The DITHD MR20xx 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).
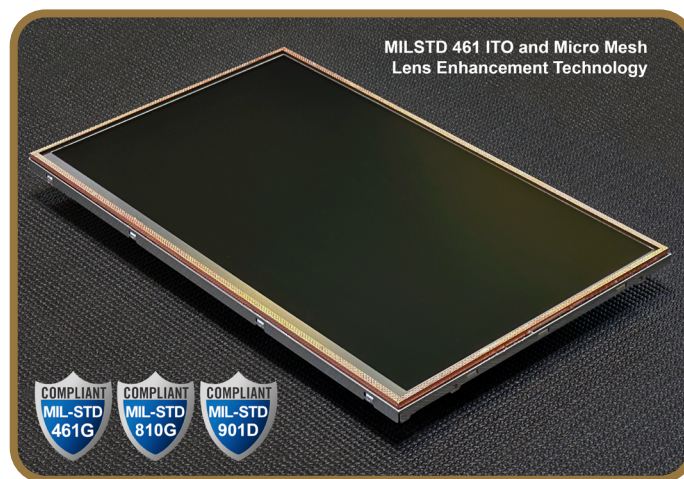
Features:
- MIL Spec Enhanced Monitor
- Mil Spec Keyboard
  * Multiple to Choose From
- Integrated Cable Guide System
- Conformal Coated Electronics
- Multiple Controller Cards and KVM Switches Options to Chose From Giving Flexibility to your I/O Needs.
- Milled Aluminum Telescoping Rear Arms With Reverse 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
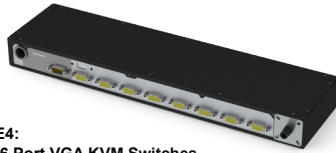- PCAP and Resistive Touch Options

MR20173Mx 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**
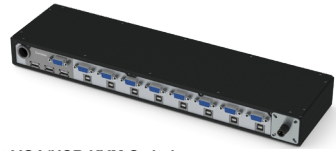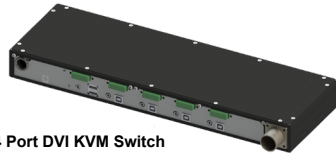- **MIL Standard C90 2 Pin Power Inlet**

Rugged Commercial Connectors 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: 4 Port DisplayPort KVM Switch

E2 / E4:
8 & 16 Port VGA KVM Switches

E3:
8 Port VGA/USB KVM Switch

G1: 4 Port DVI KVM Switch

O4: 4 Port HDMI KVM Switch

K1: 4 Port VGA KVM Switch

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

15HB SXGA 1024x768 (Max Res)
15" LED Backlit LCD w/ Anti-Glare
- Viewing Angles: 80/80/70/80
- Contrast Ratio: 800:1
- Brightness: 1800 NITS
- Response Time: 6ms
- Surface Finish: AG, 3H
- Color: 8 Bit (16.2M), NTSC 60%
- Operating Temp: -30°C to 70°C
- Storage Temp: -30°C to 70°C

HIGH BRIGHT

17LH SXGA 1280x1024 (Max Res)
17" LED Backlit LCD w/ Anti-Glare
- Viewing Angles: 80/80/60/80
- Contrast Ratio: 800:1
- Brightness: 350 NITS
- Response Time: 20ms
- Surface Finish: AG, 3H
- Color: 6-bit+HiFRC (16.7M), NTSC 72%
- Operating Temp: -30°C to 85°C
- Storage Temp: -30°C to 80°C

17HB SXGA 1280x1024 (Max Res)
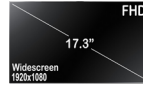**17" LED Backlit LCD w/ Anti-Glare**
- Viewing Angles: 85/85/80/80
- Contrast Ratio: 800:1
- Brightness: 1600 NITS
- Response Time: 15ms
- Surface Finish: AG, 3H
- Color: 8 Bit (16.7M), NTSC 72%
- Operating Temp: -20°C to 65°C
- Storage Temp: -30°C to 70°C

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: -10°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: -10°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	**17**	**17M1** .	**XXXXX** .	**XX**
1U MILSPEC	17" Deep	15Mx, 17Mx, 173Mx	AB0001	00

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

SPECIFICATIONS

- **Dimensions: 19"W x 1.75"H x 20"D**
- **Weight: ~ 20 LBs** (MR2017M1
- **Power Consumption: Less than 30W**

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 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.

