

A hand is shown holding a microphone, with the entire scene bathed in a vibrant blue and purple light. The background is dark, making the glowing elements stand out. The hand is positioned at the top, with fingers wrapped around the top of the microphone. The microphone has a mesh grille and a logo on its top. The overall mood is professional and high-tech.

Graphite

Character Generator Clips, Stills & Graphics

 PixelPower
broadcast graphics solutions

 PixelPower
broadcast graphics solutions

 PixelPower
broadcast graphics solutions

The Graphite 2 Range - fast, reliable and future proof

Background

▼ Since its establishment in 1987, Pixel Power has built a world class reputation for providing innovative, powerful, award winning graphics products for the television broadcast and post production industries.

Launched in 1993, Collage has become the character and graphics generator of choice for both national and commercial television broadcast companies around the world. A marriage of cutting edge hardware technology and innovative graphics software, Collage has been continuously enhanced in response to the increasingly sophisticated needs of our customers.

Introduced in 1999 the Graphite range expanded upon the proven Collage toolset by tightly integrating the uncompressed video clip handling capability made possible by the addition of the Mediapack real-time disk array. ▲

Introducing Graphite 2

▼ Graphite 2 takes this evolution further by placing proven Graphite character generator and graphics tools on an entirely new dedicated hardware platform. Leveraging the very latest technologies, Graphite 2 offers performance between 5 and 10 times faster than competitive systems and builds on the experience gained from over 1100 Collage and Graphite systems in operation worldwide.

Graphite 2 is a dedicated proprietary broadcast character generator and graphics system incorporating the latest innovative technology including dual Power PC processors and multiple pixel processors. The result is unprecedented speed and flexibility. The proven Graphite software toolset and user interface are leveraged with further enhancements to make operation even faster and more intuitive.

The Mediapack allows instant access to a library of uncompressed video clips, stills and audio clips. Video clips and stills may be recorded with a key channel for clean, convenient layering either internally or at the mixer. ▲

The Range

▼ The Graphite 2 range offers integrated character generation, clip/still store, painting and graphics functionality. Tight integration of these normally separate capabilities makes Graphite 2 the most productive character generator and graphics system available.

Offered in two basic configurations to cover the differing requirements of the playout and graphics production areas, Graphite 2 also has a number of options which enable the system to be configured to meet your specific requirements - operational, technical and budgetary.

Graphite 2 can be supplied as a complete turnkey system or as an upgrade to any existing Collage, Graphite or Collage 2 system. ▲

Interfacing & Connectivity

▼ The Graphite 2 range fits effortlessly into the broadcast environment and communicates with a wide range of third party products. In addition to interfaces with all the major station automation systems including Omnibus, Harris, Sony, CJDS DAL, Pro-Bel and Philips, Graphite 2 also operates with newsroom systems such as ENPS and iNews. The evolving MOS standard for media control is also an integral part of Graphite 2.

Operating over 100 Base TX ethernet, the powerful DCOM interface allows control of the Graphite 2 system by a remote PC - just plug into the network and go. The DCOM interface also allows Graphite 2 to extract data automatically from external applications such as Access databases, Excel spreadsheets and the internet. Titles, election results, sports and financial data can all be inserted quickly and reliably into Graphite 2 pages.

Graphite 2 can read and write to PC formatted disks (FAT 16 and FAT 32) for fast, easy access to existing disk media. Network file sharing is possible via both NFS and FTP.

Graphite 2 uses native TrueType and Postscript fonts giving easy access to a vast library of typefaces. ▲

Graphite 2 Standard features

- Dual Power PC CPUs and multiple pixel processors
- Unlimited foreground layers
- Built in 100 BaseTX networking
- Switchable between 4:3/16:9 and 625/525 operation
- 72 minutes uncompressed 4:2:2 video clip storage (48 minutes of 4:2:2:4) easily expandable in 72 minute increments by adding additional Mediapacks
- Complete turnkey system with all software installed
- Compact 3U graphics system chassis
- Additional 3U Mediapack chassis
- 6 Axis controller for clip timeline control
- 320Mb RAM expandable to over 1 Gb
- 18 Gb (min) LVD SCSI internal hard drive
- Built in 250MB Zip drive
- 1.44Mb floppy disk drive
- Ability to read from a SCSI CD-ROM drive
- Preview channel: serial digital with key and optional analogue YUV with key
- Output channel: serial digital with key and optional analogue YUV with key
- LVD/SE SCSI port (HD64)
- RapidAction keyboard
- Jobs prepared on Graphite 2 GX will playout on Graphite 2 CG

Features and Options

Audio Processing

▼ To further enhance the systems live-to-air capabilities Graphite 2 system can be fitted with an optional audio processing rack. Audio clips can be used to add music and sound effects, punctuating Cool and Smart Moves character effects and adding emphasis to animated sequences.

