

2U Military Grade RACKMOUNT

17" Industrial-/Military-Grade, 2U Rack Mount, Standard/High Brightness, Flip-up LCD Monitor/Keyboard/Trackball

MODEL: Gmil-217 Series



ENCLOSURE

- Rugged, All-Metal Construction Designed to Satisfy Industrial or MIL-STD-810-F Requirements
- User-Adjustable LCD Display Friction Hinge for High Shock/Vibration Environments
- Compact Enclosure Ideal for Desktop, Transportable or Rack Mount Applications
- Optional 19" Rack Adaptor Kit
 - Occupies Only 2U (3.5") Vertical Rack Space
 - Adjustable Mounting Brackets for Racks from 18" to 30"
 - Unique Locking Mechanism to Secure Display Head
 - Bezel Hinges at Base Improve Safety
 - Conserves Operator Space by Extending 16.75" to 18.0" when Deployed

DISPLAY

- 15"/17"/19"/20" Diagonal Active Matrix TFT LCD Display
- XGA (1024 x 768 pixels) to WUXGA (1920 x 1080 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 and DVI-D Standards
- Support for NTSC, SECAM, PAL, RS-170 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, Image Zoom, Foreign Languages, PIP, PBP, More

KEYBOARD / POINTING DEVICE

- Commercial-, Industrial- and Military-Grade Keyboards
- Many Sealed Keyboards Available that Meet MIL-STD-810 and MIL-STD-901 Shock and Vibration Requirements
- 1-3/8" Diameter Sealed Trackball

POWER

- +12 VDC Operation
- Low Power Consumption (<50 Watts)

OPTIONS

- NVIS-Compatible Displays Compliant with MIL-STD-3009
- Sunlight Readable Displays and Other Optical Enhancements
- Separate 1U Power Supply Mounts to Rear of Rack in Same Vertical Rack Space
- Separate Rack Mountable Keyboards (Commercial-, Industrial- and Military-Grade)
- Support for DVI-D Video, HDMI Video, NTSC Video (Composite)
- Protective Glass Display Overlay for SL2-15X
- Integrated 4-Port KVM Switch
- Integrated CAC (Common Access Card) Smart Card Reader

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] |
| Gmil-215 | 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) |
| Gmil-215-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) |
| Gmil-217 | 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) |
| Gmil-2W17 | 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) |
| Gmil-219 | 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) |
| Gmil-219-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) |
| Gmil-220 | 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) |
| Gmil-215 | 50,000 Hours (Minimum) | >50,000 Hours (Typical) | 182,000 Hours (Minimum) | Depends on Supply Selected |
| Gmil-215-A | 50,000 Hours (Minimum) | 50,000 Hours (Minimum) | 182,000 Hours (Minimum) | Depends on Supply Selected |
| Gmil-217 | 50,000 Hours (Minimum) | 50,000 Hours (Minimum) | 182,000 Hours (Minimum) | Depends on Supply Selected |
| Gmil-2W17 | 50,000 Hours (Minimum) | 50,000 Hours (Minimum) | 182,000 Hours (Minimum) | Depends on Supply Selected |
| Gmil-219 | 50,000 Hours (Minimum) | 50,000 Hours (Minimum) | 182,000 Hours (Minimum) | Depends on Supply Selected |
| Gmil-219-A | 50,000 Hours (Minimum) | 50,000 Hours (Minimum) | 182,000 Hours (Minimum) | Depends on Supply Selected |
| Gmil-220 | >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 |
| Gmil-215 | -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 |
| Gmil-215-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 |
| Gmil-217 | -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 |
| Gmil-2W17 | 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 |
| Gmil-219 | 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 |
| Gmil-219-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 |
| Gmil-220 | 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) | Construction | Finish | Weight, Operating [3] | Weight, Shipping [3] |
| Gmil-215 | 2.88" x 16.00" x 14.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 17 Pounds | 26 Pounds |
| Gmil-215-A | 2.88" x 16.00" x 14.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 17 Pounds | 26 Pounds |
| Gmil-217 | 2.88" x 16.00" x 17.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 19 Pounds | 28 Pounds |
| Gmil-2W17 | 2.88" x 16.00" x 17.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 19 Pounds | 28 Pounds |
| Gmil-219 | 2.88" x 16.00" x 17.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 19 Pounds | 28 Pounds |
| Gmil-219-A | 2.88" x 16.00" x 17.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 19 Pounds | 28 Pounds |
| Gmil-220 | 2.88" x 16.00" x 17.00" | 5052-H32 Aluminum/Steel | Black Matte Powder Coat & Clear Iridite | 21 Pounds | 30 Pounds |



