

# BARRACUDA RACKMOUNT SOLAR™

Environmentally Sealed, Industrial-/Military-Grade, Daylight and Sunlight Readable Rack Mount LCD Monitors

The **BARRACUDA RACKMOUNT SOLAR™ SERIES** flat screen displays are housed in environmentally sealed and 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 while reducing reflected light.



Environmentally sealed to NEMA4X and IP67 standards, the Barracuda RackMount Solar™ protects against several contaminants, including liquid immersion (submersion) between 15cm and 1m depth, blowing dust, falling dirt or debris, rain, sleet, snow, splashing liquids, hose-directed fluids, and external formation of ice on the enclosure. The Barracuda RackMount Solar™ is ideally suited for dusty or wet conditions found in industrial and military environments, such as deserts, ships, outdoor kiosks, or simply constant exposure to changing weather conditions.

The monitors' TFT LCD provides users with brilliant, colorful images, and a response time fast enough for viewing your favorite DVD. A protective glass overlay, with double-sided antiglare etch coatings, guards your LCD investment and diffuses surface glare.

The low power Barracuda RackMount Solar™ is designed to operate from a single +12V regulated source. Customers can provide their own power supply, request a custom supply, or choose General Digital's standard AC switching supply, some featuring power factor correction.

On several models, sunlight readability is achieved using our **GENFLECTIVE™** technology, which is a passive approach to brightness and contrast enhancement. Using a proprietary combination of reflective, brightness and contrast enhancing films, sunlight readable performance is achieved. General Digital™ developed GenFlective™ technology to improve daylight and sunlight readable brightness and contrast performance without increased power consumption, heat emission, and backlight augmentation. Another benefit is increased backlight bulb life expectancy.

Please feel welcome to consult with a General Digital™ Sales Engineer for additional information, or visit our web site online at: [www.GeneralDigital.com](http://www.GeneralDigital.com).

OVER 30 YEARS OF FLAT PANEL SOLUTIONS

## QUICK LOOK

### ENCLOSURE

- » Industrial/Military Grade
- » Meets NEMA4X and IP67 Requirements
- » Environmentally Sealed Connectors
- » Rounded Corners Promote Operating Safety
- » Robust 19" Rack Mount Bezel
- » Rugged, All-Metal Construction

### DISPLAY

- » 10.4" to 24.0" Diagonal Active Matrix TFT LCDs
- » VGA (640 x 480 pixels) to WUXGA (1920 x 1200 pixels) Resolution
- » Wide Viewing Angles (Horizontal & Vertical)
- » High Brightness and Contrast Enhances Display Quality
- » Several Models Improve Sunlight Readability by Employing GenFlective™ Technology to Enhance Brightness and Contrast

### VIDEO CONTROLLER

- » Support for Interlaced and Non-Interlaced Video Sources
- » Support for Separate, Composite, SoG and DVI-D Standards
- » Support for NTSC, SECAM, PAL, RS-170 Video Input
- » Resolutions to 1920 x 1200 @ 60 Hz; Sub-resolutions to 85 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

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

### OPTIONS

- » Automatic Brightness Adjustment Sensor
- » 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

### CERTIFICATIONS

- » Several Barracuda RackMount Solar™ Series Models are Designed with the Intent to Meet UL 60950 and FCC Class A Certification when Configured with the General Digital-Supplied Power-Factor-Corrected AC Power Supply

