



PRODUCT CATALOG

DITHD

Display Integration Technologies

.com

Military Edition



WELCOME



Born in the IT and commercial broadcasting space, DITHD quickly expanded into rugged military displays and solutions. Today, DITHD has built over 20,000 units over 25 years, for military applications all over the world.

We believe the value of a company is determined by its utility. At DITHD we don't simply build rugged display products, we build solutions.

If you have a need (demand?), we have a solution.

Benjamin G. Chapman

Benjamin G. Chapman | CEO | DITHD

CONTENT



4-5

Capabilities

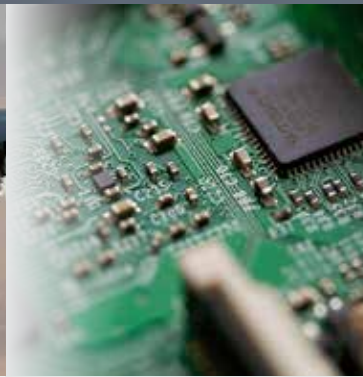
Extensive company history in rugged display integrations for Military and other environmentally-demanding industries.



6-7

MILSPEC

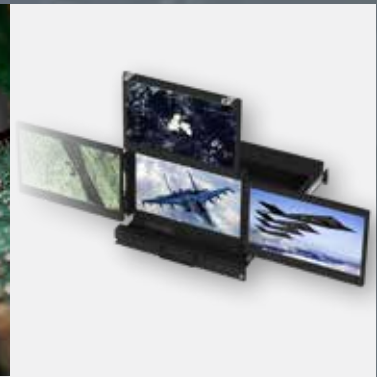
DITHD products are designed to meet or exceed environmental factors as outlined.



8-9

Enhancements

Overview of hardware enhancement options available for your needs.



10-

Products

MR Series, MP Series, MD Series, MU Series, MM Series, MT Series

We are happy to provide customized solutions. If you do not see the product for your specific needs, feel free to contact sales@dithd.com to discuss your exact requirements.

Capabilities

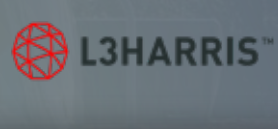
DITHD has been designing, manufacturing, and building rugged monitor solutions from the ground up, for over 25 years, all in the United States

With a streamlined manufacturing process and 3D solid modeling, DITHD is well-positioned to provide rapid prototyping, short run, high mix, and low volume as well as full-scale production.

Our products are designed to meet MIL SPEC requirements, and we specialize in MCOTS solutions for our clients.

Our 3D solid modeling and modular manufacturing give us a clear market advantage in prototyping, short run, or full-scale production.





Sandia
National
Laboratories



NORTHROP
GRUMMAN



LOCKHEED MARTIN

Honeywell



SCIENTIFIC RESEARCH CORPORATION

HARRIS



KRS
Raytheon Range Services, LLC



Defense Industry Experience

DITHD has been providing service to some of the largest players in the military contracting industry.

Our products are designed to meet MIL-SPEC requirements.

MILSPEC

Military Standards and Specifications for Environmental Conditions

Military Standard

Panels are DTM (Designed to Meet) the following Mil Standards. Mil Spec must be disclosed during the quoting process to pick the adequate components.

**Unit will meet Mil-Spec testing when Mil-Spec testing is purchased through 2s2/ DITHD.*

Some Available Specifications

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

Storage: MIL-STD-810F/G, Method and Procedures TBD; Procedures I/II; -20°C to +75°C

Humidity: MIL-STD-810F/G, Method and Procedures TBD; 48 hour, 95% RH 40-65

Altitude: MIL-STD-810F/G, Method and Procedures TBD; 12,500ft operation with 40,000ft transport

Vibration: MIL-STD-810F/G, MIL-STD-167, MIL-STD-516.2 Method and Procedures TBD; 4.43 GRMS, 5-20000Hzz, 60min/axi

Shock: MIL-STD-810F/G, MIL-STD-901E, 20g, 11msec functional shock; Method and Procedures TBD; 40g 11msec crash hazard shock

EMI: TBD, MIL-STD-461

DISCLOSURE: These are some of the MIL Standards we have built to meet for other customers. Your specific requirements must be disclosed for us to properly quote and build to those standards.



MCOTS Part Numbering

Example Part Number:

MM 550 Mx . XX 000X . XX



*Every monitor solution DITHD offers is a Modified Commercial Off The Shelf product and will follow our simplified parts numbering scheme.

Since your product is unique, we require full disclosure in writing of your MILSPEC requirements prior to the quoting process.

