Saber RackMount Solar™

Industrial-/Military-Grade, High Brightness, Rack Mount 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 DRM/SRM 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 monitors' TFT LCD provides users with brilliant, colorful images, and a response time fast enough for viewing smooth action in live video. A protective glass overlay, with double-sided antiglare etch coatings, guards your LCD investment and diffuses surface glare.

Modular adaptability is the **Saber DCMR/SCMR Series'** domain. The turnkey flat panel monitors consist of vibrant LCD displays, full-featured analog video controllers and rugged aluminum enclosures.

The low power Saber DCMR/SCMR 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.

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 a General Digital Sales Engineer for additional information, or visit ***www.GeneralDigital.com***.

QUICK LOOK

ENCLOSURE

» Industrial Grade
» Rounded Corners Promote Operating Safety
» Robust 19" Rack Mount Bezel
» Rugged, All-Metal Construction

DISPLAY

» 15.0" to 19.0" Diagonal Active Matrix TFT LCDs
» XGA (1024 x 768 pixels) to WXGA (1280 x 1024 pixels) Resolution
» Wide Viewing Angle (Horizontal & Vertical)
» 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, Sync-On-Green and DVI-D Standards
» Support for NTSC, SECAM, PAL, RS-170 Video Input
» Resolutions to 1920 x 1200 @ 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 (<50 Watts)

OPTIONS

» NVIS-Compatible Displays Compliant with MIL-STD-3009
» Optical Enhancements
» 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
» Rear Located Membrane Keypad

CERTIFICATIONS

» The Saber DCMR/SCMR Series is 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.

DISPLAY

	Size (Diagonal)	Viewing Area (W x H)	Resolution (Pixels)	Number of Colors	Luminance (0° Max.)	Contrast (Max.)	Response Time (Rise/Decay)	Horizontal Viewing Angle	Vertical Viewing Angle	Shock [1]	Vibration [1]
SCMR-15X-989	15.0"	11.97" x 8.98"	1024 x 768	16.7 Million	600 Nits	600:1	3/5 ms	±80°	±80°	30 G, 11 ms ½ Sine Wave	1.0 G (5–100 Hz)
SNCMR-17W-956[3]	17.0"	13.30" x 10.64"	1280 x 1024	16.7 Million	932 Nits [2]	813:1 [2]	3.5/1.5 ms	±85°	±85°	50 G, 20 ms ½ Sine Wave	1.5 G (10–200 Hz)
DCMR-19W-991	19.0"	14.81" x 11.85"	1280 x 1024	16.7 Million	485 Nits [2]	1276:1 [2]	3.6/1.4 ms	±85°	±80°	50 G, 11 ms ½ Sine Wave	1.5 G (10–300 Hz)
SCMR-19W-992	19.0"	14.81" x 11.85"	1280 x 1024	16.7 Million	1000 Nits [2]	700:1 [2]	3.6/1.4 ms	±85°	±80°	50 G, 11 ms ½ Sine Wave	1.5 G (10–300 Hz)
SNCMR-19W-993[3]	19.0"	14.81" x 11.85"	1280 x 1024	16.7 Million	1000 Nits [2]	700:1 [2]	3.6/1.4 ms	±85°	±80°	50 G, 11 ms ½ Sine Wave	1.5 G (10–300 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.

2 Brightness and Contrast values reflect measurements obtained with a Minolta® CS100 photometer; these values are nominal and may vary.

3 This model has been designed and tested to be NVIS compatible to MIL-STD-3009. Inquire with a Sales Engineer about obtaining other night vision goggle-compatible models.

VIDEO CONTROLLER [4]

		Resolution/Frequency [5]									
dd	Display 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	Scaling	NTSC / SECAM / PAL / RS-170	Video Supported
115 [6, 7]	All	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 [6]	All	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 [6]	All	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

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

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

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

7 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 [7]	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

	Display	LED Backlight [8]	LED Controller	Power Supply (Optional)
SCMR-15X-989	50,000 Hours (Minimum)	70,000 Hours (Minimum)	182,000 Hours	Depends on Supply Selected
SNCMR-17W-956[3]	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours	Depends on Supply Selected
DCMR-19W-991	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours	Depends on Supply Selected
SCMR-19W-992	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours	Depends on Supply Selected
SNCMR-19W-993[3]	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours	Depends on Supply Selected

8 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.*

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ENVIRONMENTAL

	Temperature, Operating	Temperature, Storage	Humidity, Operating	Humidity, Storage	Altitude, Operating	Altitude, Storage
SCMR-15X-989	-20° C to 70° C	-30° C to 80° C	8% to 90% RH Non-condensing	8% to 90% RH Non-condensing	10,000 Feet	30,000 Feet
SNCMR-17W-956[3]	-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
DCMR-19W-991	-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
SCMR-19W-992	-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
SNCMR-19W-993[3]	-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

