AccuPel
Video Excellence

DVG-5000 Digital Video Generator

Now Playing In 3D

Applications & Users

- **Professional Display Calibration**
- **Video Processing Engineers and Display Designers**
- **Video Reviewers & Evaluation Engineers**
- **Home Theater Enthusiasts**
- **Manufacturing Test**

For more than a decade AccuPel Video Generators have been a favorite of Professional Display Calibrators, Product Designers, and Home Theater Enthusiasts for unsurpassed video signal quality and easy to use standalone front panel and IR remote controls, and computer interfaces.

NEW Dual-Native 10-bit / 8-bit Digital Video Resolution

The DVG-5000 brings AccuPel's Dual-Native 10-bit / 8-bit pattern rendering to digital video signals for the first time. Each individual video signal component is produced with 10-bit digital precision to create full-accuracy 30-bit RGB and 30-bit YCbCr component video for Deep Color output signals, and 20-bit YCbCr 4:2:2 signals.

For signal standards that can't transport 10-bit digital video components, AccuPel's Dual-Native pattern rendering system produces separate full-accuracy 8-bit digital video components. The 10-bit video values are never truncated, dithered, or rounded, which eliminates dithering noise and LSB errors for 8-bit signals.

Unlike most generators that use pixel clock synthesizers, the DVG-5000 has three precision oscillators to provide individual low-noise, low-jitter pixel clocks for standard-definition, 60 Hz-based high-definition, and 59.94 Hz-based high-definition video formats.

NEW AVI InfoFrame Parameter Control

AVI InfoFrame parameters can be over-ridden and set by the user to troubleshoot compatibility problems between displays, video processors, and source components when installing systems or designing new video products.

NEW Features

- **33 3D Signal Formats**
- **HDMI® Video Output**
- **Dual 10-bit / 8-bit Pattern Rendering**
- **Deep Color Output (30-bit, 36-bit)**
- **Digital Video Luma Edge Filter Control**
- **4:2:2 Chroma Decimation Filter Control**
- **AVI Infoframe Parameter Control**
- **CIE xyY Color Gamut OSD Info**
- **24 Additional Standard Patterns**
- **ChromaPure™ Calibration Software**

NEW 3D Option – 33 3D Signal Formats

All mandatory 50 Hz and 60 Hz HDMI® 1.4a 3D formats, plus 20 optional 3D formats are implemented, including those used by Blu-ray Disc™ and cable and satellite providers. Frame Packing, Side-by-Side (Half) and Top-and-Bottom 3D structures are included.

All test patterns are available in all 33 3D structure-formats. All 3D formats are active in all 10-bit native and 8-bit native YCbCr and RGB output modes.

Left eye & right eye blanking is provided, and the 3D Infoframe can be disabled to view the left and right eye test pattern frames without 3D display processing. A special interactive 3D Crosstalk pattern easily determines left-right and right-left crosstalk as an equivalent crosstalk signal level or as display-gamma corrected percent of full luminance.

NEW ChromaPure™ Display Calibration Software

The DVG-5000 is fully supported by Display Calibrations' ChromaPure Plus™ and ChromaPure Professional™ software, which provides automated and computer-assisted display calibration using the industry's most popular colorimeters and spectrophotometers. ChromaPure™ software is available as a separate option.

DVG-5000 Features & Characteristics

Video Formats (Standard)

1080i	59.94, 60, 50
1080p	59.94, 60, 50
	23.98, 24, 25
	23.98sf, 24sf
	29.97, 30
	47.95, 48
720p	59.94, 60, 50
480i/p	59.94
576i/p	50

3D Structure-Formats (Option)

Frame Packing

1080p	23.98, 24, 25
	29.97, 30
720p	59.94, 60, 50

Side-by-Side (Half)

1080i	59.94, 60, 50
1080p	59.94, 60, 50
	23.98, 24, 25
	29.97, 30
720p	59.94, 60, 50

