GMC - TESTOR-titan

greenMachine® constellation

TESTOR Audio & Video Test Generator for greenMachine titan

The greenMachine approach is unique. The hardware itself is a powerful general purpose audio and video processing appliance that can perform many different functions using one of the available greenMachine configurations (constellations) Each constellation includes a combination of processing functions to perform high level processing including FS, UPXD, HDR etc.

greenMachine titan

The greenMachine TESTOR Constellation is for deployment on the greenMachine titan HW platform.
Below you can find some basic information about the greenMachine titan.

For more information about the greenMachine titan please visit:

www.lynx-technik.com

Description

LYNX Technik has long been recognized for its feature-rich and user friendly multi-format test signal generators through its “Testor” series. The greenMachine Testor constellation is the company’s latest offering of test signal generators and is available for the greenMachine titan hardware and greenGUI software platform. greenMachine Testor is an ideal trouble-shooting A/V tool for technicians and engineers working in the field, in-studio applications and for line-up tasks in master control rooms. Anywhere there is an A/V testing, designing, repairing and troubleshooting environment, the greenMachine Testor will be useful.

The greenMachine Testor constellation is a video and audio test signal generator that comes pre-configured for the greenMachine titan platform. It supports 12G (4K UHD), 3G, HD, SD-SDI formats and when operating in UHD mode, the Testor constellation can provide a single channel test generator. For 3G video formats (and below) the Testor constellation offers four independent test generators. To summarize the two options, it is currently offered in two configurations:

1. Single Channel 4K/UHD (up to 3840 x 2160p) - 12Gbit/s SDI and quad link (2SI)
2. Four independent channels up to 3G SDI

Standard static and dynamic video test signals and patterns are included, and for added flexibility, users can upload their own user-defined signal patterns. Logos and text can also be added to the test signals, which is very useful for example for channel identification. The included collection of patterns supports all video standards up to 4K/UHD. User-defined pattern uploads can be resampled for other standards. The Testor constellation also offers test signals for various HDR standards (PQ, HLG, SLog3).
Plus, the full collection of test signals can be shared with all greenMachine devices in a network (greenUniverse).

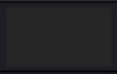
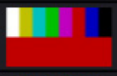
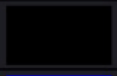
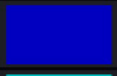
The integrated graphics editor provides a tool for users to place images & logos, add text, and even add user-defined signal patterns and graphics. All items can be moved and edited simply with a computer mouse. A scaler ensures users can scale test patterns to match the format.

The greenGUI software provides users with a true, advanced preview interface (including zoom) to check test signals in the GUI, control the outputs, format the settings, and manage customer-defined image and test pattern uploads. greenGUI software is free of charge and can be downloaded from: https://www.lynx-technik.com/support/download-area/greengui-software/

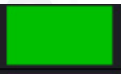
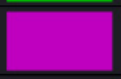
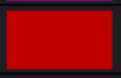
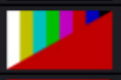
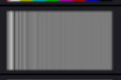
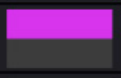
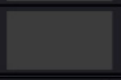
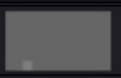
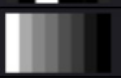
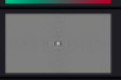
The greenMachine Testor also includes a 16-channel audio test generator with adjustable level, phase, frequency, mix-down and an EBU/AV sequence. All the audio measures are embedded into the SDI video or output to the external audio outputs of greenMachine. Through the audio crossbar all audio generator channels can be individually assigned to the embedder inputs and the external audio outputs (AES or analog).
The timing of the audio and the video test signals including the output reference signal (Bi-level SD or Tri-Level HD) can be individually set in relation to an attached input reference signal.

Standard Test Patterns (pre-installed)