Enhancements



Conformal Coating

Conformal Coating is a thin polymeric film which conforms to the contours of the printed circuit board.

This coating protects the board's components against moisture, dust, chemicals, and temperature extremes. A number of different materials can be used, each with its own unique characteristics and applications.

High Bright Displays

Regular displays do not have the brightness to compete against harsh glare from the sun. When viewed outside, regular displays are dim and dark.

Our High Bright enhancement takes monitors over 1000 NITS



M0- M6

Our military LCDs have multiple enhancement options available. These enhancement options are numbered M0 to M6. Each M offers a different enhancement, such as PCAP, NVIS, etc.

Optical Bonding

Optical Bonding refers to the material fused between the panel and the outer protective glass. Optically bonding a display enhances its readability in difficult viewing environments.

Optically bonding a display overcomes the common issue of condensation buildup, often referred to as 'fog'.

PCAP Touch

PCAP (Projected Capacitive) Touch Screens work through the use of a conductive grid that recognizes changes in its electromagnetic field via the touch of your finger.

PCAP Touch is regarded as the superior touch screen technology over infrared, and is commonly used in responsive devices like smart phones and tablets.

Building Blocks



LCD Display

We have LCD displays ranging in all sizes from compact 5.6" displays, to premium, 75" 8K displays with high refresh rates. When part numbering, a 17.3" wide LCD display is represented as '173W'. A 23.8" 4K UHD display would be represented as 238U. For a full list of our available displays, please see our [LCD Matrix Guide](#).



AD Controller

Each board features particular input options. These include (but not limited to) HDMI 1.0, 2.0, 2.1; DisplayPort 1.2, 1.4; 3G & 12G SDI, DVI-D; fiber optic channel, and Legacy VGA, S-Video, and C-Video. Some AD controller options can support 60, 120, & 240 Hz panels.



Keyboard & Pointing Devices

We offer mil-standard 461 keyboards as well as units with multiple options of keyboard and mouse configurations. Some are made from corrosion-resistant materials, designed rugged, and able to meet IP67. Other accessories mice, joysticks, and more.



KVM Switch Back

We offer multiple enhanced KVM backs with four varieties of options: DVI, VGA, HDMI, DisplayPort, KVM over IP, and more.

We also offer multi-headed KVMs for our Hydra Series Multihead Rack Drawers.

We can also support your Cac Cards, NIAP, & Tempest Requirements. (Contact Sales Rep)

Clam Shell Series

The MR Series is our popular clamshell concept. MR monitors open like a laptop, revealing keyboard and pointer. They slide along the mounted rails, and have an integrated KVM back.

The MR Series is available in 1U, 2U, 3U, 4U rack drawer monitor. Available as a single screen, or as a HYDRA multi-head unit (dual, triple, or quad displays).

MR Series

- Militarized Clamshell and Lay Flat RD1U, 2U, 3U and 4U Series
- Starting at 1U (1.75") unit height available
- Screen sizes in 17Mx, 173Mx, 19Mx
- Rack and transit case ready
- Integrated KVM back available
- Built-in Mil-Spec Friction Slide Rails
- Multi-Display Hydra Series available on 3U and 4U models
- Rugged, all-aluminium construction
- Conformally Coated Electronics
- Optically Bonded Lens



MRxx



Military Monitor



Optical Bonding



Conformal Coating

1U



Building Blocks



LCD (High Bright, Optically Bonded)



AD Controller Card (Conformally Coated)



Keyboard & Mouse Drawer



KVM Back (Optional)



2U

3U

4U





Building Blocks



LCD (High Bright, Optically Bonded)



AD Controller Card (Conformally Coated)



Keyboard & Mouse Drawer



KVM Back



Military Monitor



Optical Bonding



Conformal Coating

1U

MP Series

- Militarized PDD1, PDD2, and PDD3 Series
- 17.3", 19", and 20.1". 21.5", and 23.8" Screen Sizes
- Very thin 1U Height model available
- Rugged, All-Aluminium Construction
- Designed to meet Environmental MILSPEC Specifications
- Optically Bonded AR or AG Lens ITO 461
- Conformally Coated Electronics
- Multi-Display Hydra Series available on 3U and 4U models.



MPxx

Layflat Series

The MP series is designed to fold down flat and stow away into a transit case or standard rack. The advantage of this folding mechanism is the ability to half-stow the unit while the screen is in use.

The MP Series is available in 1U, 2U, 3U, 4U rack drawer monitor. Available as a single screen, or as a HYDRA multi-head unit.

