NORRD

HDBaseT™ 2.0 4K60 extender with ARC. | NX2-220

18 Gbps HDBaseT extender supporting 4K@60Hz (4:4:4) up to 40 m and supporting HDMI 2.0b video with HDR, Dolby Vision, HDCP 2.2, ARC, bi-directional IR, RS-232, and CEC — all through one cable

The NX2-220 extends HDMI 2.0b signals at full 18 Gbps bandwidth over a single CAT6a/7 cable, supporting 4K@60Hz (4:4:4) up to 40 m and 1080p@60Hz up to 70 m. It is HDCP 2.2 and HDCP 1.x compliant and passes HDR10, HDR10+, and Dolby Vision metadata without alteration — ensuring the display receives the full dynamic range intended by the source regardless of the extension distance.

What distinguishes the NX2-220 from a basic HDMI extender is the depth of its audio architecture. The transmitter provides both a 3.5 mm stereo L/R output and an optical S/PDIF output, with four selectable audio modes accessed via a front-panel button. These modes allow the installer to choose between extracting audio directly from the HDMI source, returning audio from the display via ARC, returning audio from the receiver's optical S/PDIF input, or a combined ARC mode that simultaneously outputs return audio on S/PDIF, L/R, and loops it back through HDMI. This flexibility covers scenarios from simple audio de-embedding to complex setups where a display's built-in tuner or streaming app needs to feed audio back to an amplifier at the source end — without running a separate audio cable.

The full audio format range covers PCM 2.0/5.1/7.1, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD Master Audio, and DSD over HDMI, with LPCM 2.0, Dolby Digital/Plus, and DTS supported on the optical path. Colour depth support includes 8/10/12-bit at 1080p and 4K30, 8-bit at 4K60 (4:4:4), and 10/12-bit at 4K60 (4:2:0).

Bi-directional IR pass-through enables source control from the display end and display control from the source end simultaneously. Included IR receiver and blaster cables (1.5 m, 20–60 kHz) connect via 3.5 mm jacks on both units. RS-232 pass-through on Phoenix connectors provides a serial control path between transmitter and receiver for integration with control systems or RS-232 equipped displays. CEC pass-through is also supported for basic device control without additional cabling.

Power over Cable means a single 24 V/1 A power supply connected to either the transmitter or receiver powers both units through the CAT cable. This simplifies installation significantly — particularly at the display end where mains power may not be conveniently accessible behind a wall-mounted screen. The included power supply uses a locking DC connector to prevent accidental disconnection.

Both units are housed in compact metal enclosures (165 × 88.3 × 20 mm) with included mounting ears for fixed installation behind displays, inside credenzas, or in rack-adjacent positions. ESD protection meets IEC 61000-4-2 at ±8 kV air-gap and ±4 kV contact discharge. A micro-USB service port on each unit provides firmware update capability for future compatibility updates.

The NX2-220 is suited for conference rooms where a source rack feeds a wall-mounted display with return audio to an amplifier, classrooms with interactive displays requiring IR control pass-through, digital signage with remote source equipment, and any installation where running a single CAT cable replaces multiple HDMI and control cables.

KEY FEATURES

Key Features

- True 4K@60Hz 4:4:4 HDMI extension with HDR support
- HDBaseT® 2.0 transmission up to 40 m at 4K60 and 70 m at 1080p
- ARC (Audio Return Channel) for audio-backhaul from display to source
- Analog stereo and optical SPDIF audio de-embedding on transmitter
- Bidirectional PoC allows powering from either end for maximum installation freedom

VIDEO	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 / HDCP 1.x
Video Bandwidth	18Gbps
Max Video Resolution	4K2K 50/60Hz 4:4:4
Supported Resolutions	4K2K 50/60Hz 4:4:4; 4K2K 50/60Hz 4:2:0; 4K2K 30Hz 4:4:4; 1080p/i; 720p/i; 480p/i; PC up to 1920×1200
Color Depth	8/10/12-bit (1080p, 4K30, 4K60 4:2:0); 8-bit (4K60 4:4:4)
Color Space	RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
HDR Formats	HDR10, HDR10+, Dolby Vision
EXTENSION	
Transmission Technology	HDBaseT over CAT5e/6
Max Distance (1080p60)	70 m
Max Distance (4K60 4:4:4)	40 m
AUDIO	
HDMI Audio Formats	PCM2.0/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby TrueHD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
ARC (Audio Return Channel)	Supported (TX)
Analog L/R Audio Out	TX: 3.5mm stereo out, PCM2.0CH (mutes when ARC on)
Optical Audio Out	TX: SPDIF OUT (LPCM2.0, Dolby Digital/Plus, DTS)
Optical Audio In	RX: SPDIF IN
CONTROL	
IR Pass-through	Bi-directional IR supported
RS-232 Pass-through	Bi-directional RS-232 supported
CEC Pass-through	Supported
POWER	
Power over Cable (PoC)	Supported; either TX or RX can be powered
Power Supply	DC 24V/1A locking adapter
Power Supply Input	AC 100–240V 50/60Hz (adapter)
Power Consumption	13W max
CONNECTIONS (TX)	
HDMI Input	1 × HDMI IN (Type-A, female)
HDBaseT Output	1 × HDBT OUT (RJ45)
Analog Audio Out	1 × L/R OUT (3.5mm stereo)
Optical Audio Out	1 × SPDIF OUT
IR Ports	1 × IR IN, 1 × IR OUT (3.5mm)
RS-232 Port	1 × RS-232 (Phoenix)
Service Port	1 × Micro-USB (service)
CONNECTIONS (RX)	
HDBaseT Input	1 × HDBT IN (RJ45)
SPDIF Input	1 × SPDIF IN
HDMI Output	1 × HDMI OUT (Type-A, female)
IR Ports	1 × IR IN, 1 × IR OUT (3.5mm)
RS-232 Port	1 × RS-232 (Phoenix)
Service Port	1 × Micro-USB (service)
PROTECTION & COMPLIANCE	
ESD Protection	IEC 61000-4-2: ±8kV air, ±4kV contact
MECHANICAL	
Housing	Metal enclosure
Color	Black
Dimensions (W×D×H)	165mm × 88.3mm × 20mm (TX/RX)
Weight	TX 170 g; RX 165 g
ENVIRONMENT	
Operating Temperature	0–40°C (32–104°F)
Storage Temperature	–20–60°C (–4–140°F)
Relative Humidity	20–90% RH, non-condensing