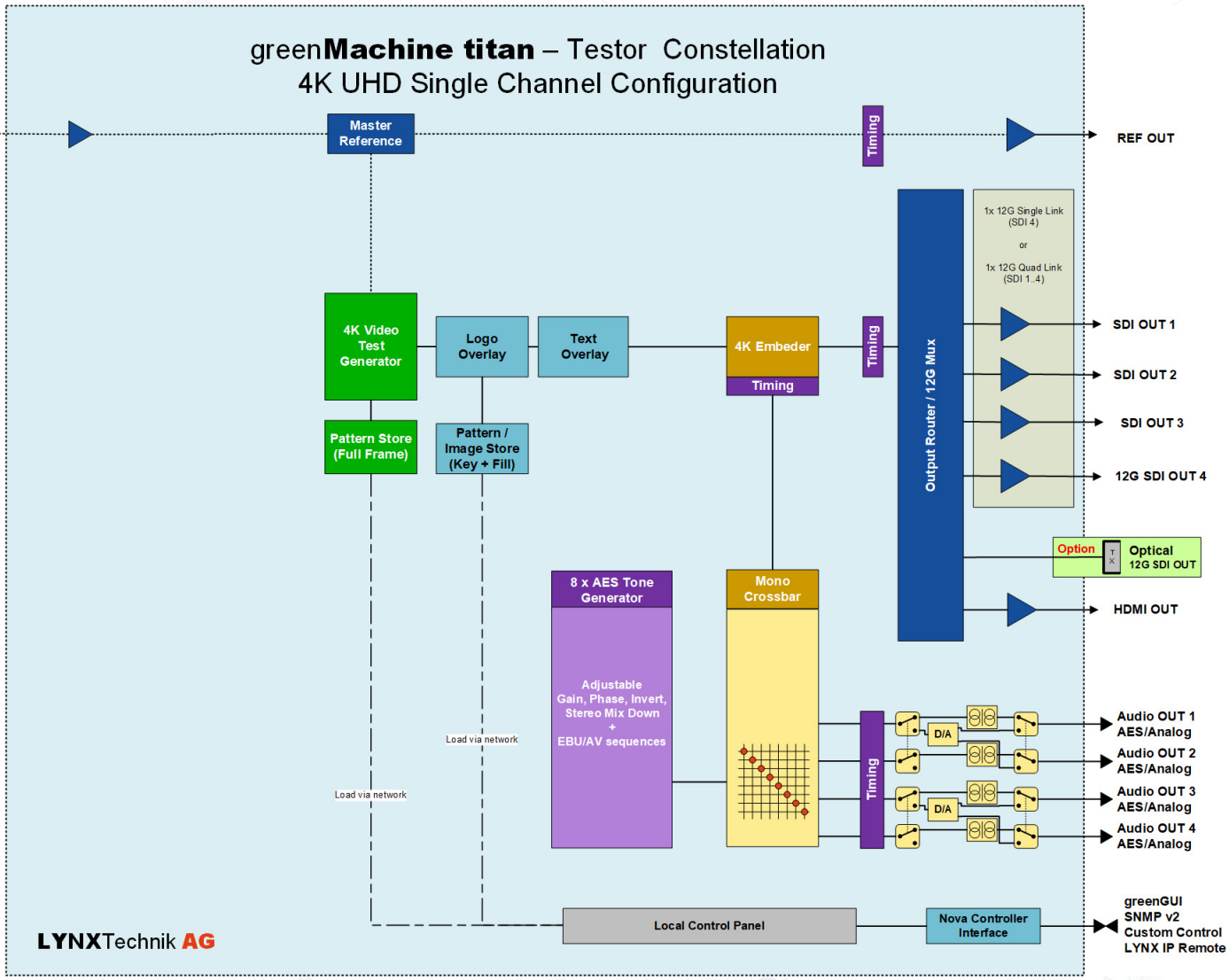
The following test patterns will be automatically available when deploying the TESTOR constellation

Standard Patterns			
Name	**Type**	**Present**	**Image**
15% Grey	Pattern	✓	
Black Flash	Pattern	✓	
CB-Ramp up	Pattern	✓	
Center Sweep	Pattern	✓	
Color Temperature	Pattern	✓	
75% Colorbar over Red	Pattern	✓	
100% Colorbar	Pattern	✓	
75% Colorbar	Pattern	✓	
Convergence Grille	Pattern	✓	
CR-Ramp up	Pattern	✓	
EBU AV Sync	Pattern	✓	
Full Field Black	Pattern	✓	
Full Field Blue	Pattern	✓	
Full Field Cyan	Pattern	✓	
Full Field Green	Pattern	✓	

Standard Test Patterns (pre-installed)

Full Field Green	Pattern	✓	
Full Field Magenta	Pattern	✓	
Full Field Red	Pattern	✓	
Full Field White	Pattern	✓	
Full Field Yellow	Pattern	✓	
4 Level Pluge	Pattern	✓	
Field Pattern Colorbar/Red	Pattern	✓	
Field Pattern Red/Colorbar	Pattern	✓	
Frequency Sweep	Pattern	✓	
Moving Zoneplate	Pattern	✓	
Multiburst	Pattern	✓	
Pathological EQ	Pattern	✓	
Pathological EQ-PLL	Pattern	✓	
Pathological PLL	Pattern	✓	
Persistence Test	Pattern	✓	
SMPTE Colorbar	Pattern	✓	
Staircase	Pattern	✓	
White Flash	Pattern	✓	
Y-Ramp down	Pattern	✓	
Y-Ramp up	Pattern	✓	
YCBCR-Ramp up	Pattern	✓	
Zoneplate	Pattern	✓	

