

Inscriber® G7™

High-Performance, Single- or Dual-Channel, HD/SD Broadcast Graphics System

GRAPHICS // INSCRIBER® G7™



Designed to meet the "big picture" graphics requirements of today's broadcasters, the Harris® Inscriber® G7™ solution offers a full suite of broadcast graphics tools combined with professional-grade hardware components in a single 4RU chassis. The G7 platform has been designed to be a top-of-the-line, single- or dual-channel character generator that delivers the robustness and reliability professional broadcasters demand. Featuring the Altitude™ Express graphics board, standard system and media drive redundancy, NVIDIA® GPUs and the latest processor technology, the G7 provides the fastest and most reliable system available.

Software tools, including the powerful Inscriber G-Scribe™ creation and playout software, Intelligent Interface® and MOS support, Connectus® integration, RTX NET™ API and Inscriber® G-3D™ design option, optimize workflow while achieving new levels of graphics quality. Combined with hardware features such as 2D and 3D DVE capabilities, video ingest, and dedicated second-channel hardware components, the G7 platform uniquely integrates the functionality of multiple broadcast graphics products into a single system solution. (* Some components optional.)

PRODUCT DETAILS

G-Scribe Character Generator

G-Scribe is a feature-rich character generator that provides all of the tools required to create stunning on-air graphics in an easy-to-use package. You can integrate clips, stills, audio, animation, transition effects, and much more to create incredible on-air presentations. Along with content creation tools, G-Scribe provides an array of tools to control and manipulate graphics, including a full playlist and sequencer module, RapidFire page recall and recording, and an integrated media store.

RTX NET Scripting

Unleash the power of RTX NET directly from your CG pages and G-3D scenes using the all-new RTX NET scripting engine. RTX NET scripting allows you to design features and functionality to meet your specific workflow requirements. Scripts can be applied to both 2D and 3D elements, and are ideal for creating special graphic effects that can automatically affect the page design and layout based on user-driven content. By utilizing the .NET framework, you can develop scripts in your language of choice, and take full advantage of all of the development tools offered by the .NET framework.

FEATURES

G7 Exclusive Features

- Dual-channel configuration available, featuring additional I/O channel and dedicated GPU for uncompromised playback on the second channel
- Dual system drives with RAID 1 redundancy
- Eight-drive, SAS media array for uncompressed clip playback with RAID 5 redundancy
- HD/SD simulcasting (requires second channel)

Standard

- G-Scribe advanced graphics software
- Strata Compositing™ — seemingly separate channels/layers output as one channel
- RapidFire™ software playback capability
- Automation Interface™ for Intelligent Interface® system control
- Connectus integration (Connectus software sold separately)
- Overlay™ persistent objects
- 3D scene playback capability (Collada or G-3D formats)
- RTX NET scripting
- Quick Edit mode for rapid data entry
- Integrated media store, with the ability to store, manage, retrieve and play out media files
- Open database connectivity (ODBC) to databases and spreadsheets; displays RSS feeds
- SD/HD-switchable
- Hardware-scaled SD downconversion on a single channel
- Embedded and discrete AES audio capability (16 channels)
- Redundant power supplies
- Timecode support
- 2-2D DVE effects for live video squeezeback
- Real-time 2D animation creation and playback
- Front-mounted, swappable system and media drives

Options

- G-3D design tool for 3D scene creation and editing
- RTX NET ports
- MOS integration
- Uncompressed video clip playback with support for most software codecs, including Quicktime®
- Live video ingest to LTV or MPEG
- 3D chart creation
- Direct Control™ two remote playlist creation and control
- Integrated Paint tool including Adobe® Photoshop® PSD import with layer support
- RapidFire keyboard
- G-Scribe Offline™ creation software

Automation Interface

Automation Interface allows you to connect an Inscriber graphics system to graphics automation systems using the industry-standard Intelligent Interface® protocol. It also enables tag filling and display control using standard serial port protocol or TCP/IP available from most news system vendors, including Harris, AP, Autocue, Avid, Compromter, EZ News, Floral, Parkervision and Sundance.

Strata Compositing

Strata Compositing enables real-time compositing of multiple, independently controllable virtual channels into a single physical channel. Use it to output multiple graphic layers — a ticker, a station ID, a lower third and background video, for instance — as a single channel.

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Overlay

Overlay allows you to build and control three additional layers of graphics on top of your current output without having to use additional channels. Objects output with Overlay remain on the topmost layer and operate without disruption. They're completely independent of other layouts, making them easy to control. You can easily insert and hide clocks, timers, still or animated logos, channel IDs, lower thirds, scoreboards, over-the-shoulder graphics, text crawls and temperature read-outs.

