

HRM-4X Remote Station

Digital Partyline Solutions

Linking
People
Together



HRM-4X

Key Features and Benefits

Remote Station

- Easy to use front panel with OLED displays
- Headset or hands-free support with speaker and mic
- (4) Keysets freely assignable to system channels
- All Talk, Stage Announce, RMK and Program Audio level controls
- Expansion mode for 8-24 channel user stations

Connectivity

- Powerline loop-through on XLR cables
- Ethernet Network port with PoE
- Program Audio input and Stage Announce output
- Contact closure inputs and outputs

Mechanical

- 1RU – 6.4" / 165mm Deep

The HelixNet System

- Networked Intercom System
- Flexible cabling
- 12 partyline channels. Expandable to 24 channels via optional license
- Program Audio distribution with independent level

Effortless Management

- Easy to use CCM browser configuration tool using optional HLI-ET2
- Fast front panel control and configuration
- Plug-and-go installation with hardwire auto-discovery
- Central upgrades automatically managed from main station

HelixNet is a fully networked partyline intercom, supporting up to 24 channels and independent program audio over XLR, LAN and WAN.

Description

HelixNet's HRM-4X remote station is a 1RU 4-channel intercom user station with utility connections for Program Audio input and Stage Announce output, supported by the HMS-4X main station.

User Station

Innovative front panel user station provides four keysets assignable to any intercom channel. The user station is provisioned with a headset connection, gooseneck mic connector and a loudspeaker in addition to All Call, Stage Announce, Remote Mic Kill and Program Audio level controls.

Expansion mode allows up to 6 other HMS or HRM user stations to be combined, each station having up to 24 channels.

Local and Central Management Options

HRM-4X can be added to a HelixNet system without central configuration or interruption. Front panel keysets include unique waterfall menu allowing tactile device configuration and channel assignments.

Roles can be created and applied to one or multiple HRM-4X remotely or locally. Roles can be edited locally or centrally managed from the Core Configuration Manager (CCM).

Connectivity and Power Options

HRM-4X connects to HMS-4X main station over XLR Powerline or network to HMS-4X with HLI-ET2 Ethernet module. Power can be supplied to the HRM-4X over the XLR Powerline, locally with a supplied power supply or PoE when connected over Ethernet.

Technical Specifications

Channels

Four local from any networked Main Station.
One local and any networked program audio.

Connectors

XLR Powerline: (2) Powerline, each with 3 pin XLR-M/F
Ethernet/PoE: Ethercon RJ45
Headset: 4-pin XLR-M
Gooseneck Mic: 3-pin Tuchel
USB: Type A
Program: 3-pin XLR-F
Stage Announce: 3-pin XLR-M
Hot Mic/IFB Interface: 1/4" (0.64 cm) phone jack
GPIO: 9-pin D-type male (1xGPI, 1xGPO)
DC Power: 3-pin to AC adapter (provided)

Microphone Pre-amplifier

Headset Mic Impedance: 200Ω (Dynamic)
Headset Mic Voltage: 1.7V (Electret selectable)
Limiter: +23dB

Route to 4-wire output at 0dBu out:
Mic Gain: 60dB (Dynamic), 45dB (Electret)
Frequency Response: 300Hz - 10 kHz ±3dB, contoured for intelligibility
Distortion: <0.2% THD @ 1kHz
Noise: <-55dBu (Dynamic), <-65dBu (Electret)

Headphone Amplifier

Load Impedance: >32Ω
Output Level: +12dBu before clipping
Sidetone: -12dBu (selectable)

Route from a 4-wire input at 0dBu Route in:
Max Gain: 0dB
Frequency Response: 180Hz - 11kHz +3dB
Distortion: <0.1% THD @ 1kHz
Noise: <-65dBu
Headphone Limiter: 0dBu (selectable)

Loudspeaker Amplifier

Load Impedance: 8Ω
Output Level: +18dBu before clipping

Route from a 4-wire input at 0dBu in:
Max Gain: 18dB
Frequency Response: 200Hz - 10kHz ±3dB
Distortion: <0.1% THD @ 1kHz
Noise: <-50dBu