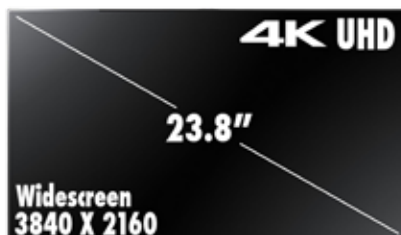
2U

3U

4U

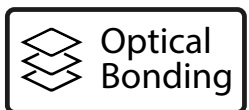


4K



MD Series

- **Military-Grade Direct Panel mount series**
- **10.4", 15", 15.6", 17", 17.3", 19", 21.5", 23.8", 27", 32", 43", and 55" Screen Sizes**
- **Direct mount solution**
- **Rugged, all-aluminium Construction, Milled Front Face**
- **Designed to meet 901D Shock and 167 Vibration, 810 Military Environmental Specifications, 461 EMI.**
- **Optically enhanced AR or AG Lens**
- **Conformally Coated Electronics**
- **Up to 4K panels**



Building Blocks

LCD (High Bright, Optically Bonded)

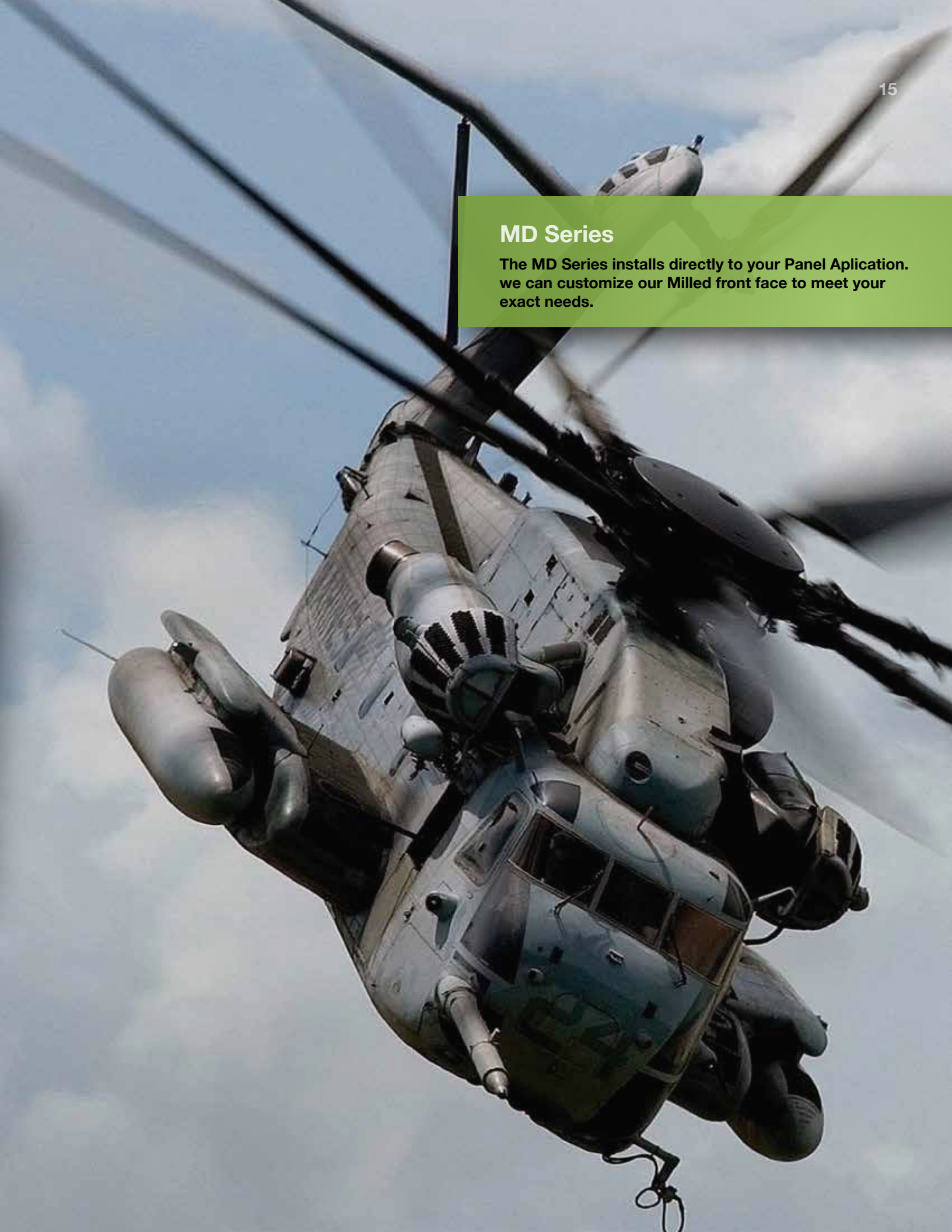


AD Controller Card (Conformally Coated)



MD Series

The MD Series installs directly to your Panel Application. we can customize our Milled front face to meet your exact needs.

