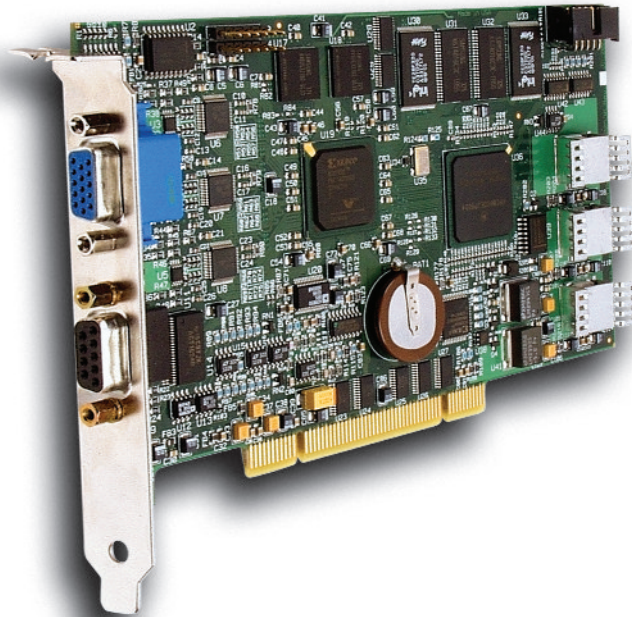




VIDEO TEST GENERATOR

The 802R-PCI is a programmable video signal generator for testing analog and digital devices. The compact 1/2-slot PCI-based design saves space in production environments. Control the generator with our Video Generator Manager software, or use our Software Development Kit to create with your own application. Or use the extensive command interface to programmatically control every aspect of the generator, from loading video formats and images, to creating custom video formats and images. Create test sequences to automate repetitive testing procedures.



802R-PCI

KEY FEATURES + BENEFITS

24 bits per pixel up to 100 MHz.
8-bits up to 300 MHz.

Analog-VGA and Digital-EGA outputs.

Compact 1/2-slot PCI card size
Self-calibrating analog video outputs are electronically adjusted against an internal precision reference.

Video Generator Manager provides a Microsoft Windows-based user interface to the generator.

Hundreds of formats and patterns included.

HDTV/SDTV Signal Support.
Generates bi-polar sync and YPrPb color difference video.

Software Development Kit for writing your own Windows® or DOS applications to control generator.

Display bitmap images stored on PC.

PC memory mapped for drawing directly into the generators video memory from your application using your PC's processor.

DMA. High speed 32-bit PCI data bus at 33 MHz.

5 volt or 3.3 volt PCI slot.

User-installable firmware and gate-ware.

HDCP	
HDMI and DVI	Authentication and encryption of uncompressed HDMI and DVI signals

HDMI InfoFrames (882 only)	
HDMI	Verify InfoFrames sent to display

HDMI Pixel Repetition (882 only)	
HDMI	Test gaming formats with variable horizontal resolution

HDMI Active Format Descriptor (AFD) (882 only)	
HDMI	Verify HDMI content mapping

HDMI Audio Tests	
Rate	Vary audio sampling rate to test sink handling
Frequency	Vary audio frequency to test sink handling
Amplitude	Vary audio amplitude to test sink handling

EDID Read	
HDMI, DVI, VGA	Auto-configuration of generator format list
Data channels	
Physical	I2C per VESA E-DDC
Protocols	DDC2B, E-DDC & DDC/CI (reads E-EDID Ver 1.3)

EDID Testing	
HDMI, DVI, VGA	Reads EDID from display and presents as displayed image

EDID Compliance Testing (882 only)	
HDMI, DVI, VGA	HDMI EDID processing

DV Swing Test	
HDMI, DVI	Vary TMDS digital video signal swing in 4mV increments from 150 to 1560 mVp-p (programmable)

Scrolling Image Test	
All interfaces	Scroll any static image

Special Sync Tool	
Analog video	Trigger scope or inspection camera anywhere in video

Formats	
Format file types	XML
Standard formats	Over 200 formats for testing IT, CE, military and other display test applications
Custom formats	Graphical format editor

Patterns	
Pattern file types	Custom object (.o) files, BMP, JPEG, PNG
Standard patterns	Over 200 standard static and dynamic images included for testing CRTs and FPDs
Custom patterns	Graphics SDK to create complex patterns
Internal data storage	15 MB

Test Sequences	Create test sequences with unlimited number of steps; each step defines a video format, image, sync, gating and duration (0.1 sec to 24 hours, or frames)
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General Specifications	
Size (mm)	330 W, 87 H, 284 D
Humidity	30 to 80% RH (non-condensing)
Operating temp.	0 to 40° C
AC Mains	
Frequency	47 to 63 Hz
Voltage	90–264 VAC

Specifications and features are subject to change without notice.

