

RACK MOUNT HINGE

19" Industrial-/Military-Grade, Low Profile Rack Mount,
Standard/High Brightness, Flip-Up/Flip-Down LCD Monitors

MODEL: GMILRP1-19 Series



ENCLOSURE

- Rugged, All-Metal Construction Designed to Satisfy Industrial and Military Requirements: MIL-STD-810F, -901D, -167B, -461E
- Low Profile to Use Minimal Vertical Rack Space when Stowed
- Hinged Slides Allow LCD Monitor to Pivot 90° (Upwards or Downwards) to Optimize Viewing Position
- Conserves Operator Workspace By Extending Out Only 6.375" from Rack when Deployed

DISPLAY

- 15"/17"/19"/20" Diagonal Active Matrix TFT LCD Display
- XGA (1024 x 768 pixels) to UXGA (1600 x 1200 pixels) Resolution
- Wide Viewing Angle (Horizontal & Vertical)
- High Brightness & Contrast Enhances Display Quality
- Fast Response Time Ideal for Real-Time and Video Applications

VIDEO CONTROLLERS

- Support for Interlaced and Non-Interlaced Video Sources
- Support for Separate, Composite, Sync-On-Green & DVI-D Standards
- Support for NTSC, SECAM, PAL Video with Input Format of Composite Video, S-Video and Component Video (YCrCb) [Optional]
- 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 & Rotation; Image Zoom; PIP; PBP; Foreign Languages...
- Piezo Ceramic Inverter (GmilRP1-20 Only)
 - No EMI; Arc Protection; Longer Lamp Life (~50%); Open Circuit Protection Prevents Backlight Failure Due to Individual Bulb Failure

POWER

- +12 VDC Operation
- Low Power Consumption (<50 Watts)
- Built-in 100 Watt Power-Factor-Corrected Supply GmilRP1-20

OPTIONS

- NVIS-Compatible Displays Compliant with MIL-STD-3009
- Sunlight Readable Displays and Other Optical Enhancements
- Separate 1U Power Supply that Mounts to Rear of Rack in Same Vertical Rack Space
- Separate Rack Mountable Keyboards (Commercial-, Industrial-, Military-Grade)
- Support for DVI-D Video, HDMI Video, NTSC Video (Composite)
- Speakers (GmilRP1-20 Only)
- Protective Glass Display Overlay
- Capacitive and Resistive Touch Screens

SPECIFICATIONS

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]
GmilRP1-15	15.0"	11.97" x 8.98	1024 x 768	16.7 Million	400 Nits	600:1	3/5 ms	±80°	±80°	30 G, 11 ms ½ Sine Wave	1.0 G (5-100 Hz)
GmilRP1-15-A	15.0"	11.97" x 8.98	1024 x 768	16.2 Million	400 Nits	700:1	5.7/2.3 ms	±80°	+60°, -80°	50 G, 20 ms ½ Sine Wave	1.5 G (10-200 Hz)
GmilRP1-17	17.0"	13.30" x 10.64"	1280 x 1024	16.7 Million	350 Nits	1000:1	3.5/1.5 ms	±85°	±85°	50 G, 20 ms ½ Sine Wave	1.5 G (10-200 Hz)
GmilRP1-W17	17.3"	15.03" x 8.46"	1920 x 1080	16.7 Million	400 Nits	600:1	37/3 ms	±80°	+60°, -80°	50 G, 20 ms ½ Sine Wave	1.5 G (10-200 Hz)
GmilRP1-19	19.0"	14.81" x 11.85"	1280 x 1024	16.7 Million	350 Nits	1000:1	3.6/1.4 ms	±85°	±80°	50 G, 20 ms ½ Sine Wave	1.5 G (10-200 Hz)
GmilRP1-19-A	19.0"	14.82" x 11.85"	1280 x 1024	16.7 Million	350 Nits	1000:1	3.6/1.4 ms	±85°	±80°	50 G, 20 ms ½ Sine Wave	1.5 G (10-200 Hz)
GmilRP1-20	20.1"	16.06" x 12.05"	1600 x 1200	16.7 Million	260 Nits	1000:1	30 ms	±85°	±85°	50 G, 6 ms ½ Sine Wave	1.0 G (58-500 Hz)

MTBF				
	Display	LED Backlight [2]	LED Controller	Power Supply (Optional)
GmilRP1-15	50,000 Hours (Minimum)	>50,000 Hours (Typical)	182,000 Hours (Minimum)	Depends on Supply Selected
GmilRP1-15-A	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected
GmilRP1-17	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected
GmilRP1-W17	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected
GmilRP1-19	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected
GmilRP1-19-A	50,000 Hours (Minimum)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected
GmilRP1-20	>50,000 Hours (Typical)	50,000 Hours (Minimum)	182,000 Hours (Minimum)	Depends on Supply Selected

ENVIRONMENTAL						
	Temperature, Operating	Temperature, Storage	Humidity, Operating	Humidity, Storage	Altitude, Operating	Altitude, Storage
GmilRP1-15	-20°C to 70°C	-30°C to 85°C	8% to 90% RH Non-condensing	8% to 90% RH Non-condensing	10,000 Feet	30,000 Feet
GmilRP1-15-A	-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
GmilRP1-17	-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
GmilRP1-W17	0° C to 70°C	-20° C to 70°C	5% to 95% RH Non-condensing	5% to 95% RH Non-condensing	10,000 Feet	40,000 Feet
GmilRP1-19	0° C to 50°C	-20° C to 60°C	5% to 90% RH Non-condensing	5% to 90% RH Non-condensing	10,000 Feet	30,000 Feet
GmilRP1-19-A	0° C to 50°C	-20° C to 60°C	5% to 90% RH Non-condensing	5% to 90% RH Non-condensing	10,000 Feet	30,000 Feet
GmilRP1-20	0° C to 50°C	-25° C to 60°C	8% to 95% RH Non-condensing	8% to 95% RH Non-condensing	10,000 Feet	40,000 Feet

