MR24xx

1U Military KVM Rack Drawer

DITHD
Display Integration Technologies
.com

The DITHD MR24xx Series Military KVM Rack Drawer 1U Monitor is designed to meet stringent MIL-SPEC environmental standards. It comes equipped with a standard Chem Strengthened Anti-Glare Cover Lens, with optional features including 461G, EMI-ITO Glass Enhancement, optical bonding, high brightness, and MIL-SPEC touch functionality. Built to comply with various MIL-SPEC requirements straight from the shelf, we also offer customization to address specific needs. Constructed from 5052H32 and 6061T6 aluminum, the unit is precisely laser-cut and milled for outstanding durability. Internal components can be conformally coated for enhanced protection. This monitor is specifically designed for rack mount or transit case applications, reflecting meticulous attention to detail in every aspect of its design, making it a top choice for military-grade rack monitor applications (MR series).

Features:

- MIL Spec Enhanced Monitor
- Mil Spec Keyboard
  * Multiple to Choose From
- Integrated Cable Guide System
- Conformal Coated Electronics
- Multiple Controller Cards and KVM Switches Options
  to Chose From Giving Flexibility to your I/O Needs.
- Milled Aluminum Telescoping Rear Arms With
  Reverse L Quick Install Technology
  *Easy Install into Rack and Transit Case
- Mil Spec C90 Power Inlet:
  *Can Be Customized to your application,

Options:

- Multiple Lens Enhancement available Including:
  Heated Glass, NVIS Backlight
- High Bright, Daylight Viewable option
- 461G EMI, ITO Glass Enhancement
- Optional Optical Bonding for Grade A Shock
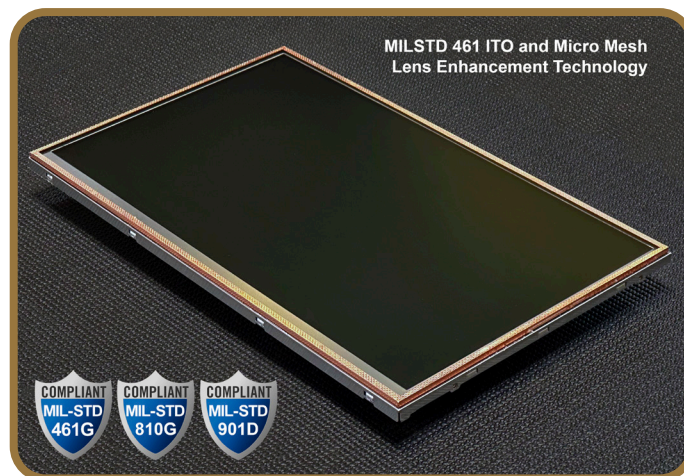- PCAP and Resistive Touch Options

MR24173Mx Shown

Comes Standard

- **Rugged All Aluminum Construction**
- **MIL Standard C300 Friction Slides**
- **Anti Glair, Chem Strengthened Cover Glass**
- **Shock and Vibe Rugged Design 810G, 901D, 167**
- **Fits 19" Rack and Transit Cases**
- **MIL Standard C90 2 Pin Power Inlet**
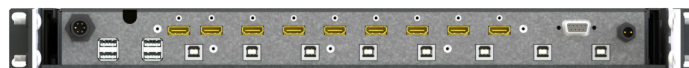
PCRS - Positive Connector Retention System Employed

ISO Rear Shown

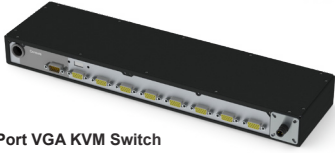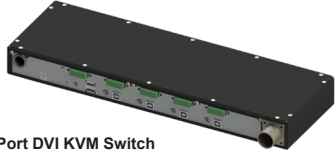MILSTD 461 ITO and Micro Mesh
Lens Enhancement Technology

COMPLIANT MIL-STD 461G
COMPLIANT MIL-STD 810G
COMPLIANT MIL-STD 901D

Popular KVM Switch Options

D1: 4Port Display Port KVM Switch

E2u: 8 Port VGA KVM Switch

G2x: 4 Port DVI KVM Switch

O4.2: 4 Port HDMI KVM Switch

O8.2: 8 Port HDMI KVM Switch

IPx: 8, 16, 32 Port RJ45 KVM Switch
DVI, VGA, HDMI, and Display Port Supported

Other Back Housing Configurations to Choose from or have us make a custom one for you.