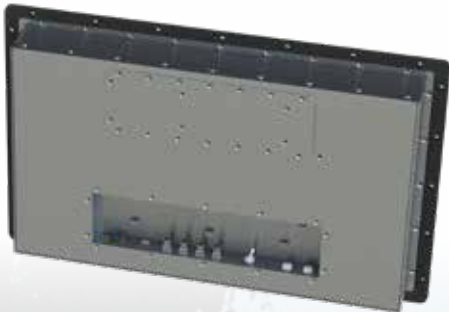




MD550M1 Shown

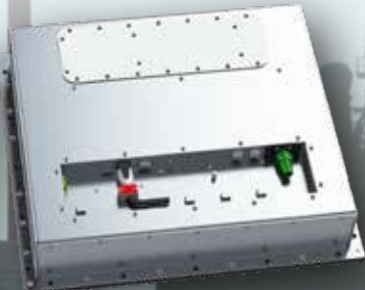
FHD

FHD 10.1" Widescreen 1920x1080	FHD 12.1" Widescreen 1920x1080	FHD 15.6" Widescreen 1920x1080	FHD 17.3" Widescreen 1920 x 1080	FHD 21.5" Widescreen 1920 x 1280
--	--	--	--	--

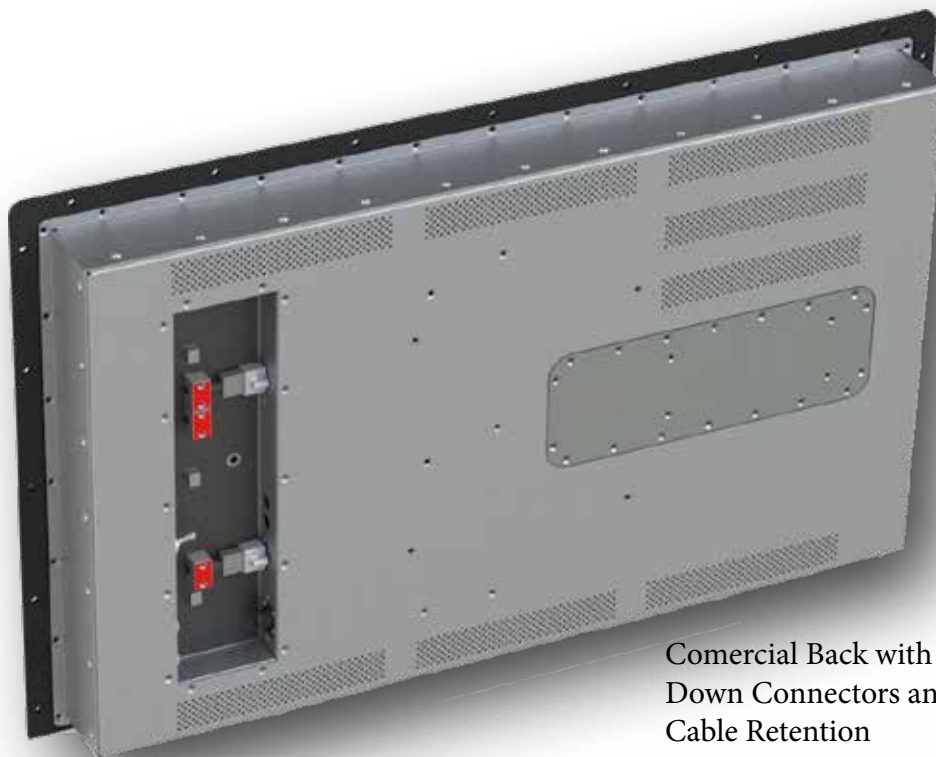


5:4

SXGA 10.4" 1280 x 1024	SXGA 15" 1280 x 1024	SXGA 17" 1280 x 1024	SXGA 19" 1280 x 1024
-------------------------------------	-----------------------------------	-----------------------------------	-----------------------------------



