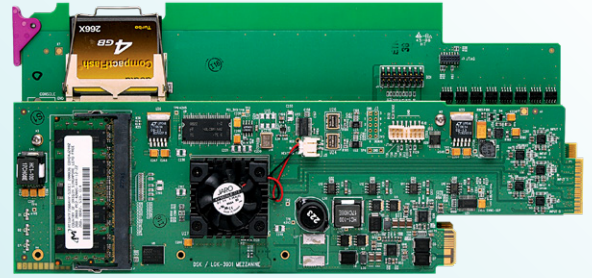# LGK-3901
3G/HD/SD Channel Branding Processor

Promote your brand and efficiently deliver your channels.

The Densité® LGK-3901 from Grass Valley® is a low-cost, modular channel branding processor, capable of inserting up to five layers of graphics into 3G/HD/SD. Three of the keying layers can be fed by internally stored still/animated graphics, and two layers are fed by external graphics devices. It also offers character generation, clock insertion, EAS support and audio clip/voiceover

playout. The LGK-3901 is ideal for pre-rendered graphics.

A template-based character generator can insert a crawl layer or a static (dynamically updated) text layer. High-quality characters are output with 256-level anti-aliasing, with easy drop shadow and transparency control. Unicode characters in Truetype fonts are

available from 6 to 600 pixels, in any RGB color. The EAS option (U.S.) enables emergency text and voiceovers to be inserted (requires an A to D converter to provide AES input).

An optional video mixer that essentially converts the card into an Imagestore-Modular can be added, providing on-card A/B mix effects. The LGK-3901-ISM-UPG option

Key Features

Modular, 3G/HD/SD branding processor
- Modular master control and branding processor
- Module is housed in Densité 3 frame, with up to 10 cards (channels) per frame
- Supports 3G/HD/SD (1080p, 1080i, 720p, 576i, 480i, 59.94 Hz and 50 Hz)
- Uses widely adopted Oxtel automation protocol (Ethernet, RS-232/422)
- Manual control options, including Xpanel GUI, and GV Orbit® and iControl™ PC-based control

Multilayer channel branding
- Five independent keying layers: three can be fed by internally stored stills/animations, and two layers are fed by external graphics devices (dual fill and key inputs)
- Integral storage capacity of up to 4000 images/animations

- Independent preview output
- Automated character generation for static or data-driven text rendering and crawls
- In-vision digital/analog clock insertion (with CG option)
- Emergency Alert System (EAS) support (USA only)
- Multichannel voiceovers and audio clip playback*
- Temperature sensor option

Master control switching
- AB video mixing option, with 16 channel audio mixing (requires LGK-3901-ISM-UPG)*
- X-fade, V-fade and asymmetric V-fade transitions

Streamlined workflow
- Fully compatible with Vertigo branding graphics automation and asset management system for highly productive, cost-saving workflows
- Easy integration into a familiar After Effects based workflow, using the Vertigo After Effects plug-in

Robust design
- Compact flash memory for O/S and graphics storage
- Rugged Linux architecture
- Densité 3 frame offers redundant, hot swappable power supplies
- Mechanical bypass of program input
- Easy diagnostics via Densité 3 front panel, video thumbnails over IP, and iControl monitoring and control system

Comprehensive Densité range
- LGK-3901 can be easily combined with other Densité modules in the 3 RU Densité frame, including signal processors, DAs, and multiviewers

*Option

allows video from A and B (PGM IN and FILL–2) sources to be mixed together, providing the background video source for the PGM keyers. The mixer can be configured to either cut or fade the video.

An optional integrated audio mixer provides eight channel voiceover/audio clip storage/playout. Background audio is automatically ducked during voiceovers. Audio can be accepted as embedded audio or by four external AES inputs.

Specifications

Program and Fill and Key Inputs
Signal: 3G/HD/SD-SDI SMPTE ST 424, SMPTE ST 292 and SMPTE ST 259-C compliant

Supports data rates of 270, 1483.5, 1485, 2967, 2970 Mb/s

Cable length (Belden 1694A):
– 60m (196 ft.) at 3 Gb/s
– 120m (393 ft.) at 1.5 Gb/s
– 300m (984 ft.) at 270 Mb/s

Return loss*:
– >15 dB for up to 1.5 GHz
– >10 dB from 1.5 GHz to 3 GHz

Program and Preview Outputs
Signal: 3G/HD/SD-SDI SMPTE ST 424, SMPTE ST 292 and SMPTE ST 259-C compliant

Supports data rates of 270, 1483.5, 1485, 2967, 2970 Mb/s

Return loss*:
– >15 dB for up to 1.5 GHz
– >10 dB from 1.5 GHz to 3 GHz

Jitter (wideband):
– HD/SD: <0.2 UI
– 3G: <0.3 UI

Reference Input
Signal:
– SMPTE ST 170/SMPTE ST 318/ITU 624-4/BUT 470-6 or comp. sync
– SMPTE ST 274/SMPTE ST 296 tri-level sync

Return loss: >35 dB up to 5.75 MHz

Serial Control
Connector: RJ45
Signal: RS-232/422
Data rate: 9600, 19200, 38400, 57600, 76800, 115200

Video Processing Performance
Signal path: 10 bits

Embedded Audio Processing Performance
Quantization: 20-24 bits
Sampling: 48 kHz, synchronous
Number of channels: 16, 4 groups

Electrical
Power: 25W

* Return loss figures may differ when signal is routed through the bypass relay.

Ordering

LGK-3901-4GB	3G/HD/SD logo inserter with 4 GB storage
LGK-3901-8GB	3G/HD/SD logo inserter with 8 GB storage
LGK-3901-16GB	3G/HD/SD logo inserter with 16 GB storage
LGK-3901-32GB	3G/HD/SD logo inserter with 32 GB storage
LGK-3901-4GB-SD	SD logo inserter with 4 GB storage
LGK-3901-8GB-SD	SD logo inserter with 8 GB storage
LGK-3901-3DRP-R	Double rear connector panel with bypass relay

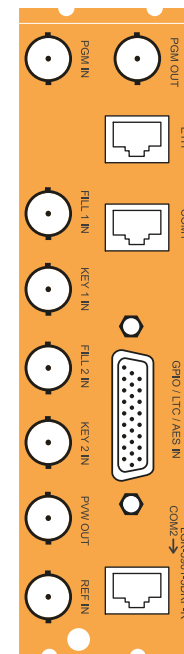| **Housing frame**	**Description**
Densité 3 frame	Housing frame with (1) PSU (AC IN), (1) Ethernet controller with front control panel, blank rear panels (up to 10 LGK-3901 processors per 3 RU frame)

Options	**Description**
LGK-3901-OPT-TXT	Easytext character generator (includes analog/digital clocks)
LGK-3901-OPT-EAS	EAS support – U.S. only
LGK-3901-OPT-AUD	Audio/voiceover option
LGK-3901-ISM-UPG	Option to upgrade to ISM
LGK-3901-OPT-TEMP	Temperature probe option
LGK-3901-8GB-UPG	Upgrade to 8 GB storage
LGK-3901-16GB-UPG	Upgrade to 16 GB storage
LGK-3901-32GB-UPG	Upgrade to 32 GB storage
LGK-3901-HD-UPG	Upgrade from SD to 3G/HD for LGK-3901-SD
Remote control	GV Orbit, iControl, iControl Solo

LGK-3901-3DRP-R

DS-PUB-3-0361A-EN

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