MECHANICAL					
	Dimensions (H x W x D [Enclosure/Slides])	Construction	Finish	Weight, Operating	Weight, Shipping
GmilRP1-15	1.75" (1U) x 19.00" x 16.63"/20.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	14 Pounds	20 Pounds
GmilRP1-15-A	1.75" (1U) x 19.00" x 16.63"/20.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	14 Pounds	20 Pounds
GmilRP1-17	1.75" (1U) x 19.00" x 15.81"/20.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	16 Pounds	22 Pounds
GmilRP1-W17	1.75" (1U) x 19.00" x 15.81"/20.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	16 Pounds	22 Pounds
GmilRP1-19	1.75" (1U) x 19.00" x 15.81"/24.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	18 Pounds	24 Pounds
GmilRP1-19-A	1.75" (1U) x 19.00" x 15.81"/20.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	18 Pounds	24 Pounds
GmilRP1-20	3.50" (2U) x 19.00" x 15.81"/20.00"	5052-H32 Aluminum	Black Matte Powder Coat & Clear Iridite	27 Pounds	33 Pounds



Rear view of 20.1" in stowed position, showing connector panel and cable strain relief

VIDEO CONTROLLER									
Display Supported	640 x 480 VGA	800 x 600 SVGA	1024 x 768 XGA	1280 x 1024 SXGA	1600 x 1200 UXGA	1920 x 1200 WUXGA	Scaling	NTSC / SECAM / PAL / RS-170	Video Supported
All	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60, 75 Hz	60 Hz	60 Hz	On/Off	-	Separate, Composite, Sync-On-Green, DVI-D
All	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60, 75 Hz	-	60 Hz	On/Off	-	Separate, Composite, Sync-On-Green, DVI-D
All	60, 72, 75 Hz	56, 60, 72, 75 Hz	60, 70, 75 Hz	60, 75 Hz	-	60 Hz	On/Off	Digital Processor, Picture-In-Picture	Separate, Composite, Sync-On-Green, DVI-D

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

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

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

4 Video controller 115 is obsolete and shown for reference only.

VIDEO STANDARDS SUPPORTED				
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		
Interface	Functions	Advanced
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
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
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)

I/O CONNECTIONS						
Power (DC)	Analog Video	Keyboard/Pointing Device	On/Standby (DC)	S-Video (Optional)	Composite Video (Optional)	Audio (Optional)
6-pin Circular,	High Density 15-pin	6-pin Mini DIN	Membrane Pad	4-pin Mini DIN	BNC Socket	3.5 mm Headphone Jack

OPTIONS

POWER SUPPLY						
Mounting Style	Input Voltage	Input Frequency	Output Voltage	Power (Maximum)	Power Factor Correction	
1U Rack Mount	85-264 VAC (Auto-Sensing)	47-63 Hz	+12 VDC	75 Watt	0.95	
Standalone/Rack Mount Bracket	90-264 VAC	50-60 Hz	+12 VDC	100 Watt	Yes	
Built-in	90-264 VAC	47-63 Hz	+12 VDC	100 Watt	Yes	
Standalone Power Supplies	Consult with a Sales Engineer to select from a multitude of AC switching or DC-DC supplies that can be mounted within the customer's rack. We can assist in specifying a commercial, industrial or military power supply that will meet your specific requirements.					



RACKMOUNT 1U KEYBOARD / POINTING DEVICE						
Grade	Keyboard Enclosure	Keyboard			Pointing Device	
		No. of Keys	Compatibility	Special Features	Type	Compatibility
Commercial	Polycarbonate	83	AT & PS/2	101-key Functionality	16 mm Trackball/ 2 Mouse Buttons	PS/2; USB
Light Industrial	Aluminum	83	PS/2	101-key Functionality	1½" Trackball/ 3 Mouse Buttons	PS/2; USB
Commercial	Polycarbonate	104	AT & PS/2	None	Touch Pad/ 2 Mouse Buttons	PS/2; USB
Heavy-Duty Industrial	Aluminum/NEMA12	114	XT, AT & PS/2 (DEC, Sun® or Mac Opt.)	Industrial Silicone Rubber Key Switch	HulaPoint®/ 3 Mouse Buttons	PS/2; USB
Heavy-Duty Industrial	Aluminum/NEMA12	121	AT & PS/2 (DEC, Sun® Type 5 Opt.)	Spill/Dust Proof, Solid-State, Full-Travel Key Switch	1¾" Trackball/ 3 Mouse Buttons	PS/2; USB

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
Keyboards	Commercial-, Industrial-, and Military-Grade 1U and 2U Rack Mount Keyboards. PC/AT, PS/2, and SUN Compatibility. Most Keyboards Include Pointing Device with Integrated Touch Pad, Trackball, or HulaPoint™
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
Speakers [8]	Two, 1.5 Watt, 90 SPL, 16 Ohm, 90 mm x 41 mm x 3.29 mm



Close-ups of 19" Rear-mounted connectors