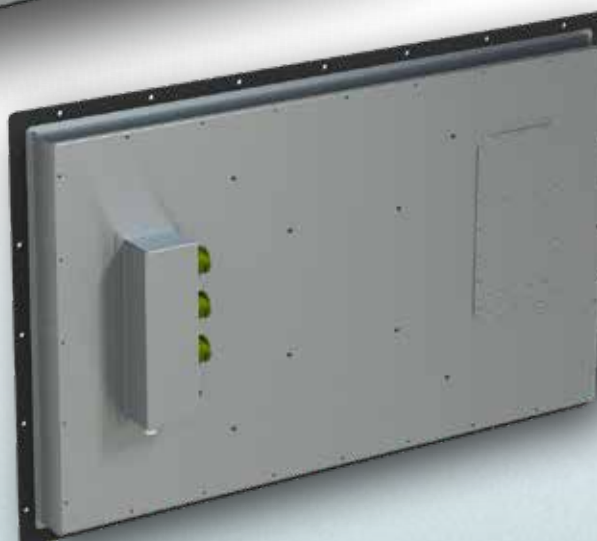
4K Available Sizes



Comercial Back with Lock
Down Connectors and Positive
Cable Retention



Optional Mil Spec
Connectors and your
Desired Orientation
and Size



FHD



Take Your Monitor Anywhere.

**Rugged, Battery-Capable Monitor Solutions
for Any Environment!**

The MU Series represents our LCD Monitors housed in rugged, portable cases.

Our MU (Underwater Kinetics and Pelican Cases) consists of an LCD display housed in our Storm Case, and ready for a very wide range of customizations. These options range from phones, to antennas, to computer systems, and anything else you desire to be integrated into this splash-proof Storm Case.

The MU series is available in several different case and monitor sizes, and features Single, Dual or Triple screen configurations. Whatever the component, it can be integrated into our resilient MU!



**Military
Monitor**



**HIGH
BRIGHT**

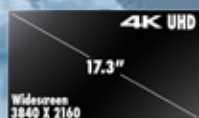


**Optical
Bonding**



**Conformal
Coating**





MU Series

Features:

- Splash-Proof Underwater Kinetics and Pelican Storm Case Design.
- Wide Range of Controller Cards, Enhancements, Standard Building Blocks and Custom Features Features to Chose From.
- FHD Monitor Screen Sizes: 156W, 173W, 215W
- DITHD's Most Customizable Product Line
- MU HYDRA is Available in Double or Triple Screen Configurations
- Available 4K Panels, 173U and 238U
- High Bright, Optical Bonding and PCAP Touch Options available



MM Series

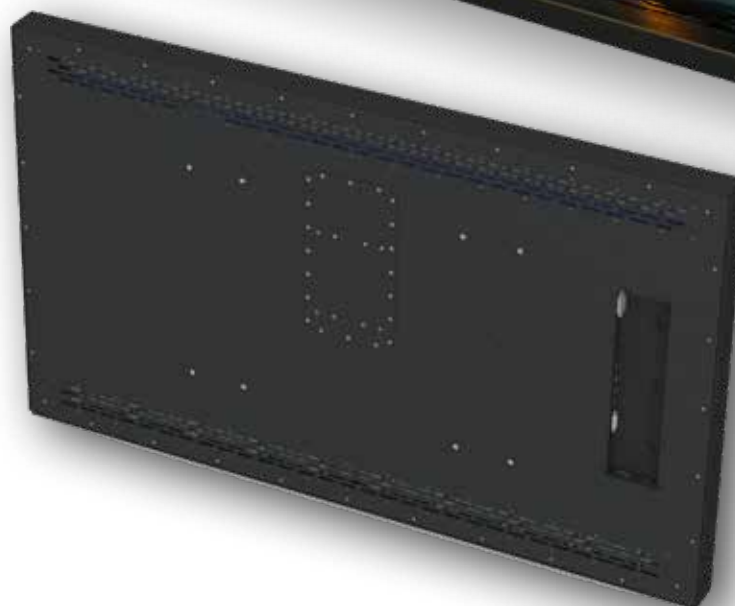
Our most flexible Military Monitor solution. These displays are available in a large range of sizes, from small field monitors, to medium-sized panel mounts, to large format bulkheads.