Functional Diagram Single 4K UHD Channel

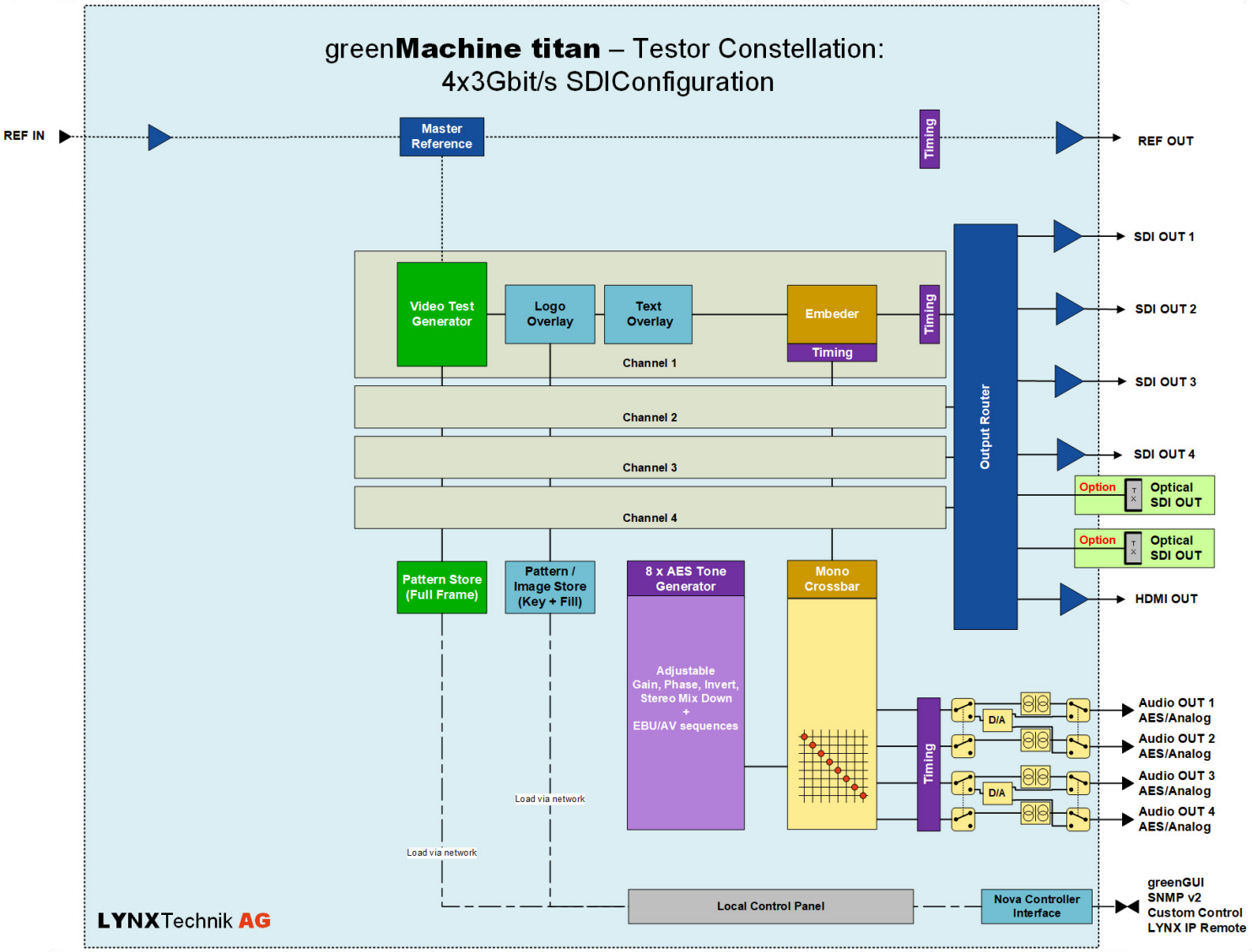


The greenMachine TESTOR Constellation consists of two individual configurations. One for a single 12G 4K-UHD processing channel, the other for four independent 3G processing channels of SDI signals up to 3Gbit/s configuration.

When deploying this constellation the user will be asked what configuration (4K UHD or 4x3G) he would like to deploy.
The user can deploy the constellation via the greenMachine front panel or within the greenGUI running on a network connected PC or MAC.