Pixel Clock	
Range:	3.9975 MHz to 300 MHz
Step:	0.001 Hz
Accuracy:	25ppm (electronically adjustable to 0 ppm with external frequency counter)
Jitter:	300 pS line to line (one sigma)

Video Memory	
Size:	4096 x 4096 at 8-bit color 2048 x 2048 at 24-bit color
Pixel depth:	8 bits 24-bit TrueColor up to 100 MHz
Analog LUT:	3x 8-to-12
Digital LUT:	8-to-6

Analog Output	
Color encoding:	RGB, YPbPr
Source Z:	75 ohms
Rise/fall times:	1.5 ns typical
DAC resolution:	12-bits per component (36 bits total)
Video levels:	
Video swing:	0 to +1.000 volts (positive)
Sync swing:	0 to 0.4 volts (negative) 0 to 0.8 volts (bi-polar)
Setup:	0 to 100 IRE
Calibration:	Self-calibrating
Output protection:	Buffered with 75-ohm isolation
Connector:	15-pin HD D-Sub (VGA)

Digital Output	
Connector:	9-pin D-Sub (EGA)

Horizontal Timing	
Frequency:	2.29 - 250 KHz
Pixels per line:	
Total:	144 to 65,535, 1 pixel step
Active:	16 to 4096, 1 pixel step
Sync pulse width:	1 to 65,519 pixels
Sync delay (front porch):	1 to 65,519 pixels

Vertical Timing	
Frequency:	1 Hz to 650 Hz
Scan lines per frame:	
Progressive:	Total: 2 to 4095 lines Active: 1 to 4094 lines
Interlace:	Total: 5 to 8191 lines Active: 2 to 8188 lines
Sync pulse width:	0 to 4095 lines
Sync delay (front porch):	0 to 4095 lines

Sync Types	
Analog Composite Sync (ACS)	Sync on any/all channels (RGB/YPbPr) Bi-level or Tri-level
Digital Separate Sync (DSS)	
Digital Composite Sync (DCS)	
Equalization and serrations:	Selectable

Device Communication	
Physical:	I2C per VESA E-DDC
Protocols:	DDC2B, E-DDC, and DDC/CI

Video Formats	
Built-in:	Over 200 component formats, including computer (VESA), SD and HD television (SMPTE), Australian 50Hz (Annex H - AS4933), display manufacturers (Apple, Sun, HP, ViewSonic, Sony, IBM, Barco), medical (Dome, DataRay), military (HOB0, STANAG, MAVERIK, LMC), and other applications.
User-defined:	300 In NVRAM. Unlimited storage on host PC.
Edit method:	VGM software or command interface

Test Images	
Built-in:	Over 290 computer and broadcast images
For evaluating:	Brightness Contrast Gamma Setup Focus Color Geometry Size Regulation Persistence Animation EMI Over scan Convergence Cross-Talk Bandwidth (MTF)
User-defined:	Use VGM or command language to create custom images.

Test Sequences	Create test sequences with unlimited number of steps. Each step defines a video format, image, sync, gating, and duration (0.1 sec to 24 hours).
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Generator Control Options	Video Generator Manager software Microsoft Windows-based or DOS-based programs created with the Quantum Data SDK (includes API documentation, sample program with source)
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System Requirements	Microsoft Windows NT/2000/XP Video Generator Manager 3.0.4 or later (included)
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General Specifications	
Power:	3.3-volt or 5-volt slot
Size:	176 mm (6.935 in) x 107 mm (4.2 in)
PCI bus:	33 MHz maximum
Humidity:	30 to 80% RH (non-condensing)
Operating temperature:	0 to 40° C

Specifications are based on hardware and firmware revisions available as of March 2006, and are subject to change without notice. HDMI, the HDMI logo and High-Definition Multimedia interface are trademarks or registered trademarks of HDMI Licensing LLC.

Revised 03/02/06