Our MM Series are very flexible thanks to designed to incorporate our highly-customizable VESA Flexmount system

MM Series



- Flex Mount System includes VESA Panel Mount and Flush Mounting Options
- Can be fully sealed to IP66 and Some to IP67
- Optically Bonded lens options
- Optional High Bright, PCAP Touch, ITO, Heated Lens, and NVIS Night Vision
- Available in 10.1", 10.4", 12.1", 15.6", 17", 17.3", 19", 20.1", 21.5", 23.8", 27", 32", 43", 55"
- ALL Aluminium with Milled Enhancement design
- Conformally Coated Electronics for Corrosion Prevention





Building Blocks

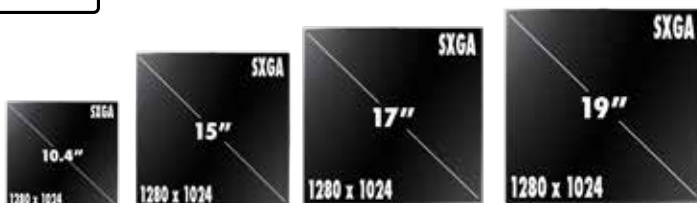


LCD (High Bright, Optically Bonded)



AD Controller Card (Conformally Coated)

5:4



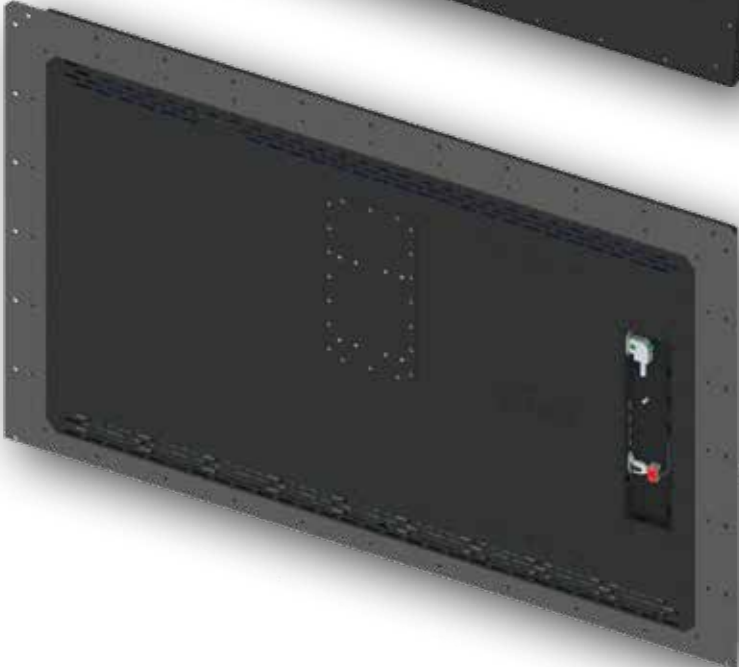
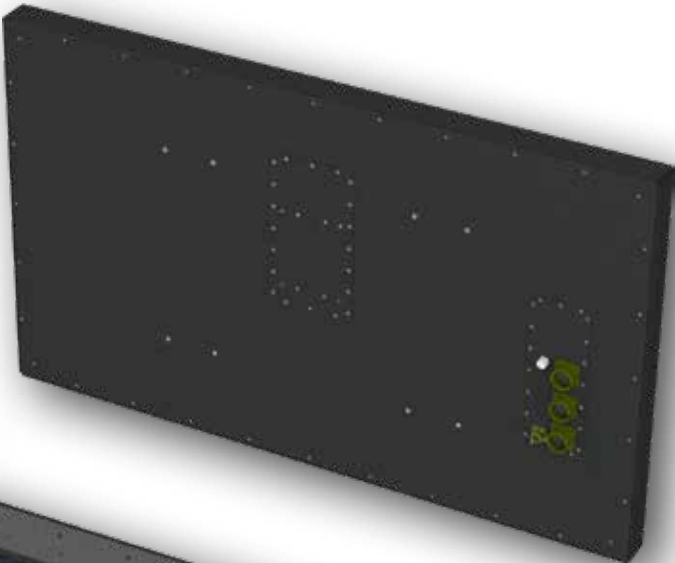
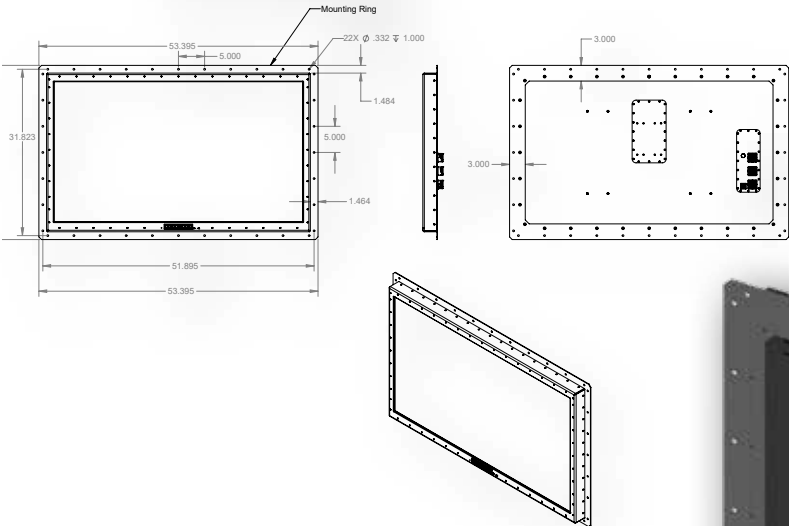
FHD



