

# SABER PANELMOUNT DUAL 8.4™ SABER RACKMOUNT DUAL 8.4™

Standard, Industrial-/Military-Grade, Panel Mount/Rack Mount Dual 8.4" LCD Monitors



The universal acceptance of LCD technology in the commercial, industrial and military sectors has revolutionized display applications. However, the demanding environments of many of these applications require performance that is not always addressed by commercial solutions; their plastic enclosures afford little design flexibility or ruggedization. Additionally, the unique needs of System Integrators/VARs and OEMs/End Users must be accommodated. In response to these criteria, General Digital offers a diverse selection of robust LCD monitor models.

The **SABER DUAL 8.4 SERIES** flat screen displays are housed in rugged, yet stylish, rack mount enclosures designed to endure hazards that are typically associated with industrial and military COTS applications. A durable, matte black powder coat exterior resists scratches and fingerprints while also reducing reflected light. The rugged rack mount bezels withstand harsh treatment and facilitate drop-in installation.

The monitors' TFT LCD provides users with brilliant, colorful images, and a response time fast enough for viewing your favorite DVD. All models are equipped with full-featured analog video controllers that support all manner of video signals. A protective glass overlay, with double-sided antiglare etch coatings, guards your LCD investment and diffuses surface glare.

The low power Saber Dual 8.4 Series is designed to operate from a single +12V regulated source. Customers can provide their own power supply, request a custom supply, or choose from two standard power supply configurations (attached or separate module) featuring a power factor corrected AC switching supply. Additionally, this series is designed with the intent to meet UL 60950 and FCC Class A Certification.

Please feel welcome to consult a General Digital Sales Engineer for additional information, or visit [www.GDdisplaysystems.com](http://www.GDdisplaysystems.com).

QUICK LOOK

## ENCLOSURE

- » Industrial/Military Grade
- » Rounded Corners Promote Operating Safety
- » Lightweight Yet Robust 3/16" Panel Mount Bezel
- » Rugged, All-Metal Construction

## DISPLAY

- » Two 8.4" Diagonal Active Matrix TFT LCDs
- » SVGA (800 x 600 pixels) Resolution
- » Wide Viewing Angles (Horizontal & Vertical)
- » High Brightness and Contrast Enhances Display Quality
- » Displays Function Independently of Each Other

## VIDEO CONTROLLER

- » Support for Interlaced and Non-Interlaced Video Sources
- » Support for Separate, Composite, Sync-On-Green and DVI-D Standards
- » Support for NTSC, SECAM, PAL, RS-170 Video Input
- » Resolutions to 1920 x 1080 @ 60 Hz; Sub-resolutions to 75 Hz
- » Intuitive On-screen Menus for Display Calibration and User's Control
- » Advanced Imaging Features
  - Auto Adjust, Brightness/Contrast/Color Adjustments, Image Expansion, Image Zoom, Foreign Languages, PIP, PBP, More

## POWER

- » Attached or Separate AC Input Supply Provides +12 VDC
- » Low Power Consumption

## OPTIONS

- » NVIS-Compatible Displays Compliant with MIL-STD-3009
- » Sunlight Readable Displays and Other Optical Enhancements
- » Protective Glass Display Overlay
- » Capacitive and Resistive Touch Screens
- » External Power Supplies (AC, DC, Power Factor Correction, More)
- » Support for DVI-D Video, HDMI Video, NTSC Video (Composite)
- » Audio Add-on Board for Stereo Speaker Control
- » Optical Film Management
- » Optical Bonding
- » Heaters

**Designed and Manufactured in the U.S.A.**

**DISPLAY x2** All Models

Size (Diagonal)	Viewing Area (W x H)	Resolution (Pixels)	Number of Colors	Luminance (0° Max.)	Contrast	Response Time (Rise/Decay)	Horizontal Viewing Angle	Vertical Viewing Angle	Shock [1]	Vibration [1]
8.4" (x2)	6.71" x 5.03"	800 x 600	16.2 Million	450 Nits	600:1	20/10 ms	± 80°	+ 80°, -60°	50 G, 20 ms 1/2 Sine Wave	1.5 G (10–200 Hz)

**1** Shock and Vibration data reflect parameters for baseline industrial monitors. Military-grade monitors could sustain even greater shock and vibration levels. Please inquire with a Sales Engineer for more information.

