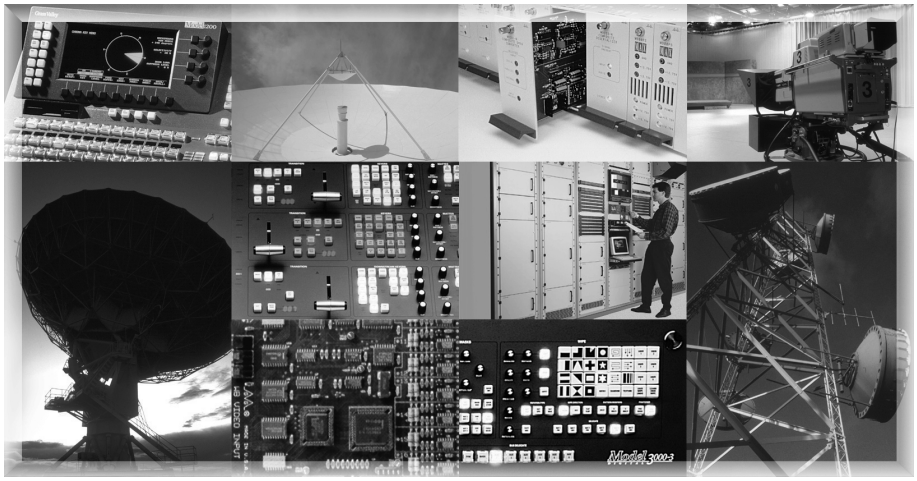
Tektronix

GVeous™
Digital Video Effects System



Ordering Guide

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GVeous™ GV-ADVE5000 Field Based Digital Video Effects System Product Overview

The GV-ADVE5000 GVeous is a high performance Digital Video Effects system that is at home in both live and post production environments. Its unique twin channel architecture provides two transform engines on a single plug-in circuit card. A second twin channel processor can be installed in the GVeous chassis providing four layers of keying. GVeous has an internal crosspoint matrix, and can accept up to 12 inputs (6 modules of Video/Video or Video/Key depending on format). Any input can be used as video, key, texture, or background.

GV-ADVE5000 GVeous™ Component System (with control panel)

GV-ADVE5000-1

GV-ADVE5000 10 Bit, 4:2:2 DVE with the following high performance features:

- Twin channels that can be used as dual video, or video plus key with full bandwidth SuperShadow™
- SurfaceFX™ Textures and Dual Color Light Source on each channel. Spot, Bar, and Flood light shapes can illuminate live video textures or patterns from the texture frame store
- UltraWarp™ non linear effects on each channel
- Mosaic, multipictures, border, crop, corner pinning
- Two color SuperMatte with integrated wipe generator
- TimeFrame™ Effects Editor and OrbitalFX™ control system
- High level motion path control, with multiple Linear, Smooth-Linear, Hold, TCB and Smooth path types
- Global Channel with nested source and target spaces
- Expanded Memory for up to 2000 on-line keyframes
- Control Panel with Internal Floppy Disk Drive
- 33ft Control Panel Cable is included UNLESS other cable length is ordered (longer cable length requires separate control panel power supply)
- Two 5100-DSD Dual Serial Digital Input boards. Up to four more input modules of any type may be added to a system (Aux channel outputs or CPL Protocol converter can take up input module slots)
- One Component Output board that provides Serial Digital Video and Key outputs (2 each) plus component analog video plus key and sync (one each). Analog output can be set to Beta, SMPTE, MII, or RGB formatted video

GV-ADVE5000 GVeous™ Composite System (with control panel)

GV-ADVE5000-2

GV-ADVE5000 10 Bit, 4:2:2 DVE with the following high performance features:

- Twin channels that can be used as dual video, or video plus key with full bandwidth SuperShadow™
- SurfaceFX™ Textures and Dual Color Light Source on each channel. Spot, Bar, and Flood light shapes can illuminate live video textures or patterns from the texture frame store
- UltraWarp™ non linear effects on each channel
- Mosaic, multipictures, border, crop, corner pinning
- Two color SuperMatte with integrated wipe generator
- TimeFrame™ Effects Editor and OrbitalFX™ control system
- High level motion path control, with multiple Linear, Smooth-Linear, Hold, TCB and Smooth path types
- Global Channel with nested source and target spaces
- Expanded Memory for up to 2000 on-line keyframes
- Control Panel with Internal Floppy Disk Drive
- 33ft Control Panel Cable is included UNLESS other cable length is ordered (longer cable length requires separate control panel power supply)
- Two 5100-CMPST Composite Analog (video plus key) Input Modules. Up to four more input modules of any type may be added to a system (Aux channel outputs or CPL Protocol converter can take up input module slots).
- One Composite Output board which provides Composite Analog Video and Key signals (2 each) plus two each Component Serial Digital (D1) Video and Key. Composite inputs and output auto-switch between NTSC and PAL.