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

**GD GENERAL DIGITAL™**  
The Innovators of Flat Panel Technology

**DISPLAY**

	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 <sup>1</sup>	Vibration <sup>1</sup>
DBR-10V-210	10.4"	8.31" x 6.24"	640 x 480	262,144	450 Nits	600:1	6/19 ms	± 80°	+ 80°, -60°	55 G, 11 ms ½ Sine Wave	2.0 G (5–100 Hz)
SBR-10V-924	10.4"	8.31" x 6.24"	640 x 480	262,144	In Testing	In Testing	6/19 ms	± 80°	+ 80°, -60°	55 G, 11 ms ½ Sine Wave	2.0 G (5–100 Hz)
DBR-12S-309	12.1"	9.7" x 7.3"	800 x 600	262,144	370 Nits	450:1	15/30 ms	± 70°	+ 50°, -60°	50 G, 11 ms ½ Sine Wave	1.0 G (58–500 Hz)
DBR-12X-311	12.1"	9.7" x 7.3"	1024 x 768	16.7 Million	400 Nits	600:1	8/25 ms	± 70°	+ 45°, -55°	55 G, 11 ms ½ Sine Wave	2.0 G (5–100 Hz)
SBR-12X-934	12.1"	9.7" x 7.3"	1024 x 768	16.7 Million	In Testing	In Testing	8/25 ms	± 70°	+ 45°, -55°	55 G, 11 ms ½ Sine Wave	2.0 G (5–100 Hz)
DBR-15X-405	15.0"	11.97" x 8.98"	1024 x 768	16.2 Million	550 Nits	700:1	6/2 ms	± 70°	+ 65°, -60°	50 G, 20 ms ½ Sine Wave	1.5 G (10–200 Hz)
SBR-15X-947	15.0"	11.97" x 8.98"	1024 x 768	16.7 Million	1220 Nits	600:1	5/11 ms	± 65°	+ 45°, -55°	120 G, 2 ms ½ Sine Wave	1.0 G (10–500 Hz)
DBR-19W-963	19.0"	14.81" x 11.85"	1280 x 1024	16.7 Million	400 Nits	600:1	13/7 ms	± 85°	± 85°	50 G, 11 ms ½ Sine Wave	1.5 G (10–300 Hz)
SBR-19W-968	19.0"	14.81" x 11.85"	1280 x 1024	16.7 Million	1000 Nits	700:1	13/7 ms	± 85°	± 85°	50 G, 11 ms ½ Sine Wave	1.5 G (10–300 Hz)
DBR-24D-815	24.0"	20.41" x 12.76"	1920 x 1200	16.7 Million	500 Nits	1000:1	16 ms	± 89°	± 89°	50 G, 11 ms ½ Sine Wave	1.5 G (10–300 Hz)

<sup>1</sup> 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<sup>4</sup>**

dd	Display Supported	Resolution/Frequency <sup>2</sup>							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			
60 <sup>3</sup>	10.4"–24.0"	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60 Hz	60, 75 Hz	60 Hz	60 Hz	On/Off	Digital Processor, Picture-in-Picture	Separate, Composite, Sync-on-Green, DVI-D
61 <sup>3</sup>	10.4"–24.0"	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
62 <sup>3</sup>	10.4"–24.0"	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60 Hz	60, 75 Hz	60 Hz	60 Hz	On/Off	Digital Processor, Picture-in-Picture	Separate, Composite, Sync-on-Green
63 <sup>3</sup>	10.4"–24.0"	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60 Hz	60, 75 Hz	60 Hz	60 Hz	On/Off	Digital Processor, Picture-in-Picture	DVI-D
64 <sup>3</sup>	10.4"–24.0"	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

<sup>2</sup> Most common video modes listed. Other video modes supported. Speak with a Sales Engineer for more information.

<sup>3</sup> Supports advanced features such as Live Video, Picture-in-Picture (multiple user-selectable sizes), and Picture-by-Picture.

<sup>4</sup> Most common video inputs listed. See below for a comprehensive list of supported video standards. Speak with a Sales Engineer for more information.

**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

**MTBF**

	Display	Backlight <sup>5</sup>	Inverter	Power Supply (Optional)
DBR-10V-210	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
SBR-10V-924	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
DBR-12S-309	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
DBR-12X-311	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
SBR-12X-934	> 50,000 Hours (Minimum)	> 40,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
DBR-15X-405	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
SBR-15X-947	> 50,000 Hours (Minimum)	> 30,000 Hours (Minimum)	182,000 Hours	Depends on Supply Selected
DBR-19W-963	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
SBR-19W-968	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected
DBR-24D-815	> 50,000 Hours (Minimum)	> 50,000 Hours (Typical)	182,000 Hours	Depends on Supply Selected

<sup>5</sup> The hours for Backlight MTBF refer to the half-life of the bulbs; that is, the point at which the bulbs reach half of their original brightness. *It does not indicate the life expectancy of the bulbs.*