Up to four tracks of high quality digital audio may be recorded to the Mediapack as standalone audio clips or associated with a video clip. Audio clips are stored separately from video on the Mediapack, allowing clips to be easily repositioned relative to video.

Clip timeline tools allow the user to create a timed sequence for any page. Real-time audio scrubbing makes precise control of audio clip placement a simple matter, while level, pan and balance controls expand your creative freedom. The ergonomic interface to the system's audio tools is further enhanced through the optional advanced control panel which features motorised faders. ▲

Archival Features

▼ Creative material needs to be both distributed and backed up so Graphite 2 has fast, flexible tools for clip archiving and transfer between systems.

The archive tool allows a selected group of clips to be recorded to a VTR, creating a single archive tape for any given show or project. For each clip the system generates a slate ensuring that all clip metadata is maintained. The archive process can even record and retrieve clips with key channels, transparently merging the stored clips with their mattes during the restoration from archive.

Clip transfer tools allow the transfer of Mediapack contents between Graphite 2 systems as a real-time video stream. Selected clips on the sending system are simply played through the facilities router to the receiving system. For maximum productivity and convenience clip metadata is encoded into the video signal and transferred to the target system. ▲



Advanced control panel option - For quick and easy frame navigation, rotoscoping, digitising, head and tail trimming, rotoscoping and colour correction



Audio rack option - This allows you to digitize, store and playout audio clips associated to a video clip or as independent sound effects inserted at a specific frame number



144 Minute Mediapack option - You can add as many Mediapacks as you need to increase your storage capacity

Graphite 2 CG - Character Generator and Still Store

▼ Targeted at live broadcast applications Graphite 2 CG combines the full featured character generation and still store capability of our proven Collage 2 CG with tightly integrated video clip handling.

Graphite 2 CG features a powerful real-time character generation toolset. Supplied with a library of 500 Postscript fonts Graphite 2 offers instant resizing and dynamic assignment of all character properties. Templates are easily created and can be animated via the Cool Moves and Smart Moves libraries of character effects.

Development in software adds super-smooth Cool Moves and enhanced control of multiple animations within a page. Multiple continuous ticker crawls are supported, each in its own soft-edged window. A dual-channel option is now available giving two clean broadcast outputs with the ability to edit text on a third status output.

The on-board still store offers fast, visual searching through up to 10000 stills on the system's internal disk. Stills may be used as backgrounds or cut and pasted into the foreground to create complex layered designs. Graphite 2 CG offers unlimited foreground layering giving you the power to create complex pages and the freedom to revise each layer at will.

Cell animation playout capability offers multiple animated areas of screen in a single channel, in addition to character effects and transitions between pages.

Graphite 2 features VTR control via RS-422 allowing clips to be digitized to the Mediapack. Clips may be stored with or without key channel and associated audio. Clips on the Mediapack are available for use as page backgrounds with timeline based clip control. Clip controls include pause, loop, repeat, ping-pong, and roll-to-freeze giving you total control of animation playback on every page.

With standard interfaces to station and newsroom automation, Graphite 2 fits easily into even the most sophisticated of automated news environments. By seamlessly combining character generation, stills and clips Graphite 2 CG simplifies production and maximises your creativity. ▲



Graphite 2 CG with internal 250 Mb Zip drive

Standard features

- Rolls, crawls and crawls - smooth at any speed
- Full text manipulation - kern, skew or lead in any direction
- Cool and Smart Moves real time pre-programmed animation effects
- Spell checker with multiple dictionaries
- Unlimited graphic and text layering
- 1024 text styles per job (assign 26 to individual keys on the keyboard)
- Digital and date clocks
- Typing on a curve
- Subtitling with timeline control and time code follow
- Cut and paste video clips
- Cut and paste pictures with programmable preset positions
- Automated clip transfer via SDI
- Video clips as backgrounds
- Clip timeline control
- Transitions between stills/video backgrounds - cut, fade, reveal, push, slide on, slide off, box wipe, page turn, curl, peel and split
- Digitize video from VTR via RS422 port and Sony protocol
- Video clip archiving
- Online help
- 500 Postscript fonts
- Logo fonts saved under keyboard letter/number
- WYSIWYG templates - for fast update of data
- Playout of multiple cell animations, animated logos and bugs
- Standard suite of 6 flexible shape tools - rectangle, circle, rounded rectangle, line, polygon, ellipse
- Extensive language support, including Arabic, Japanese, Chinese, Cyrillic and Korean
- Easy to operate macro language
- Remote protocol for customized automation of text and graphics
- Video grab - for fast image capture with key channel
- Picture Import/Export in common PC formats
- Dedicated RapidAction keyboard
- On board still store - up to 10000 stills with key (625 line) including Preview/Program and A/B mode operation
- Edit While Live
- Live video pushback and 2D DVE