TAA COMPLIANT   MADE IN U.S.A.   FC CE UL

Specifications

LCD Characteristics:

Screen Spec:	17M1 , a-Si TFT LCD
Backlight Type:	LED
Resolution:	1280 x1024
Contrast Ratio:	800:1
Brightness (cd/m2):	350
View Angles (H/V):	80/80/60/80
Pixel Size (HxV) mm:	0.264×0.264 mm
Max. Color:	16.7M
MTBF (hrs):	50,000
Response Time (ms):	20
Lens Treatment:	Antiglare, Hard Coating (3H)
Lens Enhancment:	M1=Optical Bonding
Touch:	Optional (Resistive or PCAP)
Color Gamet (NTSC):	72%

Input Signals Availible:

V35x Embeded Controller

VGA:	DB15 Male
HDMI or DVI:	Locking HDMI Connector
Display Port:	Locking Full Size Display Port
Optional Touch:	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:	20" Rack Mount with Rear Arms 20 to 28" 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 20" (in)	
Packing Dimension (WxHxD):	22"x5"x25" (in)	
Net Weight / Gross Weight:	(17Lbs/25Lbs)	
Certification and Approvals:	UL/CE/ FCC RoHs	
Altitude Test:	10,000/30,000 ft (Operational/No-Operational)	

User Controls Interface:

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

TAA COMPLIANT

MADE IN U.S.A.

Specifications

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

173Mx

LCD Characteristics:

Screen Spec:	173M1 , a-Si TFT LCD
Backlight Type:	LED
Resolution:	1920x1080
Contrast Ratio:	600:1
Brightness (cd/m2):	400
View Angles (H/V):	80/80/60/80
Pixel Size (HxV) mm:	0.1989×0.1989 mm
Max. Color:	16.7M
MTBF (hrs):	50,000
Response Time (ms):	20
Lens Treatment:	Antiglare, Hard Coating (3H)
Lens Enhancment:	M1 = Optical Bonding
Touch:	Optional (Resistive or PCAP)
Color Gamet (NTSC):	72%

Input Signals Availible:

V35x Embeded Controller

VGA:	DB15 Male
HDMI or DVI:	Locking HDMI Connector
Display Port:	Locking Full Size Display Port
Optional Touch:	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:	20" Rack Mount with Rear Arms 20 to 28" Depth	
Construction:	Aluminum Housing with black powder coating	
Operating Temperature:	-10°C ~ 70°C	Method 501.4 and 502.4
Storaging Temperature:	-20°C ~ 70°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 20" (in)	
Packing Dimension (WxHxD):	22"x5"x25" (in)	
Net Weight / Gross Weight:	(17Lbs/25Lbs)	
Certification and Approvals:	UL/CE/ FCC RoHs	
Altitude Test:	10,000/30,000 ft (Operational/No-Operational)	

User Controls Interface:

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

TAA COMPLIANT

MADE IN U.S.A.

FC CE UL

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.

MR20173Mx Platform
Shown With V35M Embeded Controller
and E3, 8 port VGA 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

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.