Video Controllers

V43x Rugged FHD Controller
• Max Resolution 1920x1200 60hz
• Input Options Available: HDMI x1, VGAx1, Display Port x1
• Designed to Meet Shock and Vibe Requirements
• Command and Controls: Consolidated OSD Buttons on Front

V35x Rugged Embedded Controller
• For Use with Integrated KVM Switch Options
• Max Resolution 1920x1200 60hz
• Input Options Available: VGAx1, Display Port x1 (HDMI, DVI-D, or 3G-SDI pick only 1)
• Designed to Meet Shock and Vibe Requirements
• Command and Controls: Consolidated OSD Buttons on Front
• Optional 3G-SDI Interface can be Integrated

Other Controller Cards Available with Multiple Options

Popular LCD Options

19LH SXGA 1280x1024 (Max Res)
19" LED Backlit LCD w/ Anti-Glare
• Viewing Angles: 85/85/80/80
• Contrast Ratio: 1000:1
• Brightness: 350 NITS
• Response Time: 10ms
• Surface Finish: AG, 3H
• Color: 6-bit+HiFRC (16.7M), NTSC 70%
• Operating Temp: -30°C to 85°C
• Storage Temp: -30°C to 80°C

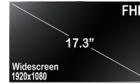### 19HB SXGA 1280x1024 (Max Res)
19" LED Backlit LCD w/ Anti-Glare
• Viewing Angles: 85/85/80/80
• Contrast Ratio: 1000:1
• Brightness: 1600 NITS
• Response Time: 10ms
• Surface Finish:AG, 3H
• Color: 8 Bit (16.7M), NTSC 70%
• Operating Temp: -30°C to 70°C
• Storage Temp: -30°C to 70°C

HIGH BRIGHT

173W FHD 1920x1080 (Max Res)
17.3" Wide LED Backlit LCD w/ Anti-Glare
• Viewing Angles: 80/80/60/80
• Contrast Ratio: 600:1
• Brightness: 400 NITS
• Response Time: 40ms
• Surface Finish: AG, 3H
• Color: 6-bit+HiFRC (16.7M)
• Operating Temp: 0°C to 70°C
• Storage Temp: -20°C to 70°C

173HB FHD 1920x1080 (Max Res)
17.3" Wide LED Backlit LCD w/ Anti-Glare
• Viewing Angles: 80/80/60/80
• Contrast Ratio: 600:1
• Brightness: 1000 NITS
• Response Time: 40ms
• Surface Finish: AG, 3H
• Color: 6-bit+HiFRC (16.7M)
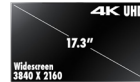• Operating Temp: 0°C to 70°C
• Storage Temp: -20°C to 70°C

HIGH BRIGHT

HOT New!

173U UHD 3840 x 2160 (Max Res)
17.3 Wide LED Backlit LCD w/ Anti-Glare
• Viewing Angles: 89/89/89/89
• Contrast Ratio: 1000:1
• Brightness: 400 NITS
• Response Time: 27ms
• Surface Finish: AG
• Color: 8bit (16.7M), 100% ADOBE RGB
• Operating Temp: 0°C to 50°C
• Storage Temp: -20°C to 60°C

Other Panels and lens Enhancement Available

Popular Keyboard Options

• **M: Series Military - Industrial Grade Keyboard**
• 119 key US or UK layout and a high quality touch pad
• Optional CAC Card Reader on MR Series
• Continuous Use, 50 million cycles
• Storage: -20°C to +65°C, Operating: 0°C to +50°C

• **M1 Series: Thin, rugged military-grade keyboard with touchpad and FSR**
• Designed to meet MIL-461G standards, MIL-STD-810F
• Adjustable green LED backlighting
• Storage: -40°C to +85°C, Operating: -32°C to +60°C
• Optional NVIS Green B.

• **M2 Series: Thin Military OEM Keyboard**
• Integrated FSR pointing device
• Industrial silicone rubber Continuous Use: 10 million cycles
• Storage: -40°C to +90°C, Operating: -40°C to +60°C
• Optional NVIS Compliant – Green B backlighting

• **M3 Series: Mobile Keyboard w/ Force Sensing Resistor**
• Integrated FSR pointing device
• Resistant to sand, debris and the elements
• Continuous Use, 10 million cycles
• Storage: -40°C to +65°C, Operating: -40°C to +70°C
• 12 Function Keys, MS Windows Function Keys

• **Q Series: NEMA 4 Sealed Keyboard Series with Glidepad**
• Rugged Keyboard - No EMI protection
• Integrated 2 button glidepad with option for backlit keys
• Resistant to sand, debris and the elements
• Continuous Use, 10 million cycles
• Storage: -40°C to +90°C, Operating: -40°C to +70°C

Other Keyboards Available

Base Series	Chassis	Display Size & Enhancement	Project Number	Revision
MR	24	19M1	. XXXXX	. XX
1U MILSPEC	24" Deep	19M1, 173M1, 173U1	AB0001	00

▸**Custom Options Available On All DITHD Models**

SPECIFICATIONS
• **Dimensions: 19"W x 1.75"H x 24"D**
• **Weight: ~ 25 LBs (MR24173M1)**
• **Power Consumption: 30W to 50W**

Values are approximate and vary based on configuration

TAA COMPLIANT

MADE IN U.S.A.