Options

- Upgrade to Graphite 2 GX
- Collette page creation software
- RapidRecall keypad
- Extended 600 frame ramcorder (625 line)
- Advanced control panel
- A3 or A5 graphics tablet
- Additional 72 minute Mediapack
- Audio rack
- 36 Gb internal SCSI disk

Graphite 2 GX - Graphics Generator

CHARACTER GENERATION

▼ Graphite 2 GX expands upon the core toolset of Graphite 2 CG to address preproduction graphics and animation creation. While retaining all of the on-air tools Graphite 2 GX adds a full featured paint system, image effects, 2D and 3D animation capability, making it a truly comprehensive graphics production system.

With numerous programmable brushes and effects and instant access to video clips on the Mediapack, Graphite 2 GX is a production artists dream. Real time access to clips with painting and effects tools makes simple work of rotoscoping and de-spotting while 2D animation tools allow unlimited layering of clips and graphic elements.

Graphite 2 GX offers unparalleled speed and flexibility in an on-air capable graphics system. By combining character generation, a fast still/clip store and high quality creative tools Graphite 2 GX makes it possible for a single artist to create animation one minute and playout to air the next. ▲



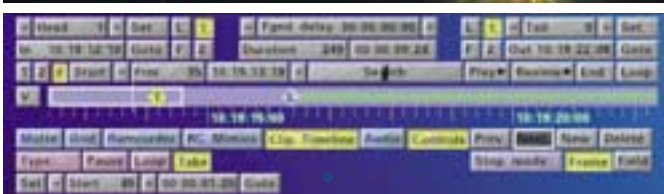
Continuous ticker tools allow you to playout multiple crawls at different speeds

Standard features

- All Graphite 2 CG features
- A5 Graphics tablet and pressure sensitive pen
- Video paint system with programmable freehand brushes
- Colour processing tools in YUVK and RGBK space
- Image effect filters including blurs, ripples, waves, warps and lighting effects
- Creation tools for cell animations
- Video rotoscoping and VTR control
- Video de-spotting
- Matte creation using brushes, chroma, hue and luma keys
- Horizontal and vertical clip inversion
- Extended flexible shape tools - arc, star, regular polygon, cubic spline, beta spline, bezier spline
- Keyframed colour effects
- Keyframed varispeeds
- Keyframed colour correction
- 2D Animation software
- 3D Animation software
- 120 frame ramcorder (625 line)
- Merge video and key
- Edit While Live

Options

- Collette page creation software
- Recall pad
- Extended 600 frame Ramcorder (625 line)
- Advanced control panel
- Additional 72 minute Mediapack
- Audio rack
- 36 Gb internal SCSI disk



Graphite 2 controls the clip duration and loops in the background as well as the foreground text template with smart move animation. The foreground text is derived from interactive viewer poll data immediately prior to display.

Features and Options

CHARACTER GENERATION FORM

CG GX SOFTWARE FEATURES

- ✓ ✓ Compatible with existing job files
- ✓ ✓ 500 Postscript Type 1 fonts
- ✓ ✓ Unlimited foreground layers
- ✓ ✓ Text page
- ✓ ✓ Text line
- ✓ ✓ Text on a curve
- ✓ ✓ Spell checker
- ✓ ✓ Tabs
- ✓ ✓ Templates and tables
- ✓ ✓ Text import
- ✓ ✓ Edge effects
- ✓ ✓ Transparency and shading
- ✓ ✓ Logos
- ✓ ✓ Logofonts
- ✓ ✓ Any speed rolls & crawls
- ✓ ✓ Type/wipe/flash effects
- ✓ ✓ Cool Moves animation effects with masks
- ✓ ✓ Smart Moves animation effects
- ✓ ✓ Continuous tickers with masks
- ✓ ✓ Import SMS, e-mail, web, excel, ASCII data
- ✓ ✓ 2 channel still store
- ✓ ✓ Live video layer with squeezeback
- ✓ ✓ Make clip from sequence function
- ✓ ✓ Digital clock/date clock
- ✓ Analogue clock
- ✓ Freehand Painting
- ✓ Mattes
- ✓ ✓ Cut & paste
- ✓ Enhanced cut & paste
- ✓ ✓ Still store (dual channel)
- ✓ ✓ Page transitions
- ✓ Cell animation creation
- ✓ ✓ Cell animation playout
- ✓ ✓ Standard Shapes
- ✓ ✓ Picture file import/export
- ✓ Colour processing
- ✓ Filter effects
- ✓ 2D Animation software
- ✓ 3D Animation software with live textures
- ○ Dual channel playout mode
- ✓ ✓ Newsroom automation
- ✓ ✓ Collage remote protocol