Rear view of 19" showing power supply and interface connectors

| 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 |
| Signal for the Keyboard/Pointing Device (DE-9 Socket on enclosure) provided separately via external cable. | | | | | | |

OPTIONS

| KEYBOARD | | | | | | |
|-----------------------|--------------------|-------------|------------------------------|------------------|-----------------------------------|------------------------------|
| Grade | Keyboard Enclosure | Keyboard | | | Pointing Device | |
| | | No. of Keys | Compatibility | Special Features | Type | Compatibility |
| Heavy-Duty Industrial | Metal | 82 | PS/2 | - | 1-3/8" Trackball/ 3 Mouse Buttons | PS/2 |
| Heavy-Duty Industrial | Metal | 82 | PS/2 | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | PS/2 |
| Heavy-Duty Industrial | Metal | 82 | Sun® Type 5 (8-pin Mini DIN) | - | 1-3/8" Trackball/ 3 Mouse Buttons | Sun® Type 5 (8-pin Mini DIN) |
| Heavy-Duty Industrial | Metal | 82 | Sun® Type 5 (8-pin Mini DIN) | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | Sun® Type 5 (8-pin Mini DIN) |
| Military [7] | Metal | 82 | PS/2 | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | PS/2 |
| Military [7] | Metal | 82 | Sun® Type 6 (USB) | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | Sun® Type 6 (USB) |
| Military [7] | Metal | 82 | PC USB | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | PC USB |
| Military [7] | Metal | 82 | Sun® Type 5 (8-pin Mini DIN) | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | Sun® Type 5 (8-pin Mini DIN) |
| Military [7] | Metal | 121 | Sun® Type 6 (USB) | Backlit Keys | 1-3/8" Trackball/ 3 Mouse Buttons | Sun® Type 6 (USB) |



| 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 |
| | Standalone/Rack Mount Bracket | 90-264 VAC | 50-60 Hz | +12 VDC | 66 Watt | - |
| Free-Standing 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. | | | | | |

| 19" RACK ADAPTOR | | | | | | |
|---------------------------|------------------------------|------------------------|--------------------------|---|--|--|
| Model Supported | Dimensions (H x W x D) | Rear Mounting Brackets | Construction | Finish | | |
| 15" | 3.50" (2U) x 19.00" x 17.00" | 18"-28" (adjustable) | 0.125" / 0.090" Aluminum | Black Matte Powder Coat & Clear Iridite | | |
| 15" | 3.50" (2U) x 19.00" x 17.00" | 28"-34" (adjustable) | 0.125" / 0.090" Aluminum | Black Matte Powder Coat & Clear Iridite | | |
| 17" / 17.3" / 19" / 20.1" | 3.50" (2U) x 19.00" x 19.00" | 20"-30" (adjustable) | 0.125" / 0.090" Aluminum | Black Matte Powder Coat & Clear Iridite | | |
| 17" / 17.3" / 19" / 20.1" | 3.50" (2U) x 19.00" x 19.00" | 30"-36" (adjustable) | 0.125" / 0.090" Aluminum | Black Matte Powder Coat & Clear Iridite | | |

| 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 |
| 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; 4-Port KVM Switch; CAC Smart Card Reader |



Side Mount Gmil-219 is designed for space-constrained environments



Rearview of Gmil-215 in storage position showing optional 4-port KVM switch and power supply