**VIDEO CONTROLLER x2 [2]**

dd	Display Supported	Resolution/Frequency [3]								Scaling	NTSC / SECAM / PAL / RS-170	Video Supported
		640 x 480 VGA	800 x 600 SVGA	1024 x 768 XGA	1366 x 768 WXGA	1280 x 1024 SXGA	1600 x 1200 UXGA	1920 x 1200 WUXGA				
115 [4, 5]	8.4"	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60 Hz	60, 75 Hz	60 Hz	60 Hz	On/Off	–	Separate, Composite, Sync-On-Green, DVI-D	
117 [4]	8.4"	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60 Hz	60, 75 Hz	–	60 Hz	On/Off	–	Separate, Composite, Sync-On-Green, DVI-D	
121 [4]	8.4"	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60 Hz	60, 75 Hz	–	60 Hz	On/Off	Digital Processor, Picture-In-Picture	Separate, Composite, Sync-On-Green, DVI-D	

**2** Most common video inputs listed. See below for a comprehensive list of supported video standards. Speak with a Sales Engineer for more information.

**3** Most common video modes listed. Other video modes supported. Speak with a Sales Engineer for more information.

**4** Supports advanced features such as Live Video, Picture-In-Picture (multiple user-selectable sizes), and Picture-By-Picture.

**5** Video controller 115 is obsolete and shown for reference only.

**VIDEO STANDARDS SUPPORTED** All Models

Analog Computer Video	Digital Computer Video	Composite (Live) Video	HD Video	Others
VGA, SVGA, ARGB, RGB, Separate Sync, Composite Sync, Sync-On-Green, DVI-A, STANAG 3350 A / B / C	DVI-D, DVI-I, SD-SDI, HD-SDI	NTSC, PAL, SECAM, RS-170, S-Video, CCTV	HD-SDI, HDMI	CGI, CCIR, EGA, RS-343A, EIA-343A, Custom Sync

**CALIBRATION** All Models

dd	Interface	Functions	Advanced
115 [5]	On-screen Displays Navigated by 8-button Membrane Pad	Volume, Brightness, Contrast, Saturation, Hue, Sharpness, Input Signal, Aspect Size (Scaling), Image Position (Horizontal & Vertical), Utilities	Auto Source Seek, Auto Picture Setup, Auto Color Gain, Auto Power Off, Picture-In-Picture, Color Temperature, Hot Keys, OSD (Position, Timeout, Language [English, Chinese], Transparency), Manual Clock & Phase, Video Standard, Image Orientation, Gamma
117	On-screen Displays Navigated by 8-button Membrane Pad	Brightness, Contrast, Saturation, Backlight Brightness, Input Signal, Aspect Size (Scaling), Image Position (Horizontal & Vertical), Utilities	Picture-In-Picture (PIP), PIP Size, PIP Position, PIP Transparency, Auto Picture Setup, Auto Color Gain, Wide Screen Mode Detection, Manual Clock/Phase, Auto Source Seek, Auto Power Off, Video Standard, OSD (Position, Timeout, Language [English, Spanish, French, German, Chinese], Transparency, Display Input), Image Freeze, Image Zoom & Pan, Color Temperature, Hot Keys, Backlight Setup
121	On-screen Displays Navigated by 8-button Membrane Pad	Brightness, Contrast, Saturation, Hue, Sharpness, Backlight Brightness, Input Signal, Aspect Size (Scaling), Image Position (Horizontal & Vertical), Utilities	Picture-In-Picture (PIP), PIP Size, PIP Position, PIP Transparency, Auto Picture Setup, Auto Color Gain, Wide Screen Mode Detection, Manual Clock/Phase, Auto Source Seek, Auto Power Off, Video Standard, OSD (Position, Timeout, Language [English, Spanish, French, German, Chinese], Transparency, Display Input), Image Freeze, Image Zoom & Pan, Color Temperature, Hot Keys, Backlight Setup, Image Orientation (Normal, Horizontal Flip, Vertical Flip, Rotate)

**MTBF** All Models

Display	LED Backlight [6]	LED Controller	Power Supply (Optional)
50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected

**6** The hours for LED Backlight refer to the half-life of the backlight; that is, the point at which the LEDs reach half of their original brightness. *It does not indicate the life expectancy of the backlight.*

**ENVIRONMENTAL** All Models

Temperature, Operating	Temperature, Storage	Humidity, Operating	Humidity, Storage	Altitude, Operating	Altitude, Storage
-30° C to 85° C	-30° C to 85° C	10% to 90% RH Non-condensing	10% to 90% RH Non-condensing	10,000 Feet	30,000 Feet

**MECHANICAL** All Models

Dimensions – Enclosure / Bezel (H x W x D) [7]	Construction	Finish	Weight, Operating [8]	Weight, Shipping [8]
8.72" (5U) x 17.75" x 3.87" / 8.72" x 19.00" x 0.19"	5052-H32 Aluminum	Black Matte Powder Coat	12 Pounds	20 Pounds