The NOVA controller is already included in the basic GM hardware.

Functional Diagram Quad 3G Channel



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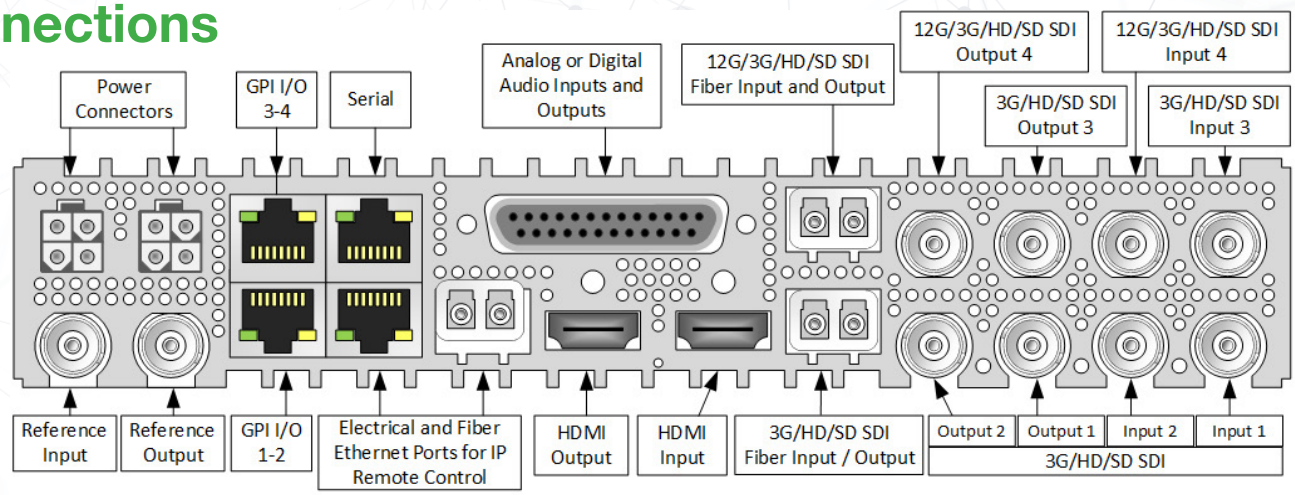
Connections



Supported SDI Formats

SDTV Formats	525 / 59.94Hz 625 / 50Hz		
HDTV Formats	1080i / 50Hz 1080i / 59.94Hz 1080i / 60Hz 1080p / 23.98Hz 1080p / 24Hz 1080p / 25Hz 1080p / 29.97Hz	1080p / 30Hz 1080psf / 23.98Hz 1080psf / 24Hz 1080psf / 25Hz 720p / 23.98Hz 720p / 24Hz 720p / 25Hz	720p / 29.97Hz 720p / 30Hz 720p / 50Hz 720p / 59.94Hz 720p / 60Hz
3GBit/s Formats Level A and B	1080p / 50Hz 1080p / 59.94Hz 1080p / 60Hz		

12GBit/s Formats Single Link	3840 x 2160p / 50Hz 3840 x 2160p / 59.94Hz 3840 x 2160p / 60Hz
12GBit/s Formats Quad Link 2SI Level A and b (4 x 3Gbit/s)	3840 x 2160p / 50Hz 3840 x 2160p / 59.94Hz 3840 x 2160p / 60Hz

Options

RFR 6000 - 1RU 19” Rack Mount Chassis

The RFR 6000 is a compact 19” rack mounting solution occupying 1RU of vertical rack space. It can be configured to accommodate one or two greenMachines. In either configuration the RFR 6000 also provides innovative mounting options for one or two of the external RPS 6120 “brick” power supplies both of which can be securely mounted within the 19” 1RU footprint.

RPS 6120 - Redundant Power Supply

Each greenMachine includes the RPS 6120 primary power supply, an external desktop “brick” style power supply. An optional second power supply can be added for redundant protection.

The greenMachines support seamless auto changeover between primary and redundant power supply. LEDs on the front control panel of the greenMachine hardware indicate the status of the supplies.

Ordering Information

GMC-TESTOR-titan	TESTOR constellation	EAN: 4250479326101
R FR 6000	1 RU 19” Rack Mount Chassis	EAN: 4250479324466
R PS 6120 EU	Desk Power supply with EU cord	EAN: 4250479324343
R PS 6120 UK	Desk Power supply with UK cord	EAN: 4250479324350
R PS 6120 US	Desk Power supply with US cord	EAN: 4250479324367

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