

# Inscriber® G5™ XT

HD/SD Broadcast Graphics System



The Inscriber® G5™ XT broadcast graphics system delivers a robust and complete HD/SD live-to-air solution. It pairs the powerful Altitude™ Express graphics board — offering video capture, HD/SD downconversion, integrated DVE effects and hardware-based video clip playback — with Inscriber G-Scribe™ creation and playout software.

Housed in a 3RU chassis, the G5 XT platform delivers flawless 2D and 3D realtime graphics in either SD or HD. It can easily be incorporated into the workflow of any automated, live news/sports broadcast environment through the use of Intelligent Interface® or MOS protocols, or via the unique Harris® Direct Control™ 2 interface. Available in a single- or dual-channel configuration and with standard features ranging from the support of embedded/discrete AES audio to end-to-end media file management, Inscriber G5 XT is a powerful yet affordable solution for broadcasters that demand the best in an all-in-one graphics system.

## FEATURES

### 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

- Dual-channel configuration available — featuring additional I/O channel and dedicated GPU for uncompromised playback on the second channel
- HD/SD simulcasting (requires the second channel option)
- G-3D design tool for 3D scene creation and editing
- Inscribe RTX NET ports
- MOS Integration
- Video clip playback with support for most software codecs, including Quicktime®
- Live video ingest to LTV or MPEG
- 3D Chart Creation
- Direct Control 2 remote playlist creation and control
- Integrated Paint™ tool including Adobe® Photoshop® PSD import with layer support
- RapidFire keyboard
- G-Scribe Offline™ creation software

## PRODUCT DETAILS

### FEATURES

#### G-Scribe

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, the RapidFire software playout capability 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.

### **Automation Interface**

Automation Interface allows you to connect an Inscribe 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, Com-promter, EZ News, Florical, Parkervision and Sundance.

### **Strata Compositing**

Strata Compositing enables real-time compositing of multiple, independently control-lable 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.

### **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, score-boards, 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 to 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 Autodesk® 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, including scene editing and template creation.

### **2D DVE**

This feature allows two incoming video feeds to be displayed resized in real time in a region of the graphics layout. Typically, the underlying graphics are revealed. There are two 2D DVE (SD or HD) per Altitude Express graphics channel.

### **SD Downconversion**

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 a hard-ware-based downconversion tool.

### **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.

### **Real-time 2D Animation**

Take your graphics to the next level with the easy-to-use 2D animation editor. The editor allows any graphic and text elements, including media objects (with Clips Option), to be key-framed on the x, y and z axes. Quickly apply effects such as transparency, scale and rotation to create dynamic, reusable animations, or use prebuilt templates included on the system. No previous animation experience is necessary.

### **Clips**

This feature enables integrated playout of 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, MPEG-2 and QuickTime\*.

The clips feature also includes a large-capacity media array consisting of eight 250 GB front-mounted SAS hard drives in RAID 5 configuration. This ensures optimal band-width for HD media playback, while protecting your digital assets and providing on-air reliability.

**\* Full HD clips must be compressed.**

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

## **OPTIONS**

### **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 design 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 feature 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.

3D charts 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.

**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**

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.

**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 ENPS® and Avid 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.**

#### **Inscriber MOS Gateway System**

The Inscriber 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 Inscriber 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 Inscriber G5 systems or one dual-channel Inscriber G7™ system. The BOB-8000p package includes two breakout cables and the breakout box.

#### **On-Site Training**

Have a certified Harris Inscriber instructor visit your site for three days of comprehensive training. You will learn about the G5 hardware and G-Scribe software, and have an opportunity to enhance and customize your graphics workflow.

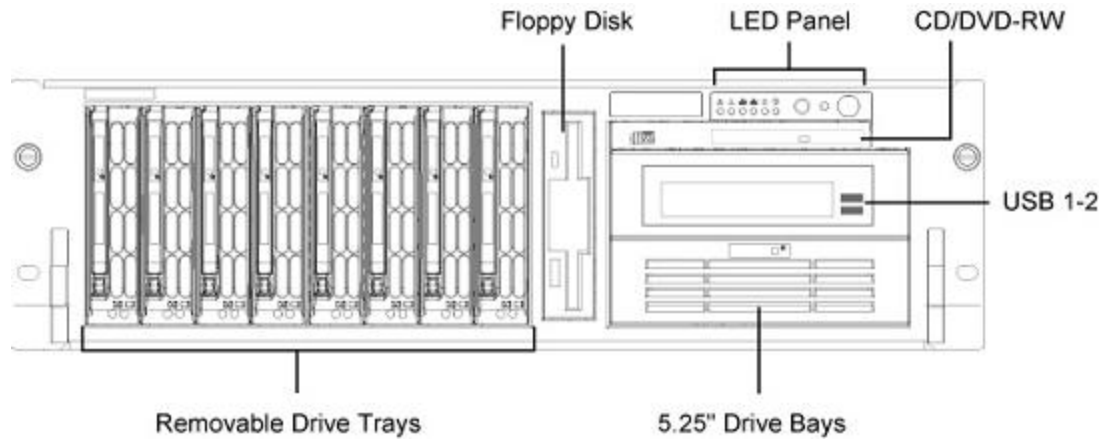
**\*Commissioning and Inscriber MOS training available separately**