CG GX

- ✓ ✓ RS422 Timeline control
- ✓ ✓ Subtitling
- ✓ VTR control
- ✓ ✓ Ramcorder
- ✓ ✓ Video grab
- ✓ ✓ Macros
- ✓ ✓ DCOM interface
- ✓ ✓ Cut & paste video clips
- ✓ ✓ Automated clip transfer via SDI
- ✓ ✓ Background video clips
- ✓ ✓ Clip timeline control
- ✓ ✓ Timeline loop and event markers
- ✓ Video rotoscoping
- ✓ Video de-spotting
- ✓ ✓ Transitions between stills/video clips
- ✓ ✓ Digitize video using Sony 9 pin VTR
- ✓ Chroma keying
- ✓ Luma keying
- ✓ ✓ Merge video and key
- ✓ Flip clip
- ✓ Keyframed varispeeds
- ✓ Keyframed colour effects
- ✓ Keyframed colour correction
- ✓ ✓ Video archiving
- ✓ ✓ Online help

HARDWARE FEATURES

- ○ Extended ramcorder
- ✓ ✓ 6 Axis controller with jog, shuttle
- ✓ -- Mouse
- ✓ A5 Tablet and cordless pen
- ○ A3 Tablet and cordless pen
- ✓ ✓ 72 Mins clip storage
- ○ 144 Mins clip storage

MISCELLANEOUS OPTIONS

- ○ Chyron/Aston file import
- ○ Collette offline software
- ○ Collage Browser software
- ○ Still store recall pad
- ○ Job page playout keypad
- ✓ -- Upgrade to Graphite 2 GX

✓ Standard ○ Optional -- Not available/applicable

Technical Specification

PHYSICAL

	Height	Width	Depth	Weight
3RU System unit	132mm	450mm	630mm	21 kg
3RU Mediapack 36	132mm	450mm	630mm	30 kg
3RU Audio*	132mm	450mm	485mm	13 kg
Control Panel*	75mm	365mm	240mm	2.9 kg
Keyboard	66mm	468mm	214mm	-
A5 Tablet	14mm	223mm	258mm	-

POWER

System unit	110/220V 50/60Hz auto switching 350W typical
Mediapack unit	110/220V 50/60Hz auto switching 400W typical
Audio unit	110/220V 50/60Hz selectable 100W typical
Tablet	110V or 220V plug in power adaptor

VIDEO

Menu selectable	525/60 or 625/50
Aspect ratio	4:3, 14:9, 16:9 or user defined (13.5MHz)

INPUTS

Video	Serial digital 4:2:2:4 and optional analogue RGBK / YUVK
Audio*	2 channels AES/EBU stereo digital 2 channels 20 bit stereo analogue SPDIF digital with sample rate conversion
GPI	2 contact closure trigger inputs

OUTPUTS

Edit and Program	Serial digital 4:2:2:4 and optional analogue YUVK
Status	RGB 0.7 volt pk-pk into 75 ohms with sync on RGB
Audio*	2 channels AES/EBU stereo digital 2 channels 20 bit stereo analogue Analogue and digital stereo monitor Headphone
GPO	2 contact closure trigger outputs