FC CE UL

DITHD
.com
Display Integration Technologies

MIL SPECIFICATIONS

Panel Can be DTM (DESIGNED TO MEET) the following MIL Standards. Full Mil Spec must requirements must be disclosed during the quoting process to pick the correct components and Enhancement Process to meet your MIL Spec Requirements.

AVAILABLE MIL STANDARD DTM OPTIONS

Operational Temperature Range: MIL-STD-810F/G, -10C to +50C (*Method and Procedures TBD)

Storage Temperature: MIL-STD-810F/G, -30C to +60C (*Method and Procedures TBD)

Humidity: MIL-STD-810F/G, (*Method and Procedures TBD)

Altitude: MIL-STD-810F/G, (*Method and Procedures TBD)

Vibration: MIL-STD-810F/G, -167, or -516.2 (*Method and Procedures TBD)

Shock: MIL-STD-810F/G, -901E Grade B, or -901E Grade A (*Method and Procedures TBD)
EMI: MIL-STD-461F/G CE102, RE101, RE102, CS101, CS114, CS116, RS101, and/or RS103

*MIL-STD, Methods, and Procedures are based on your required needs, contact one of our knowledgeable Sales Engineers to help to Spec in a unit to meet your required needs.

TERMS & CONDITIONS

DITHD only Guarantees our Units Will pass Mil-Spec Testing when Mil-Spec Testing is purchased through DITHD and its partnering 3rd party independent Labs.

Mechanical Drawings

Samples of some of the Custom Projects
we have done for our customers

Mechanical drawings and 3D Solid Models
are available upon request. Contact your
sales representative for details.

The widest point on our frame
is 17.700" 17.700 $^{+.100}_{-.000}$
Including the Mounting Screws,
So fitting in the Narrow Transit
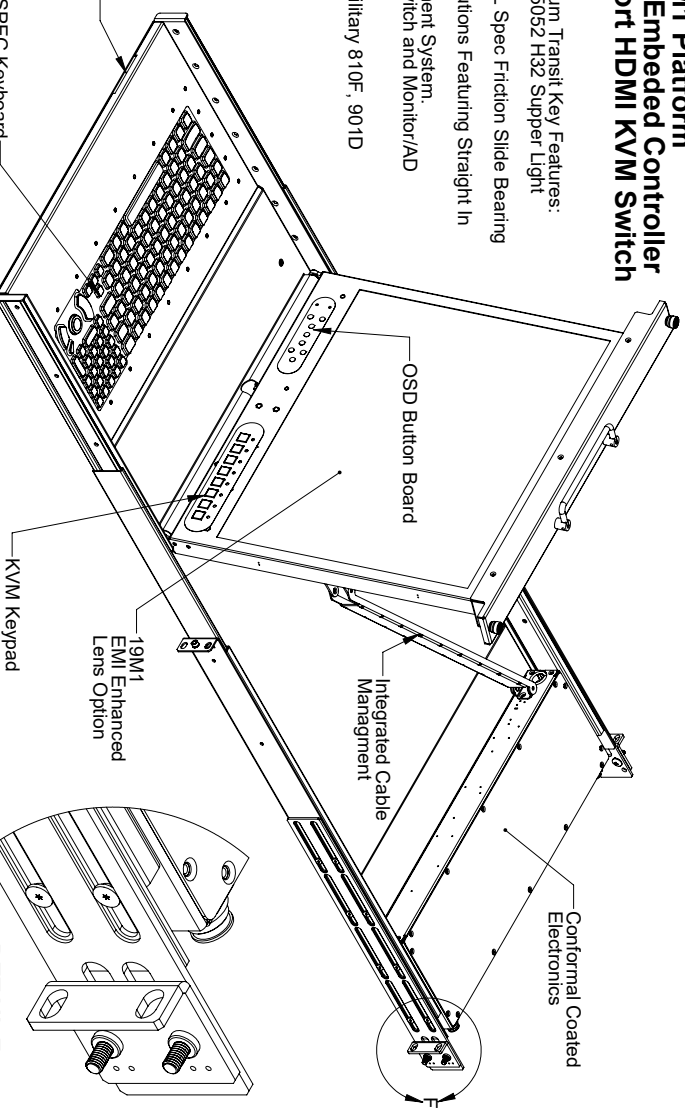Case will not be a problem.

