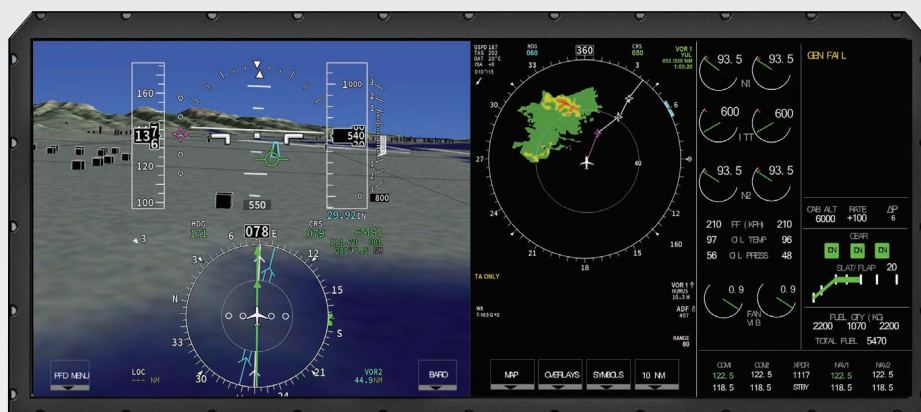# ScioTeq

Advanced Visualization

RDU-3208
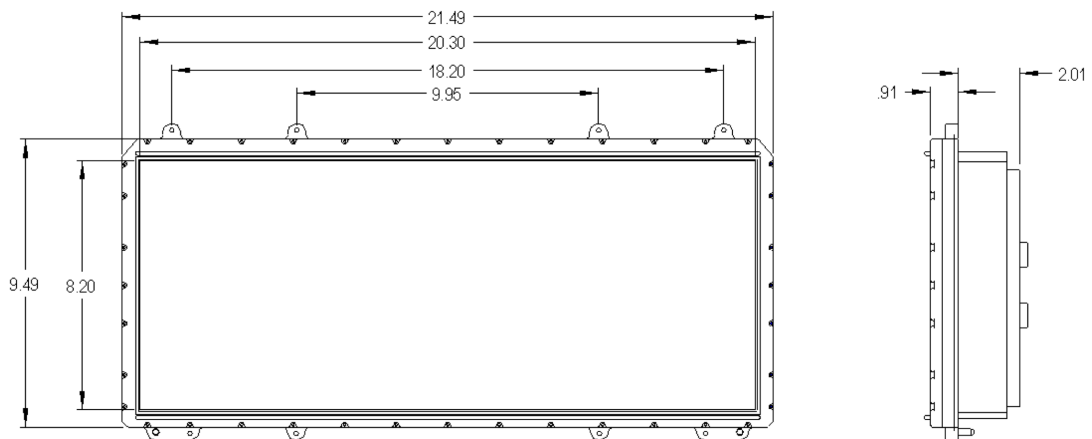## 21.5" (20"x 8") Large Area Rugged Display Unit

Main features:

- Large 20"x 8" display with independent addressable and full redundant 10"x 8" area's

- Touch interface with full redundancy

- Best in class true 8-bit AMLCD for superior color rendering

- Wide viewing angles – ideal for cross cockpit viewability

- Brightness up to 300fL, making it suitable for installation in open cockpit aircraft

- NVIS Class B compatibility

- Guaranteed brightness and color range over the operating temperature of the display and over its lifetime

- Multiple redundant video inputs standard (ARINC-818, DVI optional)

- Several control options (RS-422, ARINC-429 optional)

- Continuous operations at up to 71°C

- No fan for quiet, passive cooled operation

The RDU-3208 provides a Large Area Display format consisting of dual proprietary Active Matrix Liquid Crystal Displays, a multi-touch touchscreen interface and LED backlight technology delivering a visual performance second to none: true 8-bit color depth with high contrast ratio and superior color stability, wide viewing angles and superior brightness in Day, Night and NVIS modes. And there is even more: the optical quality is guaranteed over the complete operating temperature range and life-time of the display, thanks to ScioTeq's proprietary control mechanisms. As an option, the light can be collimated to reduce reflections on the windshield or canopy.

The 20"x 8" display provides a large area for visualizing your content and has full independent addressable and redundant 10"x 8" areas. The display is touch capable for direct interaction with your applications and provides full touchscreen and display redundancy for both 10"x 8" areas.

The software and firmware of the RDU-3208 are developed according to DO-178C and DO-254 respectively, up to and including Design Assurance Level (DAL) A. This display is therefore an ideal candidate for Part 23, Part 25, Part 27 and Part 29 electronic flight instrument systems or mission displays.

Technical specifications

Product specifications — RDU-3208

Electro-optical

Panel type	Active matrix LCD (normally black)
Panel active area	21.5" diagonal (20" x 8")
Panel resolution	2560 X 1024 (2 times 1280 X 1024)
Addressability	2 independently addressable sides for full redundancy
Color depth	True 8-bit – 16,777,216 colors and 256 grayscales
Viewing angle	• H: +/-35° • V: +/-30° Can be tailored to program requirements, such as the addition of specific collimation to reduce canopy reflections, etc.
Backlight	LED backlight
Luminance	• 25fL up to 300fL (day) • 0.01fL up to 25fL (night) Luminance stabilized over the life time and the complete temperature range of the display
Sunlight readability	Contrast ratio >7:1 @ 10,000 fC
NVG compatibility	NVIS, type I/II, class B, per MIL-L-85762
Heater	Heater for display startup at extremely cold temperatures

Interfaces

Video Inputs/ Outputs[1]	Inputs: 2x ARINC-818, 2x DVI-D optional, Outputs: 1x ARINC-818

Controls

Brightness control	Bezel control, or remote
Bezel controls [1]	Available with custom bezels
Touch screen	Multi-Touch capability with built-in mechanisms for certifiable touch interface

General specifications

Power supply	28VDC, MIL-STD-704A
Power consumption	150W max @ 300fL (20C ambient)
Heater power consumption	400W max @ 28VDC
Weight	8.2 kg / 18 lbs (max)
Cooling	Passive cooling
Built-in testing	PBIT / CBIT / IBIT
Software	RTCA/DO-178 up to Design Assurance Level (DAL) A
Hardware	RTCA/DO-254 up to Design Assurance Level (DAL) A

Environmental conditions

Compliance	DO-160G, MIL-STD-461E MIL-STD-810G (optional)
High temperature	+71°C operational / +85°C short-time / +85°C ground survival
Low temperature	-45°C operational / -55°C ground survival
Altitude	65,000 ft
Water resistant, salt fog, sand & dust	Withstands the harshest environments - closed and fan-less unit design

[1] Please contact ScioTeq for other possible options

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