

TSCU-3045

Touch Screen Control Unit



Main features:

- Latest generation touchscreen
- Powerful processing and modular graphics solutions for substantial growth capability
- ScioTeq's MOSArt™ middleware platform for hosting multiple software applications at different DAL levels (A to E)
- NVIS Class B compatibility
- 5.75" DZUS rack mountable
- Various bezel configurations possible
- Several control interfaces available (A429, RS-422, Discretes, ...)
- Optional video interfaces

The TSCU-3045 belongs to the ScioTeq's family of Touch Screen Control Units. Its 4"x5" (6.4") Multi-Function Display can act as a classic ARINC-739 interface while simultaneously enabling the integration of various cockpit functions such as virtual control panels, FMS, etc., reducing overall cockpit system costs and space requirements.

Through its powerful ARINC-653 based processing platform and ScioTeq's MOSArt™ (Modular Open System Architecture) middleware, the TSCU allows customers to develop and integrate their own applications (e.g. virtual control panels, mission solutions, etc.) on this flexible platform.

The TSCU-3xxx is a family of products equipped with the latest generation touchscreens. Depending on the touchscreen option selected, it can be extended with a context based force sensor that enables software applications to respond to a desired force feedback in a specified region of interest, leading to a fluent interaction for the user while maintaining robustness against incidental touches and providing dissimilarity of touch inputs for increased redundancy.

Technical specifications

TSCU-3045

Controls	
Touch screen	Safe-guarded, NVIS compatible dual-touch digital resistive touchscreen (gesture capable) (optional PCAP with/without force-sensing) ⁽¹⁾
Bezel controls	4 momentary push buttons, 1 single rotary knob with push select, 1 On/Off button Available with custom bezels ⁽¹⁾
Brightness controls	ALS sensors, bezel control, or remote
Processing	
Common Processor Module (CPM)	Freescall QorIQ P3041
Graphics processing	Graphics Processing Unit with up to 2 times M9 (Mobility Radeon 9000) performance Integrity of the graphics solution segregated from any knowledge of the hosted applications
RTOS	ARINC-653 Real Time Operating System
ScioTeq MOSArt™ open platform	Allows development and hosting of customer supplied, 3rd party or ScioTeq applications. Can host multiple applications at different DAL levels simultaneously (A-E). Development environment includes PC-based SIMphony™ and on-target based solutions.
Electro-optical	
Panel type	Active matrix LCD (normally black)
Panel active area	6.4" diagonal
Panel resolution	1024 x 768 (XGA)
Viewing angle	H: +/- 55° V: +/- 35° Can be tailored to program specific requirements, such as the addition of specific collimation to reduce canopy reflections, etc.
Backlight	Multimode LED backlight
Luminance	0.1 up to 200fL (non-NVIS mode) 0.1 up to 3fL (NVIS mode) Luminance stabilized over the life time and the complete temperature range of the display
Sunlight readability	Contrast ratio >10:1 @ 10,000 fC
Front surface	AG / AR / AF (MILC14806 compliant)
NVG compatibility (optional)	MIL-STD-3009 Type I/II, NVIS Class B
Heater (optional)	Heater for display startup at extremely cold temperatures
Interfaces	
Inputs/Outputs	A429, CAN, RS-422, Discretes, RS485, RS-232, MIL-STD-1553 (optional), ARINC 825, IEEE-1394B, Ethernet, A708
Video	Analogue video output Analogue video input (optional) SMPTE-292/424 (HD-SDI) In/Out (optional)
General specifications	
Power supply	28VDC, MIL-STD704A
Power consumption	<65W @ 200fL (20C ambient)
Weight	<3.85 kg / 8.5 lbs
Dimensions	6.75" H x 5.57" W x 5.51" D (mounting depth including connectors), DZUS mounting
Built-in testing	PBIT / CBIT / IBIT
Software	RTCA/DO 178B up to Design Assurance Level B
Hardware	RTCA/DO 254 at Design Assurance Level B
Environmental conditions	
Compliance	DO-160G; MIL-STD-810G & MIL-STD-461E
High temperature	+55°C operational / +70°C shorttime / +85°C ground survival
Low temperature	-45°C operational / -55°C ground survival
Altitude	50,000 ft

⁽¹⁾ Please contact ScioTeq for details

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The information and data given are typical for the equipment described.
However any individual item is subject to change without any notice.

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