult GmbH.



## Improving Healthcare with Advanced Technology

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