

HelixNet Ethernet Interface Module

Digital Partyline Solutions

Linking
People
Together



HLI-ET2

Key Features and Benefits

Network Interface

- CCM System Control
- HMS-4X and LQ Linking
- User station connection
- Dual port Ethernet switch

HelixNet System

- Wired Partyline - Networked
- Flexible cabling
- Up to 24 Channels - Licensed
- Program Audio user level control

Effortless Management

- Fast front panel control & configuration
- Easy to use CCM browser configuration
- Plug-and-go with auto discovery
- Central upgrades from main station

HelixNet[®] is a networked partyline intercom with up to 24 channels and Program Audio over XLR, LAN or WAN.

Description

The HelixNet HLI-ET2 is a dual port¹ Ethernet switch interface module for the HMS-4X³ main station.

Networking

The HelixNet Ethernet Interface Module allows access to HelixNet's internal network for HMS-4X or LQ[®] Series linking, user station network connection, system control and monitoring.

HelixNet Ethernet Interface Module can be added to any HMS-4X main station with an available option slot. Once installed, the system can be centrally managed from the browser-based Core Configuration Manager[™] (CCM²).

Pin	Name	Function
1	TX+	Transmit data (+)
2	TX-	Transmit data (-)
3	RX+	Receive data (+)
4	N/C	Not Connected
5	N/C	Not Connected
6	RX-	Receive data (-)
7	N/C	Not Connected
8	N/C	Not Connected

¹Both ports are configured to bridge traffic from one port to the other in order to work in daisy-chain. Spanning Tree Protocol is not enabled on those ports. Do not connect both to the same network.

²CCM requires HLI-ET2

³HMS-4X is a legacy product

Note: HMS-4X and HLI modules are not used in Arcadia[®] hosted HelixNet systems. HMS-4X and HLI Modules are legacy products and not recommended for new system designs and specifications, existing HMS-4X units and HLI modules are supported under Clear-Com's Warranty Terms.

HelixNet Ethernet Interface Module

Digital Partyline Solutions

Technical Specifications

Connectors

LAN A and B: (2) EtherCON RJ45

LAN Network Connection

10/100 BaseT
DHCP Capable
Configured for Daisy-Chaining

Dimensions

2.2 x 7.4 x 1.5in (HxWxD)
(57 x 187 x 39mm)

Weight

13oz (0.35kg)

Network Specifications

(Firmware Version 4.5+)

Network Protocols

Ethernet IPv4–Unicast Audio and Control
mDNS–Multicast Device Discovery
Layer 3 routable with mDNS function limitations
HTTP–Management
Tinc - Virtual Private Network (VPN)
I.V. Core–Decentralized Network Routing & Mixing
IVP–Proprietary intercom Audio and Control
WavPack–Audio Codec

Network Ports

Unicast:

Port 80 TCP–System Management
Port 655 TCP – Link Group Member Registration
Port 655 TCP – Link Group Communication
Port 655 UDP – Link Group Audio
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

Network Parameters

HMS-4X Endpoint Resource Use: None

Bandwidth:

300 kbps per audio input linking between HMS/LQ
Link Group audio sent dynamically between members
300-600 (max) kbps from an active audio input to HMS
1200-2400 (max) kbps from HMS to endpoint

Network Jitter Tolerance:

<= 128ms jitter buffer per audio stream receiver automatically adjusted to network performance

QoS Tags:

DSCP=34, Assured Forwarding (AF=41)

Link-Local Default IP Address Ranges:

169.254.0.0/16

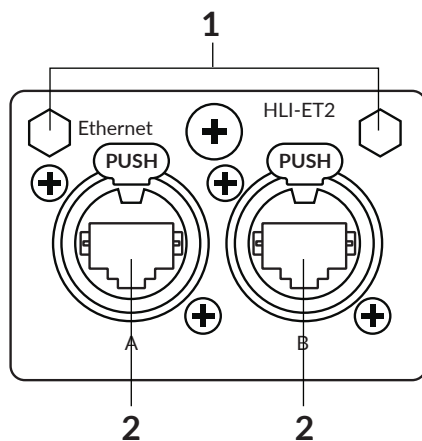
System Reserved IP Ranges:

10.0.0.0/24 for endpoints
172.23.0.0/16 for Link Group

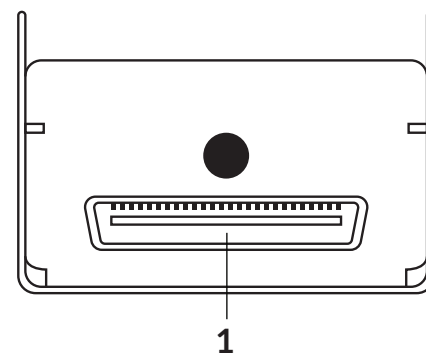
Recommended Ethernet Switches

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

Front



Back



Legend

Front

1. Handle mounting point
2. RJ45 connector

Back

1. Blade connector to HelixNet Main Station option slot

Order Code

HLI-ET2