4K UHD

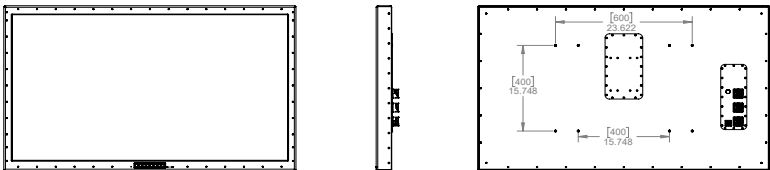


Option 2: External Ring Mounting Option



Option 3: 4 VESA Mount

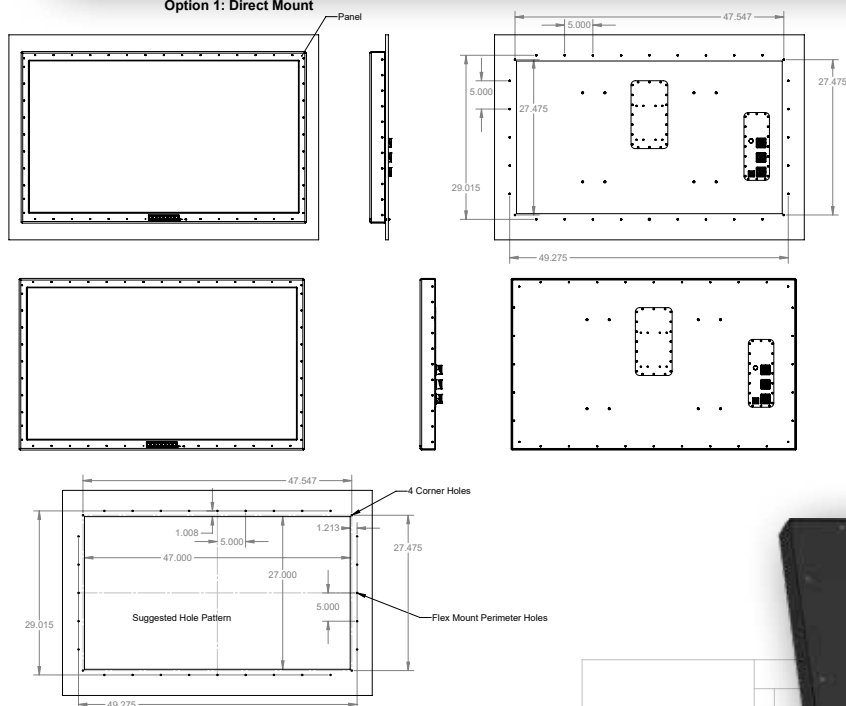
VESA 400 x 400 Mounting Holes
VESA 600 x 400 Mounting Holes



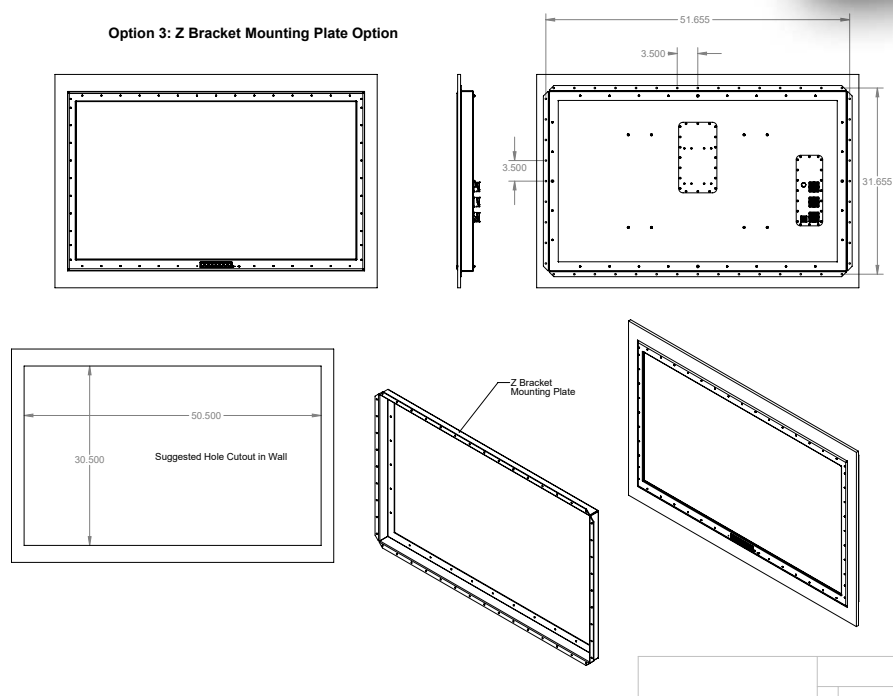
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z

