

# 32" 4K UHD Military Display

M320TF-MIL

In mission critical environments, performance, reliable, and accurate image reproduction are imperative. From landscape to radar images, this environment is complex ecosystem that requires advance technology to keep it running smoothly. The M320TF-MIL with a UHD 4K (3840 x 2160) resolution helps minimize errors and improve operational efficiencies. With the number of display options available, knowing which will best suit your needs can be a challenge. The Winmate line of 4K monitors, implement the latest in technology, are making the decision easy.

## Product Features

- 32" Display with UHD 4K (3840 x 2160) native resolution for video display and other on-site applications
- Thin and Compact Design with impact resistant screen
- AR protection glass with optional P-CAP touch
- Fanless and Ventless design, Easy-to-Clean
- Compatible with existing imaging systems



## Product Specifications

<b>TFT Technology</b>	LED Backlight Technology, TFT Active-matrix, Widescreen, IPS Technology
<b>Viewable Size</b>	32" diagonal
<b>Active Area</b>	708.48"(H) x 398.52"(V) mm
<b>Native Resolution</b>	3840 x 2160 (UHD 4K)
<b>Pixel Pitch</b>	0.185 (H) x 0.185(V)mm
<b>Aspect Ratio</b>	16:9
<b>Response Time</b>	12ms (Gray to Gray)
<b>Light Intensity</b>	350 cd/m2 (typ), Optional for high brightness 700cd/m2 (typ)
<b>Contrast Ratio</b>	1000:1 (typ)
<b>View Angle</b>	89/89/89/89
<b>Max Colors</b>	1.07B
<b>Synchronization Signal Auto-detect</b>	Digital Separate Sync., Composite Sync., Sync. On Green
<b>Synchronization Range</b>	31.5 kHz to 60.0 kHz (H) - 30 Hz to 75 Hz (V)
<b>Optimal Resolution and Hz</b>	3840 x 2160 @ 60 Hz 4:4:4
<b>Detectable Resolutions (Partial List)</b>	640 x 480, 720 x 400, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200, 1920 x 1080, 1920 x 1200, 2560 x 1440, 3840 x 2160, 4096 x 2160
<b>Product Features</b>	Ambient light sensor, IR Control, Dimming

<b>Power Specifications</b>	24V DC in 150W, with external 110-240V AC to DC Adapter
<b>User Controls and Activity</b>	Capacitive OSD : Power On/Off, On Screen Display Menu, Brightness Control (-/+)
<b>Input Signal</b>	<ul style="list-style-type: none"><li>• DVI</li><li>• Audio Line In</li><li>• HDMI 1.4</li><li>• RS232 for Optional Remote Control</li><li>• HDMI 2.0</li><li>• Display Port 1.2</li><li>• USB for Optional Touch</li><li>• VGA</li></ul>
<b>Product Dimensions</b>	777.58 x 477.62 x 48 mm
<b>Mounting</b>	VESA mounting 100 x 100mm VESA mounting 200 x 100mm VESA mounting 300 x 100mm
<b>Product Weight</b>	11 Kg
<b>Factory Options</b>	<ul style="list-style-type: none"><li>• Projected Capacitive Multitouch screen (USB)</li></ul>
<b>Operating Temperature</b>	0 deg.C to 50 deg.C, Humidity up to 95%
<b>Storage Temperature</b>	-20 deg.C to 65 deg.C, Humidity up to 95%
<b>IP Rating</b>	Protection: front IP65 - rear IP22
<b>Certificates</b>	CE, FCC
<b>Compliance</b>	MIL-STD 810F/G MIL-STD 461E/F (RE101/RE102),(CE101/CE102)

\* If you require external test report, Winmate will charge NRE fee.

## Military Grade EMC Compliance

EMC (MIL-STD 461E/F Compliance)			
EMC Test Spec	Type of Test	Frequency Range	Requirement
CE101	Conducted Emissions	30Hz ~10kHz	30Hz ~ 1kHz :110 dB 1k-10k:110-90 dB
CE102	Conducted Emissions	30Hz ~10kHz	10kHz ~ 500kHz: 100-66dB, 500kHz~10MHz:66dB
RE101	Radiated Emissions	30Hz ~100kHz	(30~100k :180-110 dBpT)
RE102	Radiated Emissions	10kHz ~-18GHz	(2MHz~18G Hz: 44-89 dB)

## Military Grade Environmental Compliance

Environmentals (MIL-STD 810F/G Compliance)		
High Temperature	Operating	30°C to 60°C, Method 501.5 / Procedure II
	Storage	30°C to 60°C, Method 501.5 / Procedure I
Low Temperature	Operating	-33°C, Method 502.5 / Procedure II
	Storage	-33°C, Method 502.5 / Procedure I
Thermal Shock	-33°C to 63°C, Method 503.5 / Procedure I-B	
Humidity	30°C to 60°C, 95 ± 2% RH, Method 507.5	
Low Pressure	Operating	15,000 ft, Method 500.5 / Procedure II
	Storage	15,000 ft, Method 500.5 / Procedure I
Salt Fog	Method 509.5	
Vibration	5 ~ 500 Hz, 1.48 & 1.90 & 2.24 Grms Method 514.6 / Procedure I	
Transit Drop	Method 516.6 / Procedure IV	
Shock	Method 516.6 / Procedure I	

Designed for demanding reliability and the latest technology.

Zoom in by Region

Fanless

Display Port 1.2

Ultra HD

In-Plane Switch

Capacitive touch keys

Light Sensor

Signature True Flat With Slim design

Wide Viewing ANGLE

Built-in Speaker

Image Adjust by Region

Touchscreen Capable (Optional)

HDMI 2.0

## Mechanical Drawing