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

Console VGA Input

E8 Front Face with Collapsible Handle and Secure Thubscrew Shown

Console Passthrough Cable Comes Out Here

Consol USB Keyboard Mouse and Aux Input

8 VGA/USB CPU inputs

8 VGA/USB CPU inputs

C90 Locking Power Input

MIL C300 Solid Bearing Friction Slide Rails

1.750

20.000

Integrated Caged Cable Guide System for beter cable Management

Optional CAC Reader

Qu or M3 MILSPEC Keyboard

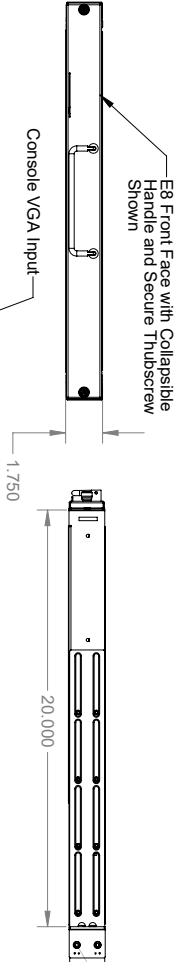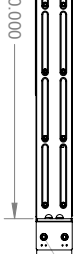Revers L Trasit Case Arms can be adjusteld to fit almost any trasit case dept. **from 20" to over 28".** The benefit of our trasit case arms is the straight in installation. no need to remove components above or below the assembly or to twist the assembly to get it in. simply install the Reverse L bracket and install onto your Rear vertical 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 manmount to the fron beam and the reverse L braclet holes.

OSD Button Board

KVM Keypad

173Mx EMI Enhanced Lens Option

Integrated Cable Managment

Conformal Coated Electronics

DETAIL F
SCALE 1 : 1

PROPRIETARY & CONFIDENTIAL
2s2, INC. Dba: DITHD, OutdoorHDTV
1357 ROCKY POINT DR.
OCEANSIDE, CA 92056
760-599-9225 PHONE
WWW.DITHD.COM
www.OutdoorHDTV.com