FLEX Mounting System

Option 1: Direct Mount



Option 3: Z Bracket Mounting Plate Option



MT Series

The MT Series encapsulates our Panel Mount and Bulkhead mounting solutions. We take these existing monitor solutions and enhance them with PCAP Touch Capabilities.

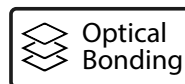
Not every product configurations may pass all 461 Requirements due to the nature of touch screen technology.

MT Series

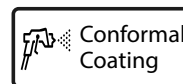
- Flex Mount System includes VESA Panel Mount and Flush Mounting Options
- PCAP Touch enabled
- Front Bezel Can be fully sealed to IP66
- Optically Bonded lens
- Optional High Bright, PCAP Touch, ITO, Heated Lens, and NVIS Night Vision
- Available in 23.8", 32", 43", 55"
- Milled Aluminium design
- Conformally Coated Electronics for Corrosion Prevention



Military
Monitor



Optical
Bonding



Conformal
Coating



*May not pass all 461 requirements given the nature of touchscreen.



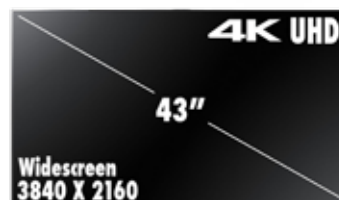
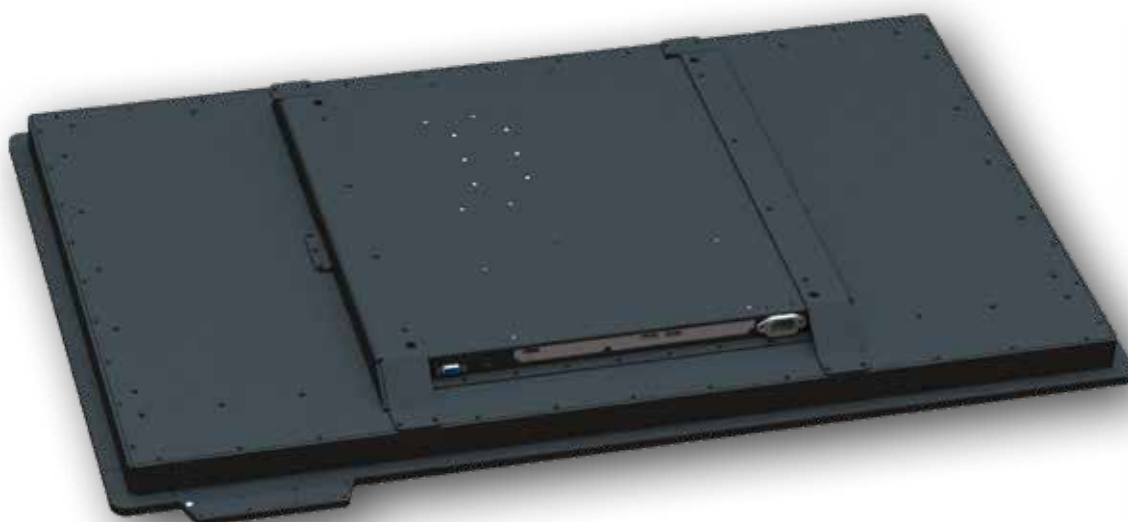
Building Blocks



LCD (High Bright, Optically Bonded)



AD Controller Card (Conformally Coated)





CONTACT US

If you have any questions or concerns, please feel free to contact us. We love discussing how to make your project possible.

www.DITHD.com



1357 Rocky Point Dr
Oceanside CA, 92056

Phone 760 599 9225

Email Govsales@2s2.com

Cage Code: 787R6

DUNS: 078555371

