Datasheet

3G Triax Transmission

3G Triax Camera Transmission

The 3G Triax transmission system for the LDK 8000 Elite and LDK 4000 Elite camera heads is the world's first and only triax system that delivers all HD video formats (720p, 1080i and 1080p) from the base station.

The 3G Triax transmission solution from Grass Valley, a Belden Brand, consists of the LDK 5418 camera adapter and the LDK 4400 base station. This third-generation triax solution is a non-compromise, fully featured solution that can cope with the broadcast requirements of today and tomorrow.

The 3G Triax transmission system is a heavy duty, high-quality, multistandard transmission system with new and specially developed highly advanced technologies that is fully 3G and 3D ready and supports current 1080i50/60 and 720p50/60 formats as well as future 1080p50/60 transmission from the LDK 8000 Elite WorldCam.

3G Triax works perfectly with the triax cables, available in pre-wired venues and users' current cable stock, so there's no need for expensive new cabling. And compared to conventional HD triax, the maximum cable length has increased by 25 percent to 1,500 m (4,921 feet) and still offers the same robustness and reliability that triax is known for.

LDK 4400 Base Station

The LDK 4400 base station offers extended connectivity with no less than eight HD outputs, of which six single link HD-SDI outputs (1.5 Gb / 3 Gb switchable) and two 1.5 Gb HD-SDI outputs, which automatically convert the signal in 1080i when the camera head is delivering 1080p. In addition, three HD return connections are incorporated, of which two can be selected as a return channel by the adapter.

Additionally, the audio connectivity offers great versatility with two analog outputs and two (digital) AES/EBU pair outputs (2 x 2 channels) which are also embedded in the HD-SDI outputs.

With a compact design of only 2 RU and weighing in at only 13.0 kg (28.66 lbs.), the LDK 4400 base station takes up minimal rack space. When combined with its low power consumption and efficient internal cooling that eliminates the need for space between adjacent units, the LDK 4400 base station is ideal for implementation in OB vans.

RefleX SuperXpander

To coincide with the introduction of the new 3G Transmission system, Grass Valley has developed a new large lens adapter — the RefleX SuperXpander.

As part of the RefleX SuperXpander, a new convenient hot shoe connection to the camera is implemented which directly powers the SuperXpander from the camera. This makes the new RefleX SuperXpander seamlessly compatible with the new 3G Triax camera adapter.

Once the camera is inserted in the RefleX SuperXpander, the triax cable can be connected to the camera and all interfacing with the RefleX SuperXpander takes place through the hot shoe connector. This makes the RefleX SuperXpander transmission agnostic, which means that the RefleX SuperXpander can works with both the 3G Triax and 3G Fiber systems without any additional equipment for true flexibility.

KEY FEATURES

- 3G Triax is a member of the versatile 3G Transmission family
- Full feature set for both today's and tomorrow's broadcast requirements
- Full support for all HD formats 720p/1080i/1080p
- 6x 3G video outputs / 8X 1.5G video outputs
- Extensive (analog/digital) audio connectivity
- Embedded audio
- 3 selectable return inputs (3G, HD or SD)
- Convenient hot shoe connectivity for RefleX SuperXpander use
- Universal 3G power supply
- Long triax cable capabilities (1,500m / 4,291 ft.)
- Compact (2 RU) and robust base station

SPECIFICATIONS

Video

720p: 23.98/25/29.97/50/59.94 Hz

1080p (WorldCam): 23.98/24/25/29.97/50/59.94 Hz

1080i: 50/59.94 Hz

S/N ratio in Y signal: 61 dB typical

Modulation depth: 55% at 27 MHz typical

3G Triax Adapter (LDK 5418)

General

Dimensions (HxWxL, approx.): 220 x 120 x 205 mm (8.7 x 4.7 x 8.1 in.) without handgrip

Operating temperature: -20 to 45° C (-4 to 113° F)

Storage temperature: -20 to 70° C (-4 to 158° F)

Operation humidity: Max. 90% (non-condensing)

Weight: 2.3 kg (5.1 lbs.)

Input Connectors

Front mic: XLR-3-31 type (female) balanced, +48V, ch1

Audio 1: XLR-3-31 type (female), selectable phantom +48V; mic/line switch

Audio 2: XLR-3-31 type (female), selectable phantom +48V; mic/line switch

DC (12V): XLR-4 pin type (male)

Output Connectors

HD-SDI VF: BNC type, 1.0 Vp-p, 75Ω

HD-SDI (EXT):

- BNC, SMPTE 292M, 1.5 Gb/s, 0.8 Vp-p, 75Ω
- BNC, SMPTE 425M-A, 3.0 Gb/s, 0.8 Vp-p, 75Ω (live output)

Scriptlight DC (0.25A/12V): 4-pin Hirose

DC (12V/1.5A) and tally indicators: 4-pin Hirose

Input/Output Connectors

Adapter (to base station): Triax communication + power connection

Typical triax (14 mm) cable length: 1,500m (4,921 ft.)

