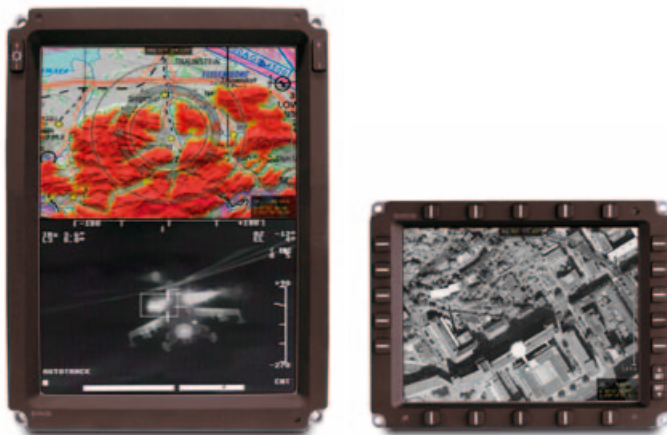


MDU-2000 family

Avionics-grade Mission Display Units



Photo US Navy - Christopher Stephens



A full range of Mission Display Units ready for all your missions



Barco's MDU-2000 family is a range of avionics-grade Mission Displays Units that draws on the accumulated experience with the field-proven Cockpit Head Down Display (CHDD) series. Compatible with FLIR, daylight video cameras, moving maps, computers and radar, the MDU-2000 Display Units provide a dedicated imaging solution, wherever your mission takes you.

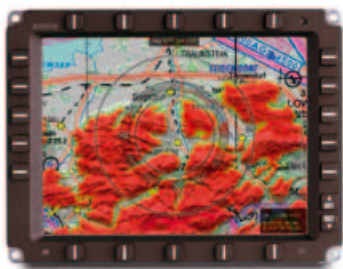
Courtesy of EADS CASA

Features & benefits

- Available in 5x4, 6x8 and 8x6 inch
- High-resolution screen (> 125 dpi)
- Multiple configurable inputs:
 - 1 Digital video input (DVI)
 - Up to 6 analog video inputs
- Unique state-of-the-art LED backlight
- Night vision compatibility (optional)
- Touch screen interface (optional)
- Extra wide viewing angle
- Input resolution from VGA to XGA
- Very compact design
- Extensive Built-In Test (BIT)
- RS422 external keyboard communication
- Ambient luminance control
- Compatible with Barco MOSArt™ processing unit

Comprehensive product range

The MDU-2000 range is available in different sizes, different orientations and with a variety of interfaces. At present, the family includes a 5x4 inch MDU-254 and a 6x8 inch MDU-268.



MDU-254 (5x4 inch)



MDU-268 (8x6 inch)



MDU-268 (6x8 inch)



Photo US Navy - Joe Kane

Excellent visual performance

The MDU-2000 line is equipped with high-grade, sunlight-readable Active Matrix Liquid Crystal Displays (AMLCD), providing exceptionally high brightness and excellent contrast. Sophisticated image processing capabilities, such as Picture-In-Picture (optional), scaling and rotating, along with avionics-grade AMLCD technology capable of displaying a maximum number of grayscales turn the MDU-2000 into a perfect solution for a multitude of mission applications.

Easy integration

The MDU-2000 family is fitted with leading edge electronics that enable a very compact footprint (maximum 4.5" depth) and low power consumption. Because of this, the MDU-2000 displays can be integrated in virtually any cockpit or cabin environment.

Avionics certified

The MDU-2000 displays are DO-178B (software) and DO-254 (hardware) certified up to level C, for the DVI input.

Digital and analog video inputs

The MDU-2000 family has the unique capability to accept a digital video input (DVI) and most of the currently available analog video inputs (composite PAL/NTSC, STANAG 3350 and/or RGB,...). This, combined with a Picture-In-Picture functionality (optional), offers system integrators the flexibility to show single or multiple video sources on the same display area, thereby providing extended mission situational awareness.

Extensive On Screen Display functionality

The MDU-2000 family includes extensive On Screen Display (OSD) functionality: this feature can be used to fully define soft label & legends and their behavior allowing better control of the various display modes using either the keyboard, an RS422 interface or the optional touch screen.

Optional touch-screen interface

The MDU-2000 Mission Displays Units are available with a unique touch screen control function based on infrared LED-based technology. It transforms the display into a powerful and intuitive control interface, without degrading the optical features of the display in any way.

Technical specifications

GENERAL DATA

Weight:
 MDU-254: 2.3 kg / 5.1 lbs
 MDU-268: 3.8 kg / 8.4 lbs

Installation cut-out:
 MDU-254: 157.5 x 129 x 110 mm / 6.20 x 5.07 x 4.33 inch
 MDU-268: 190 x 242.2 x 90 mm / 7.48 x 9.53 x 3.54 inch
 (WxHxD, without connectors)

Power supply: 28 Vdc, DO-160E

Power consumption:
 MDU-254: 45W (operating)
 MDU-268: 70W (operating)

Extreme low temperature start:
 MDU-254: 85W (typ.)
 MDU-268: 150W (typ.)

Cooling: Internal fans

MTTR: Less than 0.5 Hours

Built-In Testing: IBIT, CBIT, PBIT

Software: RTCA/DO-178B

Hardware: RTCA/DO-254

ELECTRO OPTICAL

Panel type: AMLCD (Silicon TFT)

Panel resolution:
 MDU-254: 640 x 480 (VGA)
 MDU-268: 1024 x 768 (XGA)

Screen specifications: 262,144 colors, 64 grayscales
 (253 grayscales with dithering)

Brightness: White surface luminance 250 fL,
 856 cd/m²

Contrast ratio:
 >400:1 @ dark environment
 >7:1 @ 10,000 fc

Anti reflection: Multilayer coating MIL-C-14806

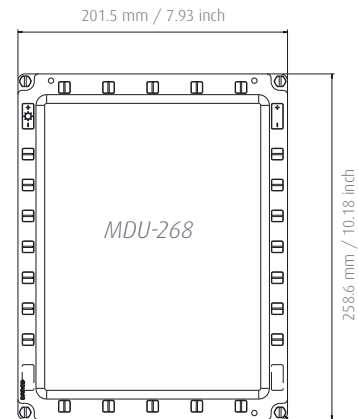
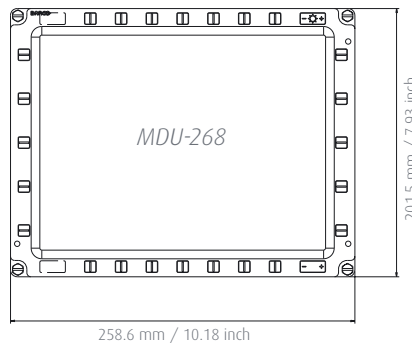