Top-and-Bottom

1080p	59.94, 60, 50
	23.98, 24, 25
	29.97, 30
720p	59.94, 60, 50

Standard & 3D Output Signals

YCbCr	4:2:2, 4:4:4
RGB	Video, PC*

Black-Reference White (0%-100%)
16-235, 109% maximum signal levels
* Black-Reference White 0-255

Native Video Pattern Rendering

Selectable	10-bit or 8-bit for each Y/Cb/Cr/R/G/B Component

YCbCr 4:2:2 Output

Selectable	8-bit or 10-bit for each Y/Cb/Cr Component

YCbCr/RGB Deep Color Output

Selectable	24-bit, 30-bit, 36-bit

User Interfaces

Standalone	Front Panel Control OSD Menus 41-button IR Remote
Computer	USB (PC/Mac/Linux) ChromaPure™ Compatible

Pattern & Feature Updates

USB	Windows or Mac OS X

3D Signal Option

33 3D Structure-Formats
All Standard Patterns in All 3D Formats
Left Eye – Right Eye Blanking
3D Infoframe Control
Interactive 3D Crosstalk Pattern

Additional Standard Features

Color Gating - R,G,B,Y,Cb,Cr
User-defined Color Values
User-defined Grayscale Values
User-defined Checkerboard Values
CIE xyY OSD Color Gamut Values
AVI Infoframe User Control
YCbCr Encoding Reversal
YCbCr 4:2:2 Decimation Filter Control
Edge Bandwidth Filter Control
User-defined Pattern Lists
Selectable Power-up Defaults
OSD Menus
IR Remote Control

Signal Standards

ITU-R BT.709
ITU-R BT.601
CEA-861E
SMPTE 274M
SMPTE 296M

Rear Panel Connectors

HDMI® (223 MHz max pixel rate)
USB
Power

Power

+6 volts DC Regulated Input
Deluxe AC Adapter (included)
100-240 VAC 50/60 Hz
Interchangeable Power Cords

Size

H x W x D	1.75” x 6.5” x 4.35”
with feet	1.85” x 6.5” x 4.35”
Material	Anodized Aluminum
Weight	15 oz.

Accessories (Included)

Standard Version
AC Power Adapter
Custom IR Remote Control

Deluxe Version with 3D Option
AC Power Adapter
Custom IR Remote Control
Hard-shell Carrying Case
USB Cable
HDMI Cable

Patterns (Standard)

Color 75 Group
75% Color Bars, Tri-Split Color Bars
75% Color Windows –
Red, Green, Blue, Yellow, Cyan, Magenta, Gray
75% Color Fields –
Red, Green, Blue, Yellow, Cyan, Magenta, Gray
User-defined Color Window
User-defined Color Field

Color 100 Group
100% Color Bars,Tri-Split Color Bars
100% Color Windows –
Red, Green, Blue, Yellow, Cyan, Magenta, Gray
100% Color Fields –
Red, Green, Blue, Yellow, Cyan, Magenta, Gray
User-defined Color Window
User-defined Color Field

Special Group
Overscan, Inverse Overscan, Crosshatch, Inverse Crosshatch, Needle Pulses, Color Pixel Multiburst, Luma Pixel Multiburst, Crosshair, Sharpness, 100% Checkerboard, 100% Inverse Checkerboard, User-defined Checkerboard, User-defined Inverse Checkerboard, Linearity Ramps (8-bit & 10-bit)

PLUGE Group
0% APL, 25% APL, 50% APL with 98%/102% PLUGE
25%, 50%, 75%, 100% Window, 100% Window with 98%/100% PLUGE
50%/100% Window with PLUGE
Precision 11-21d PLUGE

Gray Scale Group
10-Step Vertical & Split-V Grayscale
1%-10% in 1% steps
10-100% in 10% steps
100%-109% in 0.9% steps
10-Step Horizontal Grayscale
1%-10% in 1% steps
10-100% in 10% steps
100%-109% in 0.9% steps
Windows with PLUGE
1%-10% in 1% steps
10-100% in 10% steps
100%-109% in 0.9% steps
User-defined Grayscale Window

Gray Field Group
Fields 0%, 25%, 50%, 75%, 100%
Fields 10% – 100% in 10% steps
User-defined Gray Field