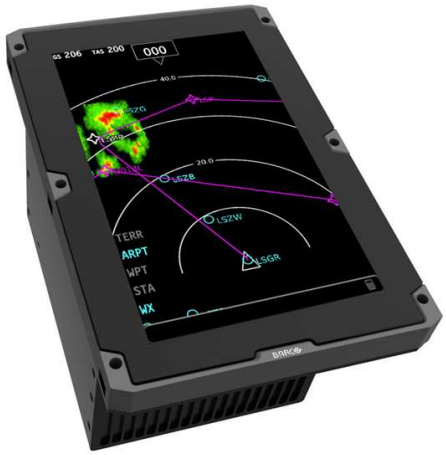
TSCU

Fail-safe multi-touch screen control unit



Barco's next-generation avionics display features a full-size fail-safe multi-touch screen. The introduction of the fail-safe multi-touch technology creates a new range of flexible and intuitive means to interact with the aircraft systems, while staying compliant to the safety requirements of the environment.

Allowing new content and applications

Control Display Units (CDUs) are common input and information devices in the cockpit. In order to extend the function of these devices by adding new content and applications, Barco has created the TSCU (Touch Screen Control Unit). Consisting of a fail-safe multi-touch screen in the standard dimensions of a conventional CDU, this device is suitable for both retrofit and new installations. The fail-safe multi-touch screen – allowing safe-guarded single touch and gestures – offers pilots a practical and intuitive way to interact with the aircraft systems.

Limitless flexibility

With its key-less touch screen, TSCU offers much more flexibility than a conventional CDU system, because the content on the screen can be adapted to the phase of the flight. This means that next to traditional CDU functions, the device can be used e.g. as an embedded EFB, as a monitor for camera inputs, as a navigation device, and many more. Because the processing core of the TSCU supports the Barco Open System Architecture 'MOSArt', the allocation of functions is fully definable and controllable by the system integrator.

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Product specifications	TSCU
Electro-optical	
Panel type	Active-matrix LCD (normally-black type)
Active area	8" diagonal
Resolution	480 x 800
Brightness	Up to 200 fL
Viewing angle	+/-55° horizontal, +15°/-45° vertical
Front surface	AG/AR/AF (MIL-C-14806 compliant)
Sunlight readability	Contrast ratio >10:1 in 10,000 fC ambient condition
NVG compatibility	MIL-STD-3009 Type I/II, Class B NVIS
Interfaces	
Data and video interfaces	Arinc 429 (up to 24 inputs and 8 output) MIL-STD-1553 (single or double dual redundant) Arinc 708 (2 inputs) Ethernet (10/100Mb) Discrete I/O (up to 32)
Controls	
Touch screen	Fail-safe multi-touch Automatic brightness control
Processing	
Processor	PowerPC
Graphics	OpenGL ES SC 1.0
RAM Size	Up to 1GB ECC protected memory
Application storage	Up to 512 MB
Data storage	Up to 8GB
General specifications	
Power Supply	Dual 28 Vdc, MIL-STD-704/RTCA-DO-160G
Power consumption	35 W (nominal) / 70 W (cold start)
Weight	3 kg / 6.6 lb
Cooling	Forced air cooling via cold wall
MTTR	Less than 0.5 hours
MTBF	11,500 hrs (AIC 35°C) - 5,300 hrs (ARW 35°C) (calculated)
Built-in testing	IBIT, CBIT, PBIT
Software	RTCA/DO-178B level B
Environmental conditions	
Compliance	RTCA/DO-160G
Operational temperature	-45°C to 70°C / -49°F to 158°F
Storage temperature	-55°C - 85°C / -67°F - 185 °F
Altitude	50,000 ft
Humidity	Cat B
Shock	20 G - 11 ms
Vibration	Cat R (G), S (M)
EMI / EMC	DO-160
(E)TSO	C113