17.700 $^{+.100}_{-.000}$

MR2419M1 Platform
Shown With V35M Embeded Controller
and O8.2 NIAP 8 port HDMI KVM Switch

MIL SPEC Clamshell Aluminum Transit Key Features:
- All Aluminum 6061 T6 and 5052 H32 Supper Light
  Construction.
- Custom General Device MIL Spec Friction Slide Bearing
  System
- Transit Case Rear Arm Solutions Featuring Straight In
  5 min. Installation.
- Integrated Cable Management System.
- Multiple Keyboard, KVM Switch and Monitor/AD
  controller Solutions
- Multiple Front Face Options
- Built for Transit and Light Military 810F, 901D
  Aplications

Integrated Caged Cable
Guide System for beter cable
Management

Optional CAC Reader

M3 MILSPEC Keyboard

OSD Button Board

KVM Keypad

19M1
EMI Enhanced
Lens Option

Integrated Cable
Managment

Conformal Coated
Electronics

DETAIL F
SCALE 1 : 1

Console HDMI
Passthrough Cable
Comes Out Here

Console USB Mouse/Keyboard
Passthrough Port

Console HDMI Input

E8 Front Face with Collapsible
Handle and Secure Thubscrew
Shown

Consol USB Keyboard
Mouse and Aux Input

Monopole
Locking HDMI
Ports

8 HDMI/USB CPU inputs

24.000

KVM RS232

Locking Power Input

MIL C300
Solid Bearing
Friction Slide Rails

Revers L Trasit Case Arms can be adjusteted to fit almost
any trasit case dept. **from 24" to over 32"**. The benefit of our
trasit case arms is the straight in installation. no need to remove
components above or below the assembly or to twist the assembly
to get it in. simply install the Reverse L bracket and install onto your
Rear virtical Posts were you want the unit in its final state. Measure the distance
from the front beam to the reverse L mounting holes. Adjust the Slide arems and
tighten the Arm Screws. Slide the unit straight in marmount to the fron beam and
the reverse L bracket holes.
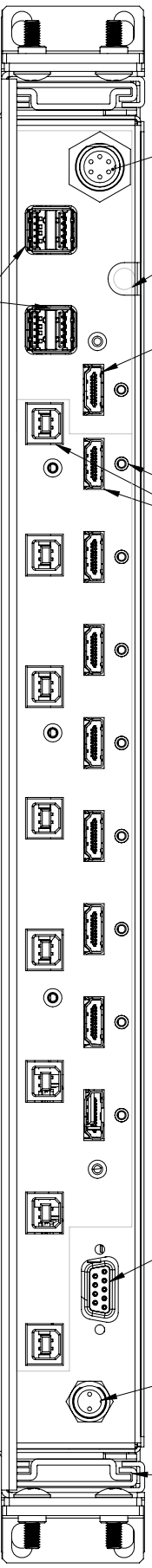
Specifications

Detailed Specifications are for the 19M1 Monitor We can supply Detailed Specs other Monitors upon Request

LCD Characteristics:

Screen Spec:	19M1 , a-Si TFT LCD
Backlight Type:	LED
Resolution:	1280 x1024
Contrast Ratio:	1000:1
Brightness (cd/m2):	350
View Angles (H/V):	85/85/80/80
Pixel Size (HxV) mm:	0.294×0.294 mm
Max. Color:	16.7M
MTBF (hrs):	50,000
Response Time (ms):	8
Lens Treatment:	Antiglare, Hard Coating (3H)
Lens Enhancment:	Optical Bonding
Touch:	Optional (Resistive or PCAP)
Color Gamet (NTSC):	70%

Input Signals:

VGA:	DB15 Male
HDMI or DVI:	Locking HDMI
Display Port:	Locking Full Size Display Port
USB:	USB 2.0 Type A

Power Specifications:

DC Power Input:	12VDC (Optional 9-36VDC)
Connector:	MIL lock connector (C90 Connector Standard)
AC Power Supply:	UL Listed AC/DC Brick (Optional MIL SPEC)

Mechanical and Environment:

Height:	1.75"		
IP Protect:	TBD, Based On Requirements		
Mounting:	24" Rack Mount with Rear Arms 24 to 32" Depth		
Construction:	Aluminum Housing with black powder coating		
Operating Temperature:	-30°C ~ 85°C	Method 501.4 and 502.4	
Storaging Temperature:	-30°C ~ 85°C	Method 501.4 and 502.4	
Operating Humidity:	5% - 95%, non -condensing	Method 507.4	
Anti-Vibration:	5 - 500 Hz / 1 Grms PTP	Method 514.5	
Anti-Shock:	15G / Peak (11 ms)	Method 516.5	
Physical Dimension (WxHxD):	19" x 1.75" x 24" (in)		
Packing Dimension (WxHxD):	22"x5"x32" (in)		
Net Weight / Gross Weight:	(25Lbs/30Lbs)		
Certification and Approvals:	UL/CE/ FCC RoHs		
Altitude Test:	12,500/40,000 ft (Operational/No-Operational)		

User Controls Interface:

Power ON / OFF via Front Button
Power Mode Status LED Indicator
OSD (On Screen Display) Buttons