GV-ADVE5000 Second Twin Channel Processor *GV-5000-CH2*

- Second Twin Channel GVeous module, which plugs into system chassis. Can be ordered with GV-ADVE5000, or as add on to existing system.
- Includes two UltraWarp™ and two SurfaceFX™ processors
- SuperShadow™ mode can be set independently of first twin channel pair

ORDERABLE OPTIONS

Video I/O

Dual Serial Digital Input Module — *GV-5100-DSD*

Two 10 bit Component Serial Digital video or key inputs with autotiming. Each input can be switched between input video and internal matte.

Dual Component Analog Input Module — *GV-5100-DCA*

Two 8 bit Autotiming Component Analog inputs that can be independently switched between RGB with or without setup and Y,R-Y,B-Y formats. Supports Beta, SMPTE, and MII. Input one requires sync on Y or G. Input two can be "slaved" to input one if sync is not available.

10 Bit Composite Analog Input Module — *GV-5100-CMPST*

Single 10 bit Composite input with Key. Switchable PAL or NTSC video formats. Loop through (non-terminating) inputs for both video and key. High quality decoding with Video, Graphic, Comb, and Notch Filter Decode modes.

Component Output Conversion Kit — *GV-5100-OUT1*

Component analog plus Component SDI Output card. To convert composite analog output 5000 to component operation.

Composite Output Conversion Kit — *GV-5100-OUT2*

Composite NTSC / PAL plus Component SDI Output card. To convert component output 5000 to composite analog operation.

Auxiliary Channel Output — *GV-5100-AUX1*

Component Serial Digital video plus key channel output. Each module provides the pre-combined output of a single twin channel DVE board. Two maximum per system chassis.

Note: Each 5100-AUX1 module requires one input module space, reducing the maximum number of inputs available.

ENHANCEMENTS

5000 to 5100 Standard System upgrade — *GV-5100-UPG*

Upgrades a basic GV-ADVE5000 to GV-ADVE5100 specifications. Requires factory exchange of processor card(s)

5000 to 5100 Second Twin Channel Upgrade — *GV-5100-CH2UPG*

Upgrades Second Twin Channel option of GV-ADVE5000 to GV-ADVE5100 specifications. Requires factory exchange processor card(s)

Retouch™ Color Corrector Option — *GV-5000-CCR*

- Four independent Color Correctors
- YUV Color Space Operation
- Proc Amp controls include Hue Rotation, Gain, Offset, and Saturation
- Special Effects include Solarization, Luma Tinting, and Invert Gain

Note: One Color Corrector option maximum per system.

Target Framestore Option — *GV-5100-TFS*

The Target Framestore Option is used to add recursive effects to the 5000. Stores Video plus Key information for keyer effects between live and framestore images. Recursive effects can be applied to either twin channel, or to the final composite of all channels.

Note: One Target Framestore option maximum per system.

Dual Wide Range Defocus Option — *GV-5100-DEF*

Two independent channels of wide range defocus. Can be used for video, key, or background. Provides independent Horizontal, Vertical (or both) defocus control on chrominance or luminance (or both).

Note: One Defocus option maximum per system.

Power Bundle — *GV-5000-PWR*

Power bundle of GV-ADVE5000 options. Includes CCR, TFS and DEF.

CPL Prototype Converter — *GV-5100-CPL*

Provides a CPL (Control Point Language) translation so that a GVeous system can communicate with a Tektronix/Grass Valley Group Model 3000, Model 2200, or Model 4000 switcher. Allows a GVeous system to control the switcher Aux busses for source selection, and lets the switcher control save, recall, and timeline run operations. Includes interface cable.

Note: This option requires one input module slot.

Control Panel Power Supply — *GV-5100-CPPS*

External power supply for first control panel.
Note: This option is REQUIRED if control panel cable length is more than 10 Meters (33 feet).

Additional Control Panel — *GV-5100-CP*

GVeous Control Panel with internal Floppy drive and external power supply. For use as spare control panel, or as secondary control panel. Up to four control panels can be daisy-chained to one system.