**ENVIRONMENTAL**

	Temperature, Operating	Temperature, Storage	Humidity, Operating	Humidity, Storage	Altitude, Operating	Altitude, Storage
DBR-10V-210	-20° C to 70° C	-30° C to 80° C	0% to 95% RH Non-condensing	0% to 95% RH Non-condensing	10,000 Feet	40,000 Feet
SBR-10V-924	-20° C to 70° C	-30° C to 80° C	0% to 95% RH Non-condensing	0% to 95% RH Non-condensing	10,000 Feet	40,000 Feet
DBR-12S-309	-10° C to 65° C	-30° C to 70° C	20% to 95% RH Non-condensing	5% to 95% RH Non-condensing	10,000 Feet	24,000 Feet
DBR-12X-311	-10° C to 70° C	-20° C to 80° C	0% to 95% RH Non-condensing	0% to 95% RH Non-condensing	10,000 Feet	40,000 Feet
SBR-12X-934	0° C to 50° C	-20° C to 60° C	0% to 100% RH Non-condensing	0% to 100% RH Non-condensing	10,000 Feet	40,000 Feet
DBR-15X-405	-30° C to 85° C	-30° C to 85° C	8% to 90% RH Non-condensing	8% to 90% RH Non-condensing	10,000 Feet	30,000 Feet
SBR-15X-947	-10° C to 70° C	-20° C to 80° C	8% to 90% RH Non-condensing	8% to 90% RH Non-condensing	10,000 Feet	30,000 Feet
DBR-19W-963	0° C to 50° C	-25° C to 60° C	0% to 100% RH Non-condensing	0% to 100% RH Non-condensing	10,000 Feet	40,000 Feet
SBR-19W-968	0° C to 50° C	-20° C to 60° C	0% to 100% RH Non-condensing	0% to 100% RH Non-condensing	10,000 Feet	40,000 Feet
DBR-24D-815	0° C to 50° C	-20° C to 60° C	0% to 100% RH Non-condensing	0% to 100% RH Non-condensing	10,000 Feet	40,000 Feet

**MECHANICAL**

	Dimensions Enclosure / Bezel (H x W x D)	Construction	Finish	Weight, Operating <sup>6</sup>	Weight, Shipping <sup>6</sup>
DBR-10V-210	9.86" x 10.96" x 2.59" / 11.47" x 12.55" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	9 Pounds	14 Pounds
SBR-10V-924	9.86" x 10.96" x 2.59" / 11.47" x 12.55" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	9 Pounds	14 Pounds
DBR-12S-309	10.77" x 12.45" x 2.59" / 12.38" x 14.06" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	10 Pounds	15 Pounds
DBR-12X-311	10.77" x 12.45" x 2.59" / 12.38" x 14.06" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	10 Pounds	15 Pounds
SBR-12X-934	10.77" x 12.45" x 2.59" / 12.38" x 14.06" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	10 Pounds	15 Pounds
DBR-15X-405	12.06" x 15.06" x 2.59" / 13.60" x 16.59" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	12 Pounds	17 Pounds
SBR-15X-947	12.06" x 15.06" x 2.59" / 13.60" x 16.59" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	12 Pounds	17 Pounds
DBR-19W-963	14.99" x 17.96" x 2.59" / 16.48" x 19.45" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	18 Pounds	23 Pounds
SBR-19W-968	14.99" x 17.96" x 2.59" / 16.48" x 19.45" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	18 Pounds	23 Pounds
DBR-24D-815	15.94" x 21.90" x 3.00" / 18.67" x 24.00" x 0.31"	5052-H32 Aluminum	Black Matte Powder Coat	25 Pounds	30 Pounds

<sup>6</sup> A power supply will add approximately 2 pounds to the weight.

**I/O CONNECTIONS<sup>7</sup>** All Models

Power	Analog Video	On/Standby (DC)	S-Video (Optional)	Composite Video (Optional)	Serial/Touchscreen (Optional)	DVI (Optional)
2W2 D-sub.	High Density 15-pin Socket	LED on Membrane Pad	DE-9, Plug	DE-9, Plug	DE-9, Socket	DVI-D

<sup>7</sup> All connectors are sealed to NEMA4X and IP67 requirements, regardless of connection.