Program Line Input

Maximum Level Before Clipping: +18dBu
Nominal Input Level: 0dBu (selectable)
Input Impedance: ≥ 10KΩ

Route to 4-wire output at 0dBu out:
Frequency Response: 20Hz - 10kHz ±3dB
Distortion: <0.2% THD @ 1kHz
Noise: <-65dBu

Stage Announce Input

Maximum Level Before Clipping: 18dBu
Nominal Output Level: 0dBu (selectable)
Output Impedance: ≤ 100Ω

Route from a dynamic headset:
Frequency Response: 300Hz - 12kHz ±3dB
Distortion: <0.1% THD @ 1kHz
Noise: <-55dBu

Hot Mic Input

Maximum Level Before Clipping: +12dBu
Nominal Output Level: 0dBu (selectable)
Output Impedance: ≤ 100Ω

Route from a dynamic headset:
Frequency Response: 300Hz - 12kHz ±3dB
Distortion: <0.2% THD @ 1kHz
Noise: <-55dBu

Power

Via Powerline
DC Voltage Range: ±30V
Powered from Powerline = 3 endpoints (10 max)
Via AC Adapter
Input Voltage Range: 100 - 240VAC
Input Frequency Range: 50 - 60Hz
Input Power: ≤ 250WAC
AC Adapter Power Connector: IEC60320-1-C14
Powered from AC = 1 endpoints (10 max)

Via Power-over-Ethernet (PoE)

Connector: RJ45

IEEE 802.3af-2003 - Class 0
PSE: 15.4 W DC max @ Power Source
PD: 12.95 W DC max @ Powered Device

Environmental

32° - +104°F (0 - +40°C)
90% relative humidity

Dimensions

1.75 x 19 x 6.4 in (HxWxD)
(44 x 483 x 165 mm)

Weight

4 lbs (1.8kg)

Network Specifications

Network Protocols

Ethernet IPv4 - Unicast Audio and Control
mDNS - Multicast Device Discovery
Layer 3 routable with mDNS function limitations
WavPack - Audio Codec

Network Ports

Unicast:

Port 80 TCP - System Management, Expansion
Port 6001 TCP - System Management
Port 6001 UDP - Audio Streams

Multicast:

Port 5353 UDP - mDNS, Names, Discovery, Linking, Expansion
Optional for device names and linking.
Mandatory for HRM Expansion

Network Parameters

Endpoint resource use: 1-3

Bandwidth:

300-600 (max) kbps from each active audio input to HMS

1200-2400 (max) kbps from HMS to each endpoint

QoS tags: DSCP=46, High Priority / Expedited Forwarding (EF)

Link-Local Default IP address range:

169.254.0.0/16

System reserved IP range: 10.0.0.0/8 for endpoints

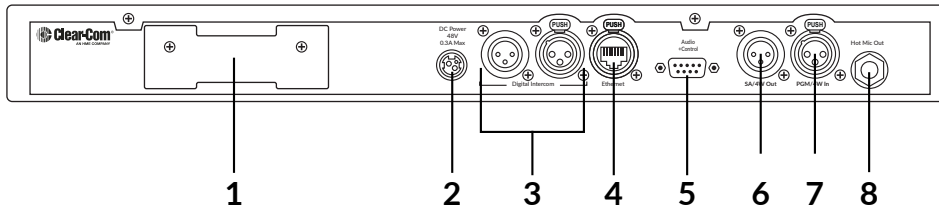
Recommended Ethernet Switches

Managed Ethernet Switch - Layer 3
100/1000Base-T ports for endpoints
1000Base IP Trunks between switches
QoS configuration
Energy Efficient Ethernet bypass option
IGMP Snooping bypass option

HRM-4X Remote Station

Digital Partyline Solutions

HRM-4X Back Panel



Legend

1. Power supply holder clip
2. DC power connector
3. Partyline In/Out
4. Ethernet connector
5. GPIO DB25, Control Inputs and Outputs
6. Stage Announce Line Out
7. Program Input
8. Hot Mic Output - 1/4" TRS

Order Code

HRM-4X
Includes: PSU (453G026)