Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 1 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, presenting flexible technical + commercial solutions and supplying a loan unit during warranty repair, if available.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based at Aldermaston in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our 40GHz in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

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VG-849C / VG-849C-A

HDMI HDCP

Further evolutionary changes unveil a new generation of video signal generators.
HDMI TV dedicated VG-849C arrives!

Arrival of the latest TV system equipped with HDMI 1.3a (not including SACD) output.

VG-849C is the most significant analog/digital output type programmable video signal generator. Supports analog RGB/YPbPr signal switching and conforms to HDTV system timing. SDTV standard signals like NTSC/PAL/SECAM are also supported. Standard unit offers TMDS signal digital output with added HDCP function. Dual link output (to 300MHz) is possible with custom modification. Can support an ultra-high-density display surpassing QXGA (2048 × 1536). Internal 450 sample programs are easy to be recalled. HDMI (High-Definition Multimedia Interface:EIA/CEA-861D, interface standards for next generation TV).

Features

● **Wideband Dot Clock**
A Dot clock with 5 - 300 MHz analog output, 25 - 300 MHz (DVI dual link) * 25-225MHz HDMI output supports a wide range including broadband. 1KHz accuracy allows more precise settings.

● **HDMI 1.3a supported**
HDMI function is provided for transmitting high-resolution (HDTV) video and multi-channel audio without compression that could result in quality deterioration.
Complies with "HDCP (High-bandwidth Digital Contents Protection), " with AV-MUTE ON/OFF function.
The latest HDM1 standard 1.3a supported.

● **Ethernet adopted for outside interface**
Ethernet and RS-232C have been adopted for external interface. By supporting Ethernet, the signal generator is now capable of performing batch control of multiple VG units.

● **CEC control function**
CEC (Consumer Electronics Control) command simulation function supported.

● **Equipped with scroll and simple animation imaging functions**
Equipped with a 1-dot level horizontal and vertical display pattern scroll function. It can also be used to store multiple animation images with respect to resolution and display them by moving a display start coordinate control.

● **Editing via PC Card is possible**

● **Corresponding full color output**

● **It corresponds to closed caption, teletext, V chip, and macro vision as an option.**

● **Supports next generation audio (standard for VG-849C-A)**
Capable of generating test signals for the following: next generation audio (Blu-Ray disc and HD-DVD applications) Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio, and DTS-HD High Resolution Audio, as well as DSD (One Bit Audio) applied in SACD.

● **Next generation audio digital input (option for VG-849C-A)**
Using I2S × 4ch input, this option can output Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio, DTS-HD High Resolution Audio in HDMI.

● **HDMI 1.3a Deep color(10/12 bit) mode supported 1024/4096 level ramp pattern for testing 10/12 bit supported as an option.**
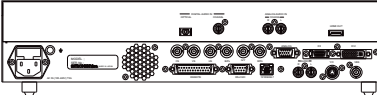
● **HDMI 1.3a xvYcc, Lipsync test function**

specifications

Output specifications	Dot clock frequency/step	Analog : 5 to 300MHz / 1KHz steps
		DIgital DVI : 25 to 165MHz (pixel clock : 25 to 165MHz) / 1KHz steps
		Digital HDMI : 25 to 165MHz / 1KHz steps (Transmission rate 225MHz)
	Horizontal frequency / dot	10 to 300KHz (Max. 8192 dot) 1 dot accuracy for full range (Analog output only)
	Vertical frequency / line	15.6 to 200Hz (Max. 8192 lines)
	Video memory	HDMI : 4k × 4k × 36 bits (RGB 12 bit each) Analog / DVI : 4k × 4k × 24 bits (RGB 8 bit each)
Analog output (BNC, Dsub-15, D5-terminal, DVI-I)	Output signal	R・G・B/Y・R-Y・B-Y・HS・VS・CS
	Video peak level	0.3 to 1.2V (75Ω)
	Setup level	0 to 0.25V (75Ω)
	Video On Sync Level	0 to 0.6V (75Ω) (0 to ±0.6V at trilevel output)
	Sync Level(HS, VS, CS)	HS.VS : More than 2V (75Ω) CS : 0.3V (±0.3V at trilevel output) (75Ω)
	Scan Mode	Interlace, Non-interlace
	NTSC/PAL/SECAM	Composite, S-Video(S1, S2), SCART(Optional) (Timing and Level are fixed)
		Vchip, Closed Caption, Teletext, Macro vision(optional)
	Output	Video : OFF/R・G・B/Y・R-Y・B-Y Sync : OFF/bilevel/trilevel
HDMI output	Output Mode	RGB/YCbCr4:4:4 8, 10, 12bit YCbCr4:2:2 8, 10, 12bit
	Internal Audio	8ch(Sinusoidal mono-sound, Sweep)
	External input audio	Digital : COAX, TOSLINK Analog : 2ch
	Audio Sampling Frequency	32 to 192KHz (max, 8ch)
	Version	HDMI Ver.1.3a
	Optional Audio	Dolby TrueHD, Dolby Digital Plus, Dolby Digital, DTS-HD Master Audio, DTS-HD High Resolution Audio, DTS Digital Surround, DSD (max8ch)
DVI Digital Output		Single Link RGB 8-bit each, HDCP supporting
Analog Audio Output		RCA connector × 2ch 0 to 20KHz (Sinusoidal mono-sound, Sweep)
Optional Audio Output		I2S × 4ch (TTLlevel)
Data Storage Device	PC card(ATA)	Compact Flash
Control Interface		RS232C, 10/100BASE-T/TX, Remote BOX
General specifications	Voltage	AC100 to 120V / AC200 to 240V 50/60Hz
	Power consumption	Max. 80W
	Operating temperature range	+5 to 40°C
	Operating humidity range	30 to 80% RH (no condensation)
	Dimensions	430(W) × 88(H) × 350(D) mm (excluding projected parts)
	Weight	Approx. 4kg

* DVI output supports up to 300 MHz by purpose-built modification. However, no HDCP function is available.

Rear View **VG-849C**