Intercom (to headset): XLR 5-pin (female)

Video Ref (input)/Teleprompter (output): BNC type, 1.0 Vp-p, 75Ω (tri-level sync input/SD-output)

Auxiliary/Data (private data): 1-pin (female)

Tracker: 11-pin (female)

VF mon./ext. output (analog)/AES-EBU input: BNC type, 1.0 Vp-p, 75Ω

Hot shoe connection (bottom plate): 20-pin connector (power + control)

3G Triax Base Station (LDK 4400)

General

Dimensions (HxWxL, approx.): 438 (19" rack) x 88 (2 RU) x 510 mm

Operating temperature: 0 to 45° C (+32 to 113° F)

Storage temperature: -40 to 70° C (-40 to 158° F)

Operation humidity: Max. 90% (non-condensing)

Weight: 13.0 kg (28.66 lbs.) full option equipped

Power consumption: 380 VA or 375 watt max. in studio configuration; 200 VA or 180 watt max. in portable configuration

Typical triax (14 mm) cable length: 1,500m (4,921 ft.)

Connectors

Teleprompter in: BNC 1X (loop-through output), (C)VBS, 1.0 Vp-p, 75Ω

Reference in: 1X (loop-through output), 1.0 Vp-p, 75Ω HD tri-level sync or SD black-burst

HD-SDI out:

- BNC 6X 0.8 Vp-p, 75Ω, SMPTE 292M, 1080i/720p at 59.94/50 Hz
- BNC 6X 0.8 Vp-p, 75Ω, SMPTE 425M-A/SMPTE 425M-B, 1080p at 59.94/50 Hz

HD-SDI out (live / effect): BNC 2X 0.8 Vp-p, 75Ω, SMPTE 292M, 1080i/720p at 59.94/50 Hz

HD monitoring out: BNC 1X 0.8 Vp-p, 75Ω, SMPTE 292M, 1080i/720p at 59.94/50 Hz

Composite video out: BNC 1X 1.0 Vp-p, 75Ω (CVBS text w/ or w/o video, for viewing purposes)

Signaling in/out: D-sub 15-pin, male; preview, green tally (call), dry contact; yellow tally (iso), dry contact; red tally (on-air), dry contact; remote audio level control (22-64 dB), DC

Auxiliary in/out: D-sub 9-pin, female; An0, 0-5 VDC in, An1, 0-5 VDC in, output on camera head; 16:9 <0.8 VDC in; private data in/out; 100 kb TTL (RS-232)

Control data: RJ-45 connector for Ethernet C2IP

Power requirement: AC 115V/230V ±15%, 47 to 63 Hz

Power connector: IEC type, 3-pin male

Power consumption: 380 VA or 375 watt max. in studio configuration; 200 VA or 180 watt max. in portable configuration

Triax module: Fischer, ARD, Lemo-4E, Lemo-3T, BBC-Lemo, Trilock

External video in:

- HD-SDI or SD-SDI in 1, (loop-through output), 0.8 Vp-p, 75Ω
- HD-SDI or SD-SDI in 2, 0.8 Vp-p, 75Ω
- HD-SDI or SD-SDI in 3, 0.8 Vp-p, 75Ω

2-channel audio: Audio out, XLR-3 2X ; 0/+6 dBu (±1.5 dB, max. 18 dBu, 600Ω, gain max. 70 dB)

Frequency response: 40 Hz to 15 kHz, (+1/-3 dB, 1 kHz, -10 dBu output level)

Distortion: Less then 0.5% (100 Hz/1 kHz, +6 dBu out, 600Ω)

S/N ratio: 58 dB (unweighted RMS)

AES-EBU 1+2: BNC 75Ω, digital audio output audio 1 and 2

AES-EBU 3+4: BNC 75Ω, Dig audio output audio 3 and 4

Intercom in/out (2/4-wire intercom): D-sub 15-pin, female (program in, production in/out, engineering in/out), in: 0 or 6 dBu; out: 0 or 6 dBu (±2 dB, max. 12 dBu)

Frequency response: 150 Hz to 6 kHz (1 kHz, -10 dBu output level)

Distortion: Less than 2% (1 kHz, +12 dBu level)

Option

SD-SDI output (LDK 4532/00): SDI out, BNC 2X, 0.8 V p-p, 75Ω, SMPTE 259M, ITU-R BT.601

ORDERING

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