**7** An attached power supply will add approximately 2.0"–2.5" to the overall depth of the unit.

**8** Add 2 pounds to the weight when a power supply is included.

**I/O CONNECTIONS** All Models

Power	Analog Video	On/Standby (DC)	S-Video (Optional)	Composite Video (Optional)	Serial/Touch Screen (Optional)	DVI (Optional)
2-pin, 0.156" sp., Molex	High Density 15-pin Socket	Button on OSD PCB	4-pin Mini DIN	RCA Jack	DE-9, Socket	DVI-D

**OPTIONS** All Models (Ordered separately – Please inquire with a Sales Engineer for additional options and accessories)

**POWER SUPPLY** [9]

hijj	Input Voltage Range	Output	Frequency Range	Line Entry Module/Filter	Power Factor
EP01 (Rear Mount)	85–264 VAC	50 W/+ 12 VDC	47–63 Hz	Yes	0.95
0092 (None)	+ 12 VDC	Filtering and regulation provided by customer (default selection)			

9 Includes 6'7" AC Power Cable.

**DISPLAY OVERLAY** (Other Overlays Available – Please Inquire with a Sales Engineer)

gg	Description	gg	Description
00	None	35	Capacitive Touch Screen, Ideal Etch
02	Clear Float Glass, Antiglare Etch Two Sides	51	Resistive Touch Screen
04	Clear Float Glass, Antireflective Coating Two Sides	65	Resistive Touch Screen, 5-Wire, with Laminated ITO Glass
21	Vandal Shield, Polycarbonate or Acrylic		
23	Vandal Shield, Clear Float Glass, Antiglare Etch Two Sides, 2 Panes Bonded (Laminated) Together (Not Bonded to LCD)		
24	Vandal Shield, Soda Lime Glass, Chemically Strengthened (Tempered), Antireflective Coating Two Sides		

**OTHER**

NVIS Compatibility	Night Vision Displays Compliant to MIL-STD-3009
Sunlight Readable LCDs	High Brightness Displays to 1000+ Nits
Optical Enhancements	Bonding of Filter and Display Using Indice-Matched Optical Materials; Brightness and Contrast Enhancing Films and Laminations; NVIS-Compatibility to MIL-STD-3009
Power Supplies	AC and DC Supplies; Various Input Ranges, Input Frequencies; Separate or Attached; Power Factor Correction; AC and DC Power Cables
Video Accessories	Video Cables, Signal Extenders, NTSC/PAL/SECAM/RS-170/S-Video/DVI-D/HD-SDI/ SD-SDI/HDMI/HD Component Support, Picture-In-Picture, Picture-By-Picture
Remote Control	IR or Serial Calibration/Control Interface
Customization	Custom Mechanical and Electrical Modifications; Custom Finishing; Custom Software and Performance Modifications; Private Labeling

**MODEL NUMBER CONFIGURATOR** [10]

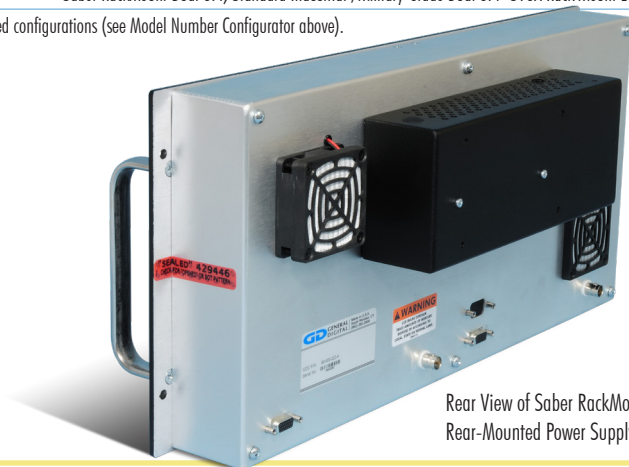
Model Style	Size & Resolution (aab)	Display (ccc)	Video Controller (ddd)	Keyboard/Pointer (ee)	Industrial Enclosure (ff)	Display Overlay (gg)	Power Supply (hijj)	Special
PA-	08S-	166-	###-	00-	01-	##-	####-	DUAL
RM-	08S-	166-	###-	00-	01-	##-	####-	DUAL

10 The hashtags (#) indicate customer-defined values.

**ORDERING**

Model Number [11]	Description
PA-08S-166- <b>ddd</b> -00-01- <b>gg-hijj</b> -DUAL	Saber PanelMount Dual 8.4, Standard Industrial-/Military-Grade Dual 8.4" SVGA Panel Mount LCD Monitors
RM-08S-166- <b>ddd</b> -00-01- <b>gg-hijj</b> -DUAL	Saber RackMount Dual 8.4, Standard Industrial-/Military-Grade Dual 8.4" SVGA Rack Mount LCD Monitors

11 **Bold Italicized letters** refer to standard customer-defined configurations (see Model Number Configurator above).



Rear View of Saber RackMount Dual 8.4 Showing Rear-Mounted Power Supply and Cooling Fans