Connectus Integration

Easily publish individual layouts or entire playlists to a Connectus media server with G-Scribe creation and playout software. Quickly and easily distribute content between multiple CG systems. You also can download and approve media from the Connectus server. Media Store operators can directly publish and retrieve media assets including associated metadata.

* Note: Connectus software must be purchased separately.

Integrated Media Store

Store, manage, retrieve and play out media files including stills, templates, clips and animations. The integrated media store allows you to search based on various metadata, including user-definable keywords. Metadata is copied with each image, allowing files to retain all related information when moved from one system to another. The media store integrates directly with the playlist and the output display so graphics resources can be found and used either in CG layouts or directly out to air.

Real-Time 3D Playback

Import and play true 3D scenes directly from third-party applications such as 3ds MAX® and Maya®. Integrate these scenes directly into your playlist for real-time playback. Add the G-3D option for even greater control of your 3D scene, allowing scene editing and template creation.

System and Media Drive Redundancy

Your valuable graphic assets are always protected against hardware failure with standard system and media drive redundancy, with no impact on system performance. RAID protection provides the peace of mind that your system and data will be available when you need it.

Integrated DVE Effects

Onboard hardware video scalars allow two incoming video feeds to be displayed resized in real time in a region of the graphics layout. There are 2 x 2D DVE (SD or HD) per Altitude Express graphics channel.

Hardware Downconversion

The Altitude Express allows your stations to standardize with one set of HD graphics and eases the transition to HD. The downconversion feature allows you to work in a completely HD workflow and downconvert the final graphics from the system using the scaling method of your choice.

ODBC

The open database connectivity (ODBC) standard allows multiple programs to share information stored within a database. The Inscribe ODBC feature links the information in your database tables to your graphic layouts and templates. When you update the database entries, the information automatically updates in your layouts. Easily update graphics from an external source — no graphics experience is needed. This feature is ideal for sporting events, elections, school closing announcements and more.

OPTIONS

Second Channel Option

Add a second channel to your G7 system to create a powerful dual-channel solution with uncompromised power across two channels. The G7 system includes a dedicated graphics processing unit for both output channels to ensure that each channel has equal bandwidth and processing power.

The second channel option also provides the ability to convert your G7 system into an HD/SD simulcasting solution producing a simultaneous HD and hardware-scaled SD video stream from a single box.

G-Scribe Offline

With G-Scribe Offline, a standalone software package, you can compose layouts on any computer running Windows® XP and transfer designs to an online graphics system for playout to air.

G-3D

This proprietary 3D design module elevates broadcast graphics design with illuminating, true 3D graphics, text and real-time animations. Create 3D scenes from native and/or imported 3D objects, or import 3D scenes from third-party programs such as 3ds Max® and Maya®.

G-3D provides a deep level of scene editing including timeline modification, image manipulation, primitive shapes, lights, multiple cameras, and many options for texturing. Attach audio files to the 3D graphics for playout in SD or HD. Apply custom textures to any 3D surface containing tagged text and graphic content using the familiar G-Scribe graphics editor. Tagged fields can be updated manually or via automation. Once a scene has been created, it can be played out directly from G-Scribe or exported and then used as a template for playback using Automation Interface or Inscribe RTX NET applications.

Also included with the G-3D module is the ability to create Advanced Real-time Triggers (ART), allowing you to quickly and easily create dynamic interactions between objects and scenes that can be triggered from the timeline or manually by an operator. These triggers allow complex actions to be integrated into 3D scenes with no scripting required.

* Training recommended.

G-3D Offline

* Same as above, but used in conjunction with G-Scribe Offline. Create G-3D files offline, and transfer to an online G-Series™ system.

G-Scribe+ Software Bundle

The G-Scribe+ software bundle includes the G-3D design module, 3D charts and video capture. Video capture and 3D charts are available exclusively with the G-Scribe+ software bundle.

Video capture enables you to record streaming audio and video at full HD resolution. Set in and out points, and play back as a full-frame video clip.

The 3D charts feature enables the integration of dynamic 3D charts directly into 3D scenes. Each chart can be connected to a separate data source and will update on-air as updates are made to the data source (e.g., Excel, Access). Chart types available include 3D bar and pie, as well as line charts.

Clip Playback

This option enables integrated playout of compressed video clips as backgrounds, media objects and textures within your graphics layout. Play media content of any resolution up to full HD. Software codecs enable playout of most Windows® formats, including VIA, AVI, WMV, MPEG2 and QuickTime®*.

The clip option includes a large-capacity media array consisting of eight 250 GB front-mounted SAS hard drives, providing uncompressed clip playback with integrated data protection.

* Some QuickTime codecs may not be suitable for broadcast playback.

Direct Control 2

Take control of your graphics systems with the all-new Direct Control 2 remote control interface for Inscribe production graphics systems. From a single seat, generate playlists, fill tags and control playback on multiple CG systems simultaneously. A simple drag and drop interface makes CG control a breeze with intuitive controls and operation, and is easy-to-use even by those not trained as graphics operators. Direct Control 2 supports most common media formats, including stills, video clips, CG pages and G-3D files.

* The Direct Control 2 option must be purchased for each playback system.

3D DVE Module

The 3D DVE module option is an add-on to the Altitude Express board. The 3D DVE option allows one input to be animated and positioned within 3D space on the output channel. The 3D DVE option can be used in conjunction with the 2D DVE option. Typically, the underlying graphics are revealed. One 3D DVE module is purchased per Altitude Express graphics channel.

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RTXports™

RTXports enables the playback of custom or third-party applications — such as financial tickers, elections results or sports score bugs — that have been created using the RTX NET API on any Inscribe graphics system. These customized applications can run concurrently with G-Scribe and Automation Interface, while sharing access to the output channel.

Paint™

The Paint option is a 32-bit paint and graphics creation tool integrated with G-Scribe. It supports unlimited layering, resolution-independent image processing and masking. Paint allows native Photoshop® files (.PSD) to be imported into and manipulated within the G-Scribe user environment — while maintaining layers.

Inscribe MOS

Inscribe MOS enables remote asset browsing, editing and playout capabilities within MOS Newsroom Computer Systems (NRCS) such as AP's ENPS® and Avid's iNews®. Inscribe MOS consists of a MOS-compliant ActiveX client control interface connected to Inscribe graphics systems. Inscribe MOS enables newsroom staff to create and schedule template-based graphics from their desktops. Once inserted into a rundown, the graphics are available for playout across multiple Inscribe graphics systems. The Inscribe MOS server component negotiates transactions between the various MOS clients, the newsroom computer and Inscribe graphics hardware. Real-time previews are available for the journalists as they create their graphics to ensure the accuracy of each item being added to a story. Absolutely no graphics experience is required.

* MOS Training and Commissioning must also be purchased.

** The MOS option must be purchased for each graphics system that will be controlled by MOS.

*** The MOS option includes unlimited client licenses.

Inscribe MOS Gateway System

The Inscribe MOS Gateway system is a 1RU chassis with dual Ethernet ports and redundant power. The gateway communicates between the NRCS and the MOS clients.

* The Inscribe MOS option must be purchased separately.

RapidFire Keyboard

RapidFire is a dedicated, custom keyboard that enables single-stroke functionality for many G-Scribe functions and features. It includes a US 101 key-cap layout for use as a standard keyboard for normal PC operations. The RapidFire keyboard is an essential tool for live event coverage.

* Ships with English key-caps.

BOB-8000p — Two-Channel Passive Breakout Box

The BOB-8000p is a 1RU passive breakout box that allows you to manage cable connections for up to two Inscribe G5™ systems or one dual-channel Inscribe G7 system. The BOB-8000p package includes two breakout cables and the breakout box.

On-Site Training

Have a certified Harris Inscribe instructor visit your site for three days of comprehensive training. You will learn about the G7 hardware and G-Scribe software, and have an opportunity to enhance and customize your graphics workflow.

* Commissioning and Inscribe MOS training available separately.

** Online training seminars also available.

SPECIFICATIONS

Specifications are subject to change without notice.

Hardware

Chassis	4RU rackmount
	Front-mounted, hot-swappable drive bays (10)
	1+1 redundant hot-swappable power supply, 700 W
	High CFM cooling for 24/7 operation
Dimensions (H x W x D)	7 x 19 x 25.5 in. (17.78 x 48.26 x 59.59 cm)
Weight	71 lbs (32.2 kg)
Breakout Cable	1 x 18 in. Altitude Express ponytail cable
CPU	2 AMD CPU "ISTANBUL" processor
GPU	Dual-head NVIDIA FX4800/1.5 GB
RAM	8 GB DDR2-667 RAM
Disk Sub System	2 x 250 GB SATA system drives in RAID 1
	8 x 300 GB SAS 15.7K media in RAID 5
Removable Drives	Recordable CD/DVD-RW drive for backup or system restore
External Ports	2 Gb Ethernet ports via RJ-45
	2 RS-232 serial port via DB-9 connector
	6 USB 2.0 ports

Video

Supported Video Resolutions	1920 x 1080: 60i/59.94i/50i
	1280 x 720: 60p/59.94p/50p
	720 x 486 (525): 59.94i
	720 x 576 (625): 50i
Standards	SMPTE 292M, SMPTE 259M-C, SMPTE 272M

Input	2 Fill
Input Embedded Audio	16 channels per input
Input Connectors	2 BNC (IEC 169-8)
Input Level	800 mV pk-pk
Input Impedance	75 ohms
Input Equalization	Automatic, adjustment-free cable equalization
Input Cable Length	For HD 135 m minimum of Belden 1694A cable
	For SD 250 m minimum of Belden 828IB cable
Output	1 Fill + 1 Key
Output Embedded Audio	16 channels
Output Connector	2 BNC (IEC 169-8)
Output Impedance	75 ohms
Miscellaneous	EDH insertion on output

AES Audio

Standard	AES-3-1992
Input Connectors	2 BNC (IEC 169-8) and 2 XLR
Sample Resolution	16/20/24-bit
Input Sampling Rate	48 kHz
Input Impedance	75 ohms (BNC) or 110 ohms (XLR)
Maximum Input Signal	2.5 V pk-pk
Output Sampling Rate	48 kHz
Output Connector	4 BNC (IEC 169-8) and 4 XLR
Output Coupling	AC coupled
Input Impedance	75 ohms (BNC) or 110 ohms (XLR)

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Genlock Reference

- Standard SMPTE 318M
- Input Connectors 2 BNC (IEC 169-8) loop
- Input Sensitivity >100 mV
- Input Impedance 75 ohms or High-Z (software controlled)
- Input Types NTST/PAL color black or 2 V sync or tri-level sync

Timecode

- LTC Input XLR connector, 0.6 to 5 V pk-pk, high-impedance termination
- LTC Output XLR connector, <9 V pk-pk

IMAGES/DIAGRAMS

Inscriber G7 Front Panel



Inscriber G7 Back Panel



ORDERING INFORMATION

- INSG7-PROMO G7 Power Promo system; is charged with: single-channel, 2D DVE, automation, AES audio, clips, RTXports, Broadcast Paint, RapidFire Keyboard, G-Scribe+ (includes G-3D design, video capture, 3D charts) and G-Scribe Offline
- INSG74100 Inscriber G7 4 RU HD/SD graphics system; Altitude Express supports 2 video inputs per channel, with full system redundancy; 2D DVE standard

Hardware Options

- INSG72C Second channel for Inscriber G7 system — ordered and installed with system; (2 SDI video inputs, 1 video and key output, analog genlock input)
- INSG7CL Enables the playback of HD/SD clips of most Windows®-supported codecs; option includes additional storage capacity for the dedicated SAS media array (RAID 5)
- INSRFK Provides fast streamlined operation for playback of graphics in a live production environment
- BOB-8000P 2-channel, rackmountable breakout box for Altitude Express-based system; includes 2 breakout cables and a 1RU breakout box to support up to 2 Altitude Express boards

Software Options

- INSG7GSP G-Scribe+ software provides extended functionality; only available for G7; includes G-3D (create 3D graphics), real-time 3D charts and video capture
- INSMOS Create and insert Inscriber graphics directly into your MOS-enabled NRCS such as AP's ENPS® and Avid's iNews®; includes Inscriber MOS Gateway software, Rundown Control and unlimited client licenses for journalists (per site);** NOTE: Must purchase MOS training and commissioning
- INSGSOFF Provides the ability to compose Inscriber G-Scribe layouts on any sufficiently powerful Windows® XP system for later transfer to Inscriber hardware for broadcast payout
- INSRTXP Enables the playback of custom or third-party applications such as financial tickers or school closings
- INSPNT 32-bit Paint and graphics creation plug-in for Inscriber systems; imports Photoshop files (.PSD) directly into the G-Scribe user environment
- INSDC Direct Control for Inscriber systems, network management software offering an innovative way of managing your graphics resources across a LAN. Resources on a G series system can be viewed and managed from any computer system on the LAN. Streamlined user interface allows for editing, displaying, or simple browsing of CG graphics, playlists, news rundowns, templates or template libraries even by those not trained as CG operators