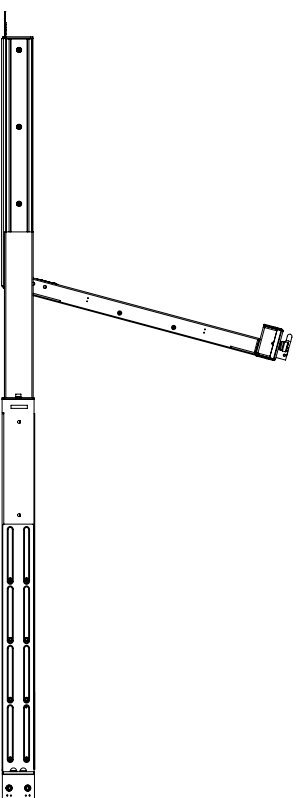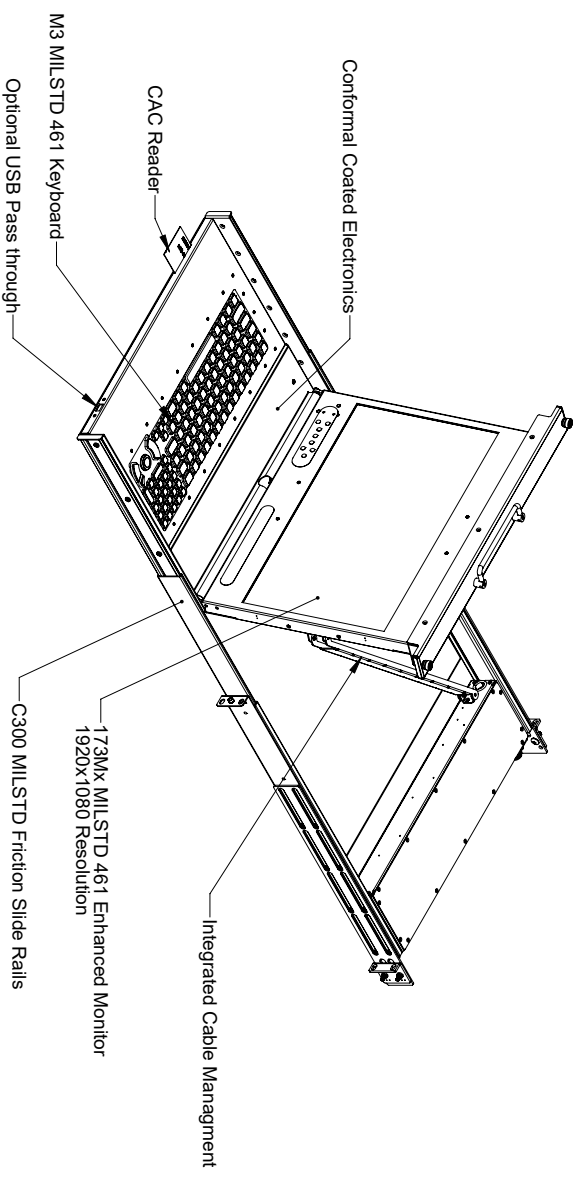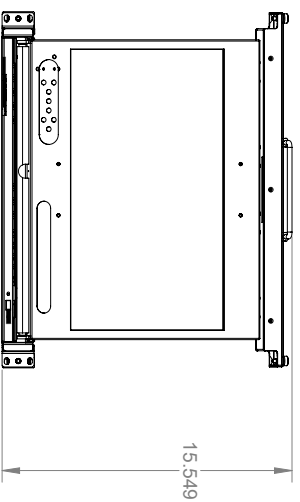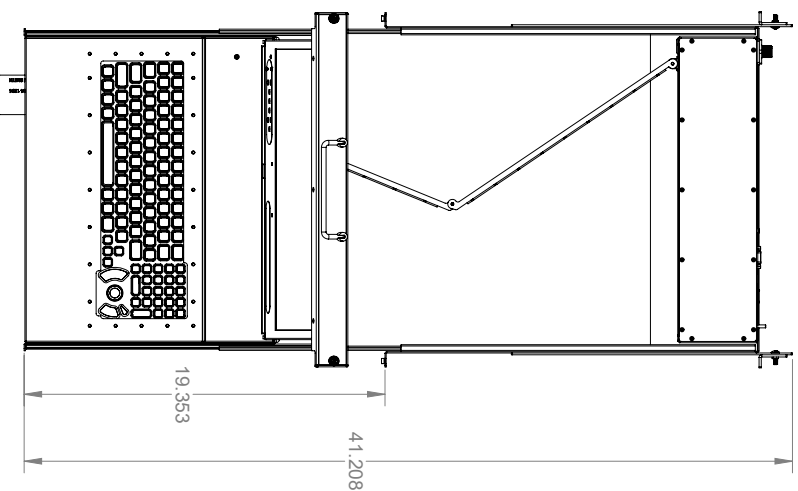| SIZE	PART NO.		REV
C	MR20173Mx.xxxx		00

| SCALE: 1:4 | | SHEET 1 OF 1 |

1357 Rocky Point Dr., Oceanside CA 92056
760.599.9225 | www.DITHD.com | Cage Code 787R6 | sales@DITHD

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.

15.549

19.353

41.208

Conformal Coated Electronics

M3 MILSTD 461 Keyboard

CAC Reader

Optional USB Pass through

173Mx MILSTD 461 Enhanced Monitor
1920x1080 Resolution

C300 MILSTD Friction Slide Rails

Integrated Cable Managment

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.

Ground Post

Display Port

Positive Retention HDMI

DB15 VGA Connector

Audio Port if using Front Face Speakers

E8 Front Face

19.000

1.750

Up to 4 USB Type A Connector for
-Keyboard
-Mouse/Pointer
-CAC Reader
-Pass through Port to Front

Power Inlet, C90 MILSTD, 2 Pin Locking Connector

20"
Rear Arms Can Be extended up to 8" to
Fit from 20" to 28" Rack Drawers

20.0

22.7