

LDK 4420 3G Twin Base Station

DUAL TRIAX/FIBER CAMERA TRANSMISSION SYSTEM

The only 3G/3D-ready multi-standard camera transmission system that lets you use either triax or fiber connectivity.



With the introduction of the 3G Twin Base Station, Grass Valley™ extends its 3G Transmission family to further optimize camera transmission flexibility without compromising signal quality and functionality. This third-generation transmission system is a non-compromise, fully featured solution that can cope with the broadcast requirements of today and tomorrow.

The 3G Twin Base Station is a heavy-duty, high-quality, multi-standard 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.

The system combines a triax module and a single mode (dark) Fiber (SC or ST) module within a single base station. This makes the 3G Twin Base Station the base station of choice for every truck or studio environment.

When the cameras used in a production are Grass Valley 3G Triax cameras, “traditional” triax cable can just be plugged into the 3G Twin Base Station and all functionality is available. Distances up to 1,500m (4,921 ft.) can be covered. If longer cable runs are needed (e.g., 5 km/3.1 miles), single mode (dark)

fiber cables can be plugged into the same 3G Twin Base Station, which then plug into the LDK 4426 3G Camera to 3G Fiber converter. This then outputs full Grass Valley 3G Triax to the camera. The LDK 4426 converter box can be placed close to the camera or up to 1,500m (4,921 ft.) away.

When Grass Valley 3G Fiber cameras are used, single mode (dark) fiber cables are plugged into the 3G Twin Base Station and can run to the LDK 4425 3G Fiber Power Converter which delivers full SMPTE hybrid fiber to the camera, keeping full functionality including diagnostics.

The 3G Twin Base Station offers extended connectivity with no less than eight HD outputs. There are 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 available, of which two can be selected as a return channel at the 3G Triax or 3G Fiber camera adapter. 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 RUs and weighing only 2.3 kg (5.1 lbs.), the 3G Twin 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 4420 3G Twin 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 used to directly power the SuperXpander from the camera. This makes the new RefleX SuperXpander seamlessly compatible with the new Grass Valley 3G Triax and 3G Fiber camera adapters.

Once the camera is inserted in the RefleX SuperXpander, the triax or fiber cable can be connected to the camera. Since all interfacing between the camera and the RefleX SuperXpander takes place through the hot shoe connector, the transmission system agnostic—working directly with both the Grass Valley 3G Triax and 3G Fiber systems without for true flexibility.

KEY FEATURES

- Member of the versatile Grass Valley 3G Transmission family
- Maximum flexibility with both triax and single mode (dark) fiber connectivity
- Range of transmission conversion boxes to meet every need
- 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
- Three selectable return inputs (3G, HD, or SD)
- Universal 3G power supply
- Long triax cable capabilities (1,500m/4,921 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

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.)

Typical SMPTE hybrid fiber (SMPTE 311) cable length: 3,000m (9,842 ft.) - in combination with 3G Twin Power converter LDK 4429

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

3G Transmission Module

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

Fiber connections: SMPTE (Lemo), SC, ST

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 than 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)

OPTIONS

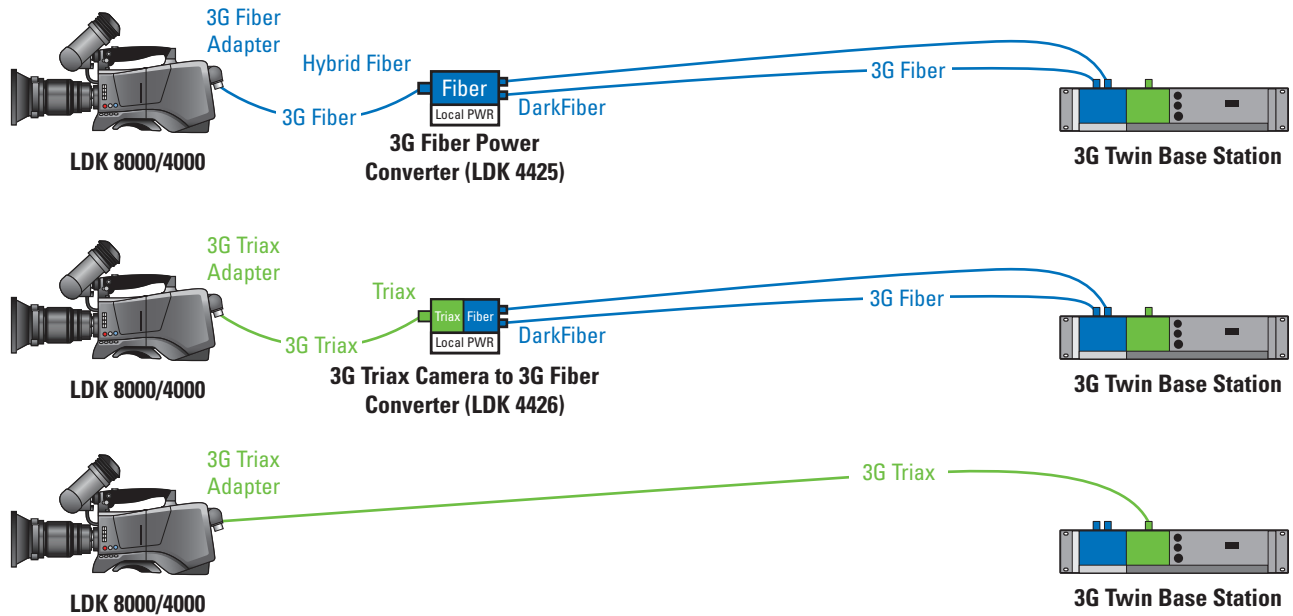
SD-SDI Output

(LDK 4532/00)

SDI out, BNC 2X, 0.8 Vp-p, 75Ω, SMPTE 259M, ITU-R BT.601

ORDERING INFORMATION

Please contact your authorized Grass Valley representative.



GLOBAL SERVICES



Grass Valley Global Services specializes in the defining of, deployment of, and support of today's dynamic file-based workflows, based on Grass Valley and third-party solutions. With Grass Valley Global Services, you can achieve your operational goals in the most efficient and cost-effective way possible with a partner you can trust.

www.grassvalley.com/support

Define: We help you to define your business and technology requirements and then design solutions to meet them.

Deploy: Our professional service organization, backed up with proven project management methodologies, can take you from design through deployment, commissioning, and training.

Support: We offer a complete SLA portfolio to keep your systems running and help plan for your long-term maintenance needs.

Join the Conversation at **GrassValleyLive** on Facebook, Twitter, and YouTube.

