

## TX-231

12.1" WXGA Thin and Lightweight Extreme Display  
**Rugged Displays and Computing: Displays**



When conditions become extreme, only extreme technologies can offer operators the reliability and survivability they need. For the demanding environments of the utility vehicle, helicopter, or armoured vehicle, ScioTeq has completely renewed the ThinX series of extremely rugged displays. TX Generation 2 displays offer an ideal solution for driver's vision enhancement, reconnaissance and local situational awareness or for BMS and mission applications inside today's vehicles and helicopters.

Being a 12 inch member of the family from 10 inch to 15 inch, the TX-231 display features the same or similar functionalities and options as its predecessor: designed and qualified for harsh environments, a variety of HMI options like bezel buttons, touch screen, a variety of video I/O and video processing capabilities.

The ThinX Gen2 displays accept multiple video inputs, offers multiple scaling modes and image representation options such as Picture-in-Picture, Picture-and-Picture, Quad-view, Image cropping.

The video rendering limitation is the number of sources limited to 4 sources displayed at the same time. Compared to the previous generation, the Generation 2 optionally introduces a display remote control by a CAN 2.0B protocol. The ThinX Gen2 continues to propose a remote controlled capability by one of the remote control links (Ethernet, Serial, USB, or CAN).

Next to the excellent performance in terms of sunlight readability, image crispness, contrast, viewing angle and dimming capabilities, the TX-231 display is addressing all SWaP-C aspects with an even more compact mechanical design, lower power consumption and lower cost.

## Product Specifications

<b>Panel Size</b>	12.1"; 16:10 aspect ratio
<b>Panel Resolution</b>	1280 x 800 (WXGA)
<b>Panel Specifications</b>	16.7 M colours, 256 gray scales
<b>Brightness</b>	Max > 686 cd/m <sup>2</sup> (200 fL) typical, LED backlight
<b>Dimming Ratio</b>	200:1 in day mode and 10:1 in night mode
<b>Contrast Ratio</b>	700:1 in dark room typical
<b>Viewing Angle</b>	± 80° horizontal and vertical
<b>Video Inputs and Outputs</b>	1xDVI-D Single Link, 1x Analog RGB (3,4 or 5 wires) Max Resolution 1920 x 1200 (WUX-GA) @ 60 Hz 3x Analog video (CVBS) inputs and 3x loop through outputs, MIL connector 1x CAN 2.0B (Accessible for project specific, please contact Eylex) General Purposes Input Output (3 IN, 3 OUT)
<b>Command and Control</b>	USB, RS232/422 for Touch Screen, Function keys, and remote control 1x 10/100 Ethernet maintenance port for configuration management and remote control
<b>Option 1: HD-SDI Video Inputs and Outputs</b>	2 x Digital video (HD-SDI) inputs and 2x loop through outputs, Max resolution 720p/1080i HD-SDI standard SMPTE 292M
<b>Connectors</b>	MIL-DTL-38999/3
<b>Power Supply</b>	28 VDC MIL-STD-1275E
<b>Max. Power Consumption</b>	35 W typical (100 W with heater)
<b>Operating Temperature Range</b>	From - 46°C to + 63°C – MIL-STD-810G
<b>Storage Temperature Range</b>	From - 46°C to + 75°C – MIL-STD-810G
<b>Relative Humidity</b>	95% RH temperature cycle 30°C to 60°C – MIL-STD-810G
<b>Vibration</b>	Random vibration (wheeled vehicles) – MIL-STD-810G Random vibration (heavy tracked vehicles) – AECTP400
<b>Shock</b>	40 g 15/23 ms SRS – MIL-STD-810G
<b>EMI/EMC</b>	Ground Army – MIL-STD-461G
<b>Enclosure</b>	EN60529 IPx5
<b>Altitude</b>	Operating and Storage up to 40,000 ft – MIL-STD-810G
<b>Sand and Dust, Salt Fog</b>	Compliant at unit level – MIL-STD-810G
<b>Bezel Controls</b>	Power/Stand by, Brightness Mode day/night, Brightness dimming
<b>Option 2: Touch Screen</b>	Base configuration: no touch screen Single touch, Rugged Analog Resistive touch screen, USB or RS controlled
<b>Option 3 or 4: Function Keys</b>	Base configuration: no function key Up to 20 user defined function keys left, right and top, dimmable backlight Standard button layout or GVA Def Stan 23-09 compliant layout
<b>Finishing</b>	Bezel colour: Black RAL 9005 Surface treatment: RoHS compliant Chromated Cr3 (MIL-DTL-5541 type II Class 3)

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The information contained herein is for reference only and does not constitute a warranty of performance

Partnered Supplier



sales@eylex.com.au  
www.eylex.com.au