External Floppy Disk Kit — *GV-5100-EFD*

External floppy disk c/w 10ft cable for use with GVeous Control Panel. Permits a GVeous control panel to be flush mounted in a control desk.
Note: The CPPS option is REQUIRED if an EFD is purchased.

GVeous™ Shot Box Control Panel — *GV-5100-SHOT*

Mini "On-Air" recall panel for live use. Connects to main control panel. Direct access to effects or keyframes and includes live freeze.

100ft Control Panel Cable — *GV-5100-100*

100ft cable for Control Panel to Signal Chassis interconnection

GVEOUS™ GV-ADVE5100 FRAME BASED DIGITAL VIDEO EFFECTS SYSTEM PRODUCT OVERVIEW

The GV-ADVE5100 GVeous is a high performance Digital Video Effects system that is at home in both live and post production environments. Its unique twin channel architecture provides two transform engines on a single plug-in circuit card. A second twin channel processor can be installed in the GVeous chassis providing four layers of Z-Axis keying. GVeous has an internal crosspoint matrix, and can accept up to 12 inputs (6 modules of Video/Video or Video/Key depending on format). Any input can be used as video, key, texture, or background. The GV-ADVE5100 features unique Motion Adaptive image processing for the ultimate in image quality.

GV-ADVE5100 GVeous™ Component System (with control panel) *GV-ADVE5100-1*

GV-ADVE5100 10 Bit, 4:2:2 Motion Adaptive Frame based DVE with the following high performance features:

- Twin channels that can be used as dual video, or video plus key with full bandwidth SuperShadow™
- SurfaceFX™ Textures and Dual Color Light Source on each channel. Spot, Bar, and Flood light shapes can illuminate live video textures or patterns from the texture frame store
- UltraWarp™ non linear effects on each channel
- Mosaic, multipictures, border, crop, corner pinning
- Two color SuperMatte with integrated wipe generator
- TimeFrame™ Effects Editor and OrbitalFX™ control system
- High level motion path control, with multiple Linear, Smooth-Linear, Hold, TCB and Smooth path types
- Global Channel with nested source and target spaces
- Expanded Memory for up to 2000 on-line keyframes
- Control Panel with Internal Floppy Disk Drive
- 33ft Control Panel Cable is included UNLESS other cable length is ordered (longer cable length requires separate control panel power supply)
- Two 5100-DSD Dual Serial Digital Input boards. Up to four more input modules of any type may be added to a system (Aux channel outputs or CPL Protocol converter can take up input module slots)
- One Component Output board that provides Serial Digital Video and Key outputs (2 each) plus component analog video plus key and sync (one each). Analog output can be set to Beta, SMPTE, MII, or RGB formatted video

GV-ADVE5100 GVeous™ Composite System (with control panel)

GV-ADVE5100-2

GV-ADVE5100 10 Bit, 4:2:2 Motion Adaptive Frame based DVE with the following high performance features:

- Twin channels that can be used as dual video, or video plus key with full bandwidth SuperShadow™
- SurfaceFX™ Textures and dual Color Light Source on each channel. Spot, Bar, and Flood light shapes can illuminate live video textures or patterns from the texture frame store
- UltraWarp™ non linear effects on each channel
- Z Axis combiner for intersecting planes effects
- Mosaic, multipictures, border, crop, corner pinning
- Two color SuperMatte with integrated wipe generator
- TimeFrame™ Effects Editor and OrbitalFX™ control system
- High level motion path control, with multiple Linear, Smooth-Linear, Hold, TCB and Smooth path types
- Global Channel with nested source and target spaces
- Expanded Memory for up to 2000 on-line keyframes
- Control Panel with Internal Floppy Disk Drive
- 33ft Control Panel Cable is included UNLESS other cable length is ordered (longer cable length requires separate control panel power supply)
- Two 5100-CMPST Composite Analog (video plus key) Input Modules. Up to four more input modules of any type may be added to a system (Aux channel outputs or CPL Protocol converter can take up input module slots).
- One Composite Output board which provides Composite Analog Video and Key signals (2 each) plus two each Component Serial Digital (D1) Video and Key. Composite inputs and output auto-switch between NTSC and PAL.

GV-ADVE5100 Second Twin Channel Processor

GV-5100-CH2

Second Twin Channel GVeous module, which plugs into system chassis. Can be ordered with GV-ADVE5100, or as add on to existing system.