**\*\* Online Training seminars also available.**

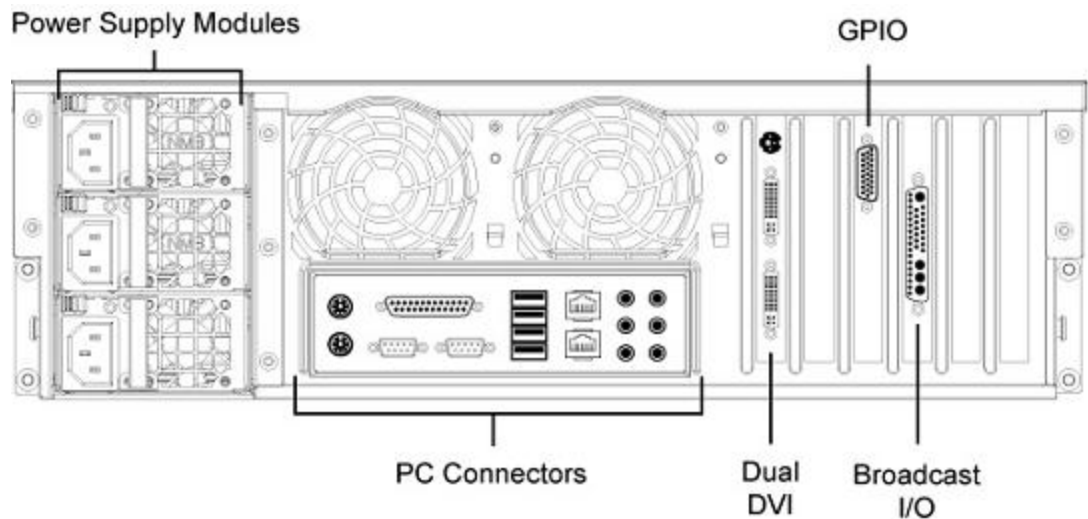
Inscriber G5 XT has 1 x 250 GB SATA Drive and 7 x 250 GB SATA II Drives.

**IMAGES/DIAGRAMS**

**Front Panel**



**Back Panel**



**SPECIFICATIONS**

Specifications and designs are subject to change without notice.

**Hardware**

Chassis	3RU rack mount Front-mounted hot-swappable drive bays (8) 2+1 redundant hot-swappable power supply, 760 W High CFM cooling for 24/7 operation
Dimensions (H x W x D)	5.25 x 19 x 25.5 in. (13.35 x 48.26 x 59.69 cm)
Weight	62 lbs (28.18 kg)
Breakout Cable	01 x 18 in. Altitude Express ponytail cable
CPU	2 x Intel Xeon E5520 Nehalem 2.26 GHz quad core
GPU	NVIDIA Quadro FX3800

RAM	6 GB DDR3-1366 MHz RAM
Disk Sub System	1 x 250 GB SATA system drive 7 x 250 GB SATA media drives
Removable Drives	Recordable CD/DVD-RW drive for backup or system restore 1.44 MB floppy drive
External Ports	2 Gb Ethernet ports via RJ45 2 RS-232 serial port via DB-9 connector 4 USB 2.0 ports

### Video

Supported Video Resolutions	1920x1080: /60i/59.94i/50i 1280x720: /60p/59.94p/50p 720x486 (525): /59.94i 720x576 (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 1694 A 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	AES3-1992
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)

### 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

NOTE: The second channel option adds a second altitude express IO board, as well as a second NVIDIA Quadro FX3800.