**CALIBRATION** All Models

dd	Interface	Functions	Advanced (Excluding 07, 12)
60/61/62/ 63/64	On-screen Displays Navigated by 8-button Membrane Pad	Volume, Brightness, Contrast, Saturation, Hue, Sharpness, Backlight Brightness, Input Signal, Aspect Size (Scaling), Image Position (Horizontal & Vertical)	Picture-In-Picture (PIP), PIP Size, PIP Position, PIP Transparency, Picture-by-Picture (PBP), Auto Picture Setup, Auto Color Gain, Wide Screen Mode Detection, Manual Clock/Phase, Auto Source Seek, Auto Power Off, Video Standard, Gamma, OSD (Position, Timeout, Language [English, Spanish, French, German, Chinese], Transparency, Display Input), Image Freeze, Image Zoom & Pan, Color Temperature, Hot Keys, Monochrome Mode, Backlight Setup

**POWER SUPPLY<sup>8</sup>**

hijj	Input Voltage Range	Output		Frequency Range	Line Entry Module/Filter	Power Factor
		10.4" – 20.1"	24.0"			
SP07 (Separate)	85–264 VAC	–	150 W / +12 VDC	47–63 Hz	Yes	0.95
SP31 (Separate)	90–264 VAC	100 W / +12 VDC	–	47–63 Hz	–	0.95
0092 (None)	+12 VDC	Filtering and regulation provided by customer				

<sup>8</sup> Includes 6'7" AC Power Cable.

## OPTIONS

All Models (Ordered Separately – Please Inquire with a Sales Engineer for Additional Options and Accessories)

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

gg	Description	gg	Description
00	None	23	Vandal Shield, Clear Float Glass, Antiglare Etch Two Sides, 2 Panes Bonded (Laminated) Together (Not Bonded to LCD)
02	Clear Float Glass, Antiglare Etch Two Sides	35	Capacitive Touch Screen, Ideal Etch
04	Clear Float Glass, Antireflective Coating Two Sides	51	Resistive Touch Screen
21	Vandal Shield, Polycarbonate or Acrylic		

### OTHER

Optical Enhancements	Bonding of Filter and Display Using Indice-Matched Optical Materials; Brightness and Contrast Enhancing Films and Laminations
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<sup>9</sup>

Model Style	Size & Resolution (aab)	Display (ccc)	Video Controller (dd)	Keyboard/Pointer (ee)	Industrial Enclosure (ff)	Display Overlay (gg)	Power Supply (hijj)
DBR-	10V-	210-	##-	00-	15-	##-	####
SBR-	10V-	924-	##-	00-	15-	##-	####
DBR-	12S-	309-	##-	00-	15-	##-	####
DBR-	12X-	311-	##-	00-	15-	##-	####
SBR-	12X-	934-	##-	00-	15-	##-	####
DBR-	15X-	405-	##-	00-	15-	##-	####
SBR-	15X-	947-	##-	00-	15-	##-	####
DBR-	19W-	963-	##-	00-	15-	##-	####
SBR-	19W-	968-	##-	00-	15-	##-	####
DBR-	24D-	815-	##-	00-	15-	##-	####

<sup>9</sup> The pound symbol (#) indicates customer-defined values.

### ORDERING

Model Number <sup>10</sup>	Description
DBR-10V-210- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 10.4" Diagonal, VGA, Rack Mount, Sealed, Daylight Readable Ruggedized LCD Monitor
SBR-10V-924- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 10.4" Diagonal, VGA, Rack Mount, Sealed, Sunlight Readable Ruggedized LCD Monitor
DBR-12S-309- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 12.1" Diagonal, SVGA, Rack Mount, Sealed, Daylight Readable Ruggedized LCD Monitor
DBR-12X-311- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 12.1" Diagonal, XGA, Rack Mount, Sealed, Daylight Readable Ruggedized LCD Monitor
SBR-12X-934- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 15.0" Diagonal, XGA, Rack Mount, Sealed, Sunlight Readable Ruggedized LCD Monitor
DBR-15X-405- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 15.0" Diagonal, XGA, Rack Mount, Sealed, Daylight Readable Ruggedized LCD Monitor
SBR-15X-947- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 17.0" Diagonal, SXGA, Rack Mount, Sealed, Sunlight Readable Ruggedized LCD Monitor
DBR-19W-963- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 19.0" Diagonal, SXGA, Rack Mount, Sealed, Daylight Readable Ruggedized LCD Monitor
SBR-19W-968- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 20.1" Diagonal, UXGA, Rack Mount, Sealed, Sunlight Readable Ruggedized LCD Monitor
DBR-24D-815- <b>dd</b> -00-15- <b>gg-hijj</b>	Barracuda RackMount Solar™, 24.0" Diagonal, WUXGA, Rack Mount, Sealed, Daylight Readable Ruggedized LCD Monitor

<sup>10</sup> **Bold Italicized letters** refer to standard customer-defined configurations (see Model Number Configurator above).