STORAGE

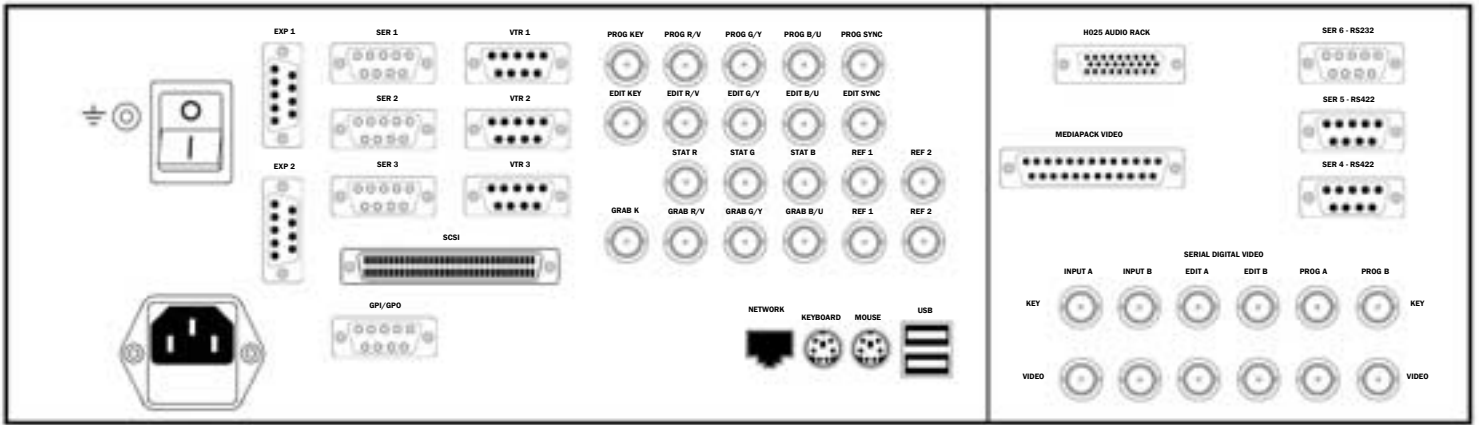
320 Mb system memory expandable to over 1Gb
18Gb (optional 36 Gb) internal LVD SCSI hard disk storing up to 10000 pictures with key (625 line)
1.44 Mb PC compatible floppy disk
250 Mb Internal Iomega Zip drive
Media pack 72 - Can store up to 72 minutes of uncompressed 4:2:2 video
Audio* - Can store up to 12 mono track hours of 24 bit digital audio

INTERFACE CONNECTIONS

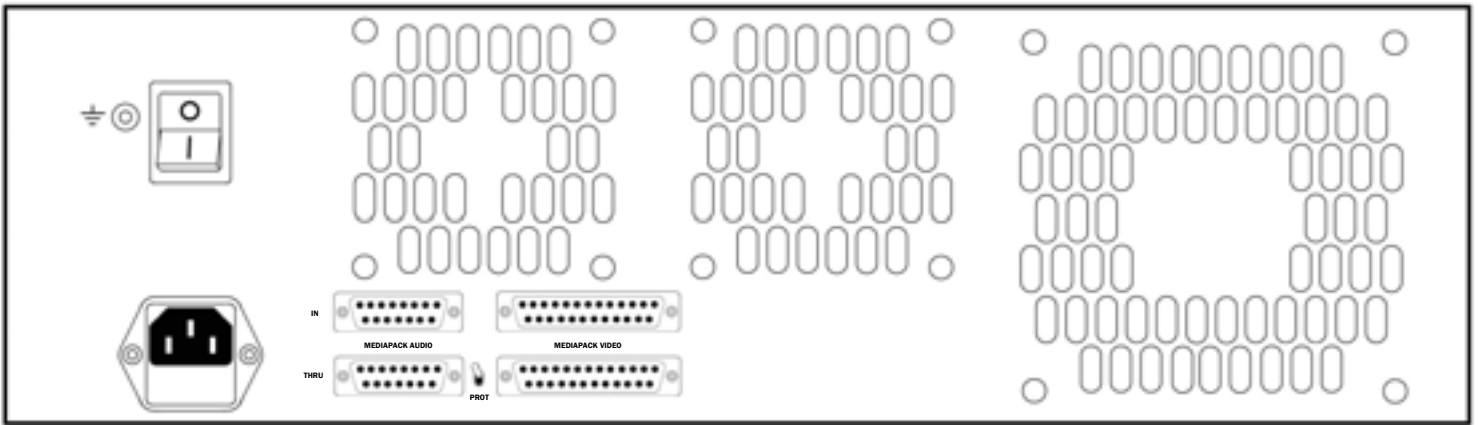
Keyboard	PS 2
Mouse	PS 2 or serial port
VTR1, VTR2, VTR3	RS422 Sony 9 pin VTR controller ports
Serial	3 RS232 ports for tablet, remote control, keypad, trackball or 6 axis controller
SCSI	SCSI compatible 68 pin LVD/SE
Ethernet	100 Base TX
USB	2 ports
Control Panel*	RS422 Sony 9 Pin D connector
Mediapack video	25 way D connector
Mediapack audio*	15 way D connector

* Denotes an option

SYSTEM UNIT



MEDIAPACK



AUDIO UNIT (optional)