- Adds second level of Z axis keying between the two twin channel processors
- Includes two UltraWarp™ and two SurfaceFX™ processors
- SuperShadow™ mode can be set independently of first twin channel pair

ORDERABLE OPTIONS

Video I/O

Dual Serial Digital Input Module — *GV-5100-DSD*

Two 10 bit Component Serial Digital video or key inputs with autotiming. Each input can be switched between input video and internal matte.

Dual Component Analog Input Module — *GV-5100-DCA*

Two 8 bit Autotiming Component Analog inputs that can be independently switched between RGB with or without setup and Y,R-Y,B-Y formats. Supports Beta, SMPTE, and MII. Input one requires sync on Y or G. Input two can be "slaved" to input one if sync is not available.

10 Bit Composite Analog Input Module — *GV-5100-CMPST*

Single 10 bit Composite input with Key. Switchable PAL or NTSC video formats. Loop through (non-terminating) inputs for both video and key. High quality decoding with Video, Graphic, Comb, and Notch Filter Decode modes.

Component Output Conversion Kit — *GV-5100-OUT1*

Component analog plus Component SDI Output card. To convert composite analog output 5000 to component operation.

Composite Output Conversion Kit — *GV-5100-OUT2*

Composite NTSC / PAL plus Component SDI Output card. To convert component output 5000 to composite analog operation.

Auxiliary Channel Output — *GV-5100-AUX1*

Component Serial Digital video plus key channel output. Each module provides the pre-combined output of a single twin channel DVE board. Two maximum per system chassis.

Note: Each 5100-AUX1 module requires one input module space, reducing the maximum number of inputs available.

Enhancements

Retouch™ Color Corrector Option — *GV-5100-CCR*

- Four independent Color Correctors
- RGB or YUV Color Space Operation
- Independent Black Balance, White Balance, Offset, Gamma, and Knee control on each color component
- Proc Amp controls include Hue Rotation, Gain, Offset, and Saturation
- Special Effects include Solarization, Luma Tinting, and Invert Gain

Note: One Color Corrector option maximum per system.

5100 Target Framestore Option — *GV-5100-TFS*

The Target Framestore Option is used to add recursive effects to the 5100. Stores Video plus Key and Depth information for intersecting planes effects between live and framestore images. Recursive effects can be applied to either twin channel, or to the final composite of all channels.

Note: One Target Framestore option maximum per system.

5100 Dual Wide Range Defocus Option — *GV-5100-DEF*

Two independent channels of wide range defocus. Can be used for video, key, or background. Provides independent Horizontal, Vertical (or both) defocus control on chrominance or luminance (or both).

Note: One Defocus option maximum per system.

Power Bundle — *GV-5100-PWR*

Power bundle of GV-ADVE5100 options. Includes CCR, TFS and DEF.

5100 CPL Protocol Converter — *GV-5100-CPL*

Provides a CPL (Control Point Language) translation so that a GVeous system can communicate with a Tektronix/Grass Valley Group Model 3000, Model 2200, or Model 4000 switcher. Allows a GVeous system to control the switcher Aux busses for source selection, and lets the switcher control save, recall, and timeline run operations. Includes interface cable.

Note: This option requires one input module slot.

Control Panel Power Supply — *GV-5100-CPPS*

External power supply for first control panel.

Note: This option is REQUIRED if control panel cable length is more than 10 Meters (33 feet).

Additional Control Panel *GV-5100-CP*

GVeous Control Panel with internal Floppy drive and external power supply. For use as spare control panel, or as secondary control panel. Up to four control panels can be daisy-chained to one system.

External Floppy Disk Kit *GV-5100-EFD*

External floppy disk c/w 10ft cable for use with GVeous Control Panel. Permits a GVeous control panel to be flush mounted in a control desk.

Note: The CPPS option is REQUIRED if an EFD is purchased.

GVeous™ Shot Box Control Panel *GV-5100-SHOT*

Mini "On-Air" recall panel for live use. Connects to main control panel. Direct access to effects or keyframes and includes live freeze.

100ft Control Panel Cable *GV-5100-100*

100ft cable for Control Panel to Signal Chassis interconnection

BRUTUS™ FRAME BASED DIGITAL VIDEO EFFECTS SYSTEM

Brutus is a Quad Twin channel DVE comprised of two GVeous™ systems and a downstream combiner, providing eight transform engines with Z-Axis keying controlled from a single control panel.

