



# kramer

**860**

18G 4K HDR Signal Generator & Analyzer

| HDMI | 4K/60 UHD (4:4:4) | 4K HDR



860 HDMI 18G (6G per graphic channel) 4K HDR Signal Generator & Analyzer is an advanced and handy tool for generating, testing and verifying the signal path within your (up to) 4K@60Hz (4:4:4) HDMI/HDCP 2.2 ecosystem. With 88 built-in resolutions, 55 test patterns and over a dozen types of AV analysis functions, this unit provides an enormous range of testing options. HDMI data packet, EDID and HDCP analysis is supported along with EDID upload and emulation. Additionally the Status and Control Data Channel (SCDC) can be monitored, enabling HDMI 18G signal detection and analysis. Up to 8 channels of LPCM audio test tones can be generated with a wide range of frequencies and audio levels

## FEATURES

Max. Resolution - 4K@60Hz (4:4:4)

HDMI Support - HDR10 (on input), xvYCC color (on input), Dolby TrueHD/DTS-HD Master Audio (by-pass), Dolby Vision (on input) as specified in HDMI 2.0

Standards Compliance - DVI 1.0 and HDCP 1.4/2.2

Data Path Analysis - Source and sink up to 18G HDMI signals (6G per graphic channel)

Analysis of HDMI Data Packet

Analysis & Control of HDCP v1.4 and v2.2

Analysis & Emulation of EDID Data - Including SCDC

Analysis of Input Audio Signals

HDR Bypass & Analysis Support

HDMI Timing Generation - Up to 4096×2160 @60Hz (4:4:4), 8-bit

Heavy-duty, waterproof, padded protective case included

VGA Output Supports - 350p, 480p, 576p, 720p, 1080i, 1080p, 640×480, 800×600, 1024×768, 1280×1024, 1366×768, 1400×1050, 1440×900, 1600×900 (Reduced Blanking; RB), 1600×1200, 1680×1050, 1920×1200 (RB), 2048×1080p

HDMI Output Supports - 350p, 480p, 576p, 720p, 1080i, 1080p, 640×480, 800×600, 1024×768, 1280×1024, 1366×768, 1400×1050, 1440×900, 1600×900 (RB), 1600×1200, 1680×1050, 1920×1200 (RB), 3G4K, 6G4K

Custom User Test Patterns - 640×480 & 1920×1080

External Stereo Audio Input & Output

LPCM Sinewave Audio Generation - Up to 8 channels

Control Options - Front-panel, RS-232, Telnet, and IR remote controls

OLED Display - With rapid updates of current status information

Detailed OSD - For settings and informational displays

USB Firmware & Pattern Update

Small & Portable Unit



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## TECHNICAL SPECIFICATIONS

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INPUTS:	1 HDMI, 1 unbalanced stereo audio (2Vrms max. 20k $\Omega$ ) on a 3.5mm jack, 1 RS-232 on a 9-pin D-sub connector, 1 Ethernet on an RJ-45 connector, 1 USB connector
OUTPUTS:	1 HDMI, 1 VGA on a 15-pin HD connector, 1 unbalanced stereo audio (2Vrms max. 560 $\Omega$ ) on a 3.5mm jack
COMPLIANCE WITH HDMI STANDARD:	HDCP 2.2. HDR10 (on input), xvYCC color (on input), Dolby TrueHD/DTS-HD Master Audio (by-pass), Dolby Vision (on input) as specified in HDMI 2.0
CONTROLS:	Panel buttons with OLED display, OSD, RS-232, IR, and Ethernet
MAXIMUM DATA RATE:	18Gbps (6Gbps per graphic channel)
ESD PROTECTION:	Human body model: $\pm 8$ kV (air-gap discharge), $\pm 4$ kV (contact discharge)
OPERATING TEMPERATURE:	0° to +40°C (32° to 104°F)
STORAGE TEMPERATURE:	-20° to +60°C (-4° to 140°F)
HUMIDITY:	20% to 90%, RHL non-condensing
POWER CONSUMPTION:	5V DC, 1.6A
POWER SUPPLY:	5.2V/4A
CHASSIS MATERIAL:	Metal
SAFETY REGULATORY COMPLIANCE:	CE
INCLUDED ACCESSORIES:	Remote control (LR-40), power supply, protective case
Product Dimensions	16.50cm x 13.20cm x 3.00cm (6.50" x 5.20" x 1.18" ) W, D, H
Product Weight	0.8kg (1.7lbs) approx
Shipping Dimensions	30.50cm x 26.90cm x 14.70cm (12.01" x 10.59" x 5.79" ) W, D, H
Shipping Weight	2.7kg (5.9lbs) approx