MECHANICAL

	Dimensions - Bezel / Enclosure (H x W x D) [9]	Construction	Finish	Weight, Operating [10]	Weight, Shipping [10]
SCMR-15X-989	13.97" (8U) x 19.00" x 0.19" / 12.50" x 15.00" x 2.35"	5052-H32 Aluminum	Black Matte Powder Coat	15 Pounds	25 Pounds
SNCMR-17W-956[3]	13.97" (8U) x 19.00" x 0.19" / 13.50" x 16.00" x 2.56"	5052-H32 Aluminum	Black Matte Powder Coat	17 Pounds	27 Pounds
DCMR-19W-991	15.72" (9U) x 19.00" x 0.19" / 14.25" x 17.00" x 3.23	5052-H32 Aluminum	Black Matte Powder Coat	19 Pounds	29 Pounds
SCMR-19W-992	15.72" (9U) x 19.00" x 0.19" / 14.25" x 17.00" x 3.23	5052-H32 Aluminum	Black Matte Powder Coat	19 Pounds	29 Pounds
SNCMR-19W-993[3]	15.72" (9U) x 19.00" x 0.19" / 14.25" x 17.00" x 3.23	5052-H32 Aluminum	Black Matte Powder Coat	19 Pounds	29 Pounds

9 An Attached Power Supply will add approximately 2.0"–2.5" to the overall depth of the unit.

10 An Attached or Separate Power Supply will add approximately 2 pounds to the weight.

I/O CONNECTIONS

	Power (DC)	Analog Video	On/Standby (DC)	S-Video (Optional)	Composite Video (Optional)	Touch Screen (Optional)
SCMR-15X-989	2W2 D-sub.	High Density 15-pin Socket	LED on Membrane Pad	4-pin Mini DIN	RCA Jack	DE-9, Socket
SNCMR-17W-956[3]	2W2 D-sub.	High Density 15-pin Socket	LED on Membrane Pad	4-pin Mini DIN	RCA Jack	DE-9, Socket
DCMR-19W-991	2W2 D-sub.	High Density 15-pin Socket	LED on Membrane Pad	4-pin Mini DIN	RCA Jack	DE-9, Socket
SCMR-19W-992	2W2 D-sub.	High Density 15-pin Socket	LED on Membrane Pad	4-pin Mini DIN	RCA Jack	DE-9, Socket
SNCMR-19W-993[3]	2W2 D-sub.	High Density 15-pin Socket	LED on Membrane Pad	4-pin Mini DIN	RCA Jack	DE-9, Socket

Rear View of Saber RackMount Solar/NVIS 19.0 Showing Interface Connectors

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

POWER SUPPLY [11]

hijj	Input Voltage Range	Output	Frequency Range	Line Entry Module/Filter	Power Factor
EP01 (Rear Mount)	85–264 VAC	50 W/+12 VDC (15" Only)	47–63 Hz	Yes	0.95
EP02 (Rear Mount)	85–264 VAC	75 W/+12 VDC	47–63 Hz	Yes	0.95
EP03 (Rear Mount)	85–264 VAC	100 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 (default selection)			

11 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
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 [12]

Model Style	Size & Resolution (***aab***)	Display (***ccc***)	Video Controller (***ddd***)	Keyboard/Pointer (***ee***)	Industrial Enclosure (***ff***)	Display Overlay (***gg***)	Power Supply (***hijj***)
SCMR-	15X-	989-	###-	00-	01-	##-	####
SNCMR-	17W-	956-	###-	00-	01-	##-	####
DCMR-	19W-	991-	###-	00-	01-	##-	####
SCMR-	19W-	992-	###-	00-	01-	##-	####
SNCMR-	19W-	993-	###-	00-	01-	##-	####

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

ORDERING

Model Number [13]	Description
SCMR-15X-989-***ddd***-00-01-***gg-hijj***	Saber RackMount Solar 15.0, Standard Rugged Sunlight Readable 15.0" XGA Rack Mount LCD Monitor
SNCMR-17W-956-***ddd***-00-01-***gg-hijj***	Saber RackMount Solar/NVIS 17.0, Standard Rugged Sunlight Readable Night Vision Goggle-Compatible 17.0" SXGA Rack Mount LCD Monitor [3]
DCMR-19W-991-***ddd***-00-01-***gg-hijj***	Saber RackMount Solar 19.0, Standard Rugged Sunlight Readable 19.0" SXGA Rack Mount LCD Monitor
SCMR-19W-992-***ddd***-00-01-***gg-hijj***	Saber RackMount Solar 19.0, Standard Rugged Sunlight Readable 19.0" SXGA Rack Mount LCD Monitor
SNCMR-19W-993-***ddd***-00-01-***gg-hijj***	Saber RackMount Solar/NVIS 19.0, Standard Rugged Sunlight Readable Night Vision Goggle-Compatible 19.0" SXGA Rack Mount LCD Monitor [3]

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

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