All four twin channel processors can work in Video/Video or Video/Key/SuperShadow™ modes independently. Options can be ordered from the standard GVeous option list.

GV-ADVE5400 Brutus Component Quad Twin Channel DVE (with Control Panel)

GV-ADVE5400-1

The Brutus System contains the following components:

- Two GVeous Chassis, each with two twin channel processors
- Combiner chassis
- Control panel
- 33ft Control Panel Cable is included UNLESS other cable length is ordered (longer cable length requires separate 5100-CPPS control panel power supply)
- Two 5100-DSD Dual Serial Digital Input Modules for EACH of the GVeous chassis, and video/key inputs into the combiner chassis (for a system total of 6 DSDs). Up to four more input modules of any type may be added to each chassis.
- Three Component Output boards provide Serial Digital Video and Key outputs (2 each) plus component analog video plus key and sync (one each). Analog output can be set to Beta, SMPTE, MII, or RGB levels.
- 3 Memory expansion Options (Signal chassis and combiner should all have the same memory size)

The following options may be installed in a Brutus system:

- Up to 4 more input module options per chassis (combiner chassis can have input module(s) for background inputs). Note that Aux channel output modules or a CPL converter can take up input module locations.
- Up to 2 Color Corrector Options
- Up to 2 Target Framestore Options
- Up to 2 Defocus Options

Multiple control panels (up to 4) can be connected in a daisy chain fashion, but ONLY ONE control panel can operate the system at one time.

GV-ADVE5400 Brutus Composite Quad Twin Channel DVE (with Control Panel)

GV-ADVE5400-2

The Brutus System contains the following components:

- Two GVeous Chassis, each with two twin channel processors
- Combiner chassis
- Control panel
- 33ft Control Panel Cable is included UNLESS other cable length is ordered (longer cable length requires separate 5100-CPPS control panel power supply)
- Two 5100-CMPST Composite Analog (video plus key) Input Modules for the two GVeous Chassis and two 5100-DSD Dual Serial Digital Input Modules in the Combiner Chassis. Up to four more input modules of any type may be added to each chassis.
- Three Composite Output boards provide Composite Analog Video and Key signals (2 each) plus two each Component Serial Digital (D1) Video and Key. Composite inputs and output auto-switch between NTSC and PAL.
- 3 Memory expansion Options (Signal chassis and combiner should all have the same memory size)

The following options may be installed in a Brutus system:

- Up to 4 more input module options per chassis (combiner chassis can have input module(s) for background inputs). Note that Aux channel output modules or a CPL converter can take up input module locations.
- Up to 2 Color Corrector Options
- Up to 2 Target Framestore Options
- Up to 2 Defocus Options

Multiple control panels (up to 4) can be connected in a daisy chain fashion, but ONLY ONE control panel can operate the system at one time.

Brutus Quad Twin Channel Component Combiner

5400-COMB1

This is a separate combiner chassis with component output for use when a customer already has TWO GVeous systems that are to be used in a Brutus configuration.
This model number does NOT require an I/O package. It includes Serial Digital Inputs for the video and key from the two GVeous Chassis, and a Component output module. Component Output board provides Serial Digital Video and Key outputs (2 each) plus component analog video plus key and sync (one each). Analog output can be set to Beta, SMPTE, MII, or RGB formatted video.

Note: Dveous™ systems built before April `96 will need factory updates before they can be used in a Brutus configuration.

Brutus Quad Twin Channel Composite Combiner *5400-COMB2*

This is a separate combiner chassis with composite output for use when a customer already has TWO GVeous systems that are to be used in a Brutus configuration. This model number does NOT require an I/O package. It includes Serial Digital Inputs for the video and key from the two GVeous Chassis, and a Composite output module. Composite Output board provides Composite Analog Video and Key signals (2 each) plus two each Component Serial Digital (D1) Video and Key. Composite output will auto-switch between NTSC and PAL.

Note: Dveous™ systems built before April `96 will need factory updates before they can be used in a Brutus configuration.

CPL Protocol Converter *5400-CPL*

Provides a CPL (Control Point Language) translation so that a Brutus system can communicate with a Tektronix/Grass Valley Group Model 3000, Model 2200, or Model 4000 switcher. Allows a Brutus system to control the switcher Aux busses for source selection, and lets the switcher control save, recall, and timeline run operations. Includes three-way interface cable.

Note: This option requires one input module slot in the combiner chassis.

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