## ORDERING INFORMATION

INSG5XT3100	Inscriber G5 XT production graphics system, featuring G-Scribe, media store, integrated, clip playback, 2D DVE
*INSG5XTPRODBDL	Inscriber G5 XT productivity bundle includes a single-channel G5 XT system, G-Scribe + feature G-3D, video capture, 3D Charts, RapidFire keyboard, RTX Ports and paint option

### Hardware Options

INSG5XT2C	Second channel option for Inscriber G5 XT, includes Altitude Express IO board, NVIDIA GPU, and required hardware (factory upgrade)
INSG5XT-3DDVE	3D DVE module for G5 XT systems, provides one hardware-based 3D DVE; rotate, scale, and crop incoming video signal in 3D space
BOB-8000P	2-channel passive breakout box for Altitude Express including cables to support up to 2 Altitude Express boards, this option does not include onboard bypass relays
INSRFK	Inscriber RapidFire keyboard

### Software Options

INSG5XT-GSPL	G-Scribe + software bundle provides extended software functionality including G-3D (create 3D graphics), real-time charting and video capture
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
INSRTXP	RTXports option enables the playback of custom or third-party applications such as financial tickers or school closings on Inscriber systems. These customized applications can run concurrent with CG pages and even share the access to the output channel
INSPNT	Inscriber Paint, 32-bit paint and graphics creation plug-in for Inscriber systems with unlimited layering capabilities, image processing and masking tools. Provides native Photoshop file import (.PSD) directly into the G-Scribe user environment, maintaining

layers

INSMOS  
 MOS support for Inscribe systems enables remote asset browsing, editing, and play out capabilities within MOS NRCs such as AP® ENPS® and Avid® iNews®; consists of a MOS-compliant ActiveX client control interface connected to Inscribe systems, giving newsroom staff the ability to create and schedule template-based text and graphics for playout across the entire Inscribe G-Series product line; the Inscribe MOS Server component negotiates transactions between the various MOS clients, the NRCS and Inscribe graphics hardware, acting as a rendering engine to generate previews and on-air graphics, and interfaces MOS rundowns to the Inscribe playlist; includes unlimited client licenses for journalists and unlimited MOS gateways used to facilitate communications between the Inscribe systems used for play out and the Inscribe MOS Clients used by journalists.

**\*Training and Commissioning is mandatory for the Inscribe MOS Option. (use INSMOS-QSTR or INSMOS-QSTRNT with orders)**

INSGSOFF  
 Inscribe G-Scribe Offline software provides the ability to compose Inscribe G-Scribe layouts on any sufficiently powerful Windows XP system; includes all of the functionality of the Inscribe G-Scribe software found on Inscribe G-Series and Inscribe TitleOne XT systems; provides offline composition for later transfer to Inscribe hardware for broadcast play out

INSG3DOFF  
 Inscribe G-3D Offline; proprietary offline module to create 3D text and animations, or import Collada files from third-party applications such as 3D Studio Max; scene editing includes timeline modification, image manipulation, primitive shapes, lights, multiple cameras and textures; tag text and graphic content, to update manually, or via automation or RTX

### Service and Commissioning

G5XT-GOLD-UPG  
 1st year G5 XT Gold system support upgrade, includes next-day hardware exchanges for faulty components, 24x7 priority phone and e-mail technical support

G5XT-SWS-EXT  
 1-year G5 XT software support extension; additional year of software technical support during regular business hours (8:30 a.m. - 5:00 p.m.); hardware exchanges are not included

G5XT-BASIC-EXT  
 1-year G5 XT Basic System and software warranty extension; includes hardware exchanges for faulty components, phone and e-mail technical support during regular business hours (8:30 a.m. - 5:00 p.m.)

G5XT-GOLD-EXT  
 1-year G5 XT Gold system and software warranty extension, includes next-day hardware exchanges for faulty components, 24x7 priority phone and e-mail technical support

G5XT-QS  
 1-day on-site Quickstart commissioning for G5 XT (excludes travel and expenses)

G5XT-OPS-OTR	3-day on-site operation training for G5 XT system (excludes travel and expenses)
G5XT-OPS-FTR	3-day factory training for G5 XT system
G5XT-OPS-WEB	4-hour Web-based training for G5 XT Systems; class topics can be customized based on user requirements
INSMOS-BASIC	1-year Basic MOS ServicePAK 1-year basic ServicePAK for Inscriber MOS Gateway
INSMOS-GOLD	1-year Gold MOS ServicePAK 1-year basic ServicePAK for Inscriber MOS Gateway
INSMOS-QSTR	3-day MOS commissioning and training (includes travel and expenses)
INSMOS-QSTRNT	3-day MOS commissioning and training (excludes travel and expenses)

**CONTACTS**

**North America**  
+1 800 231 9673

**Caribbean and Latin America**  
+1 786 437 1960

**Europe, Middle East & Africa**  
+44 (0) 118 964 8200

**Asia, Pacific Rim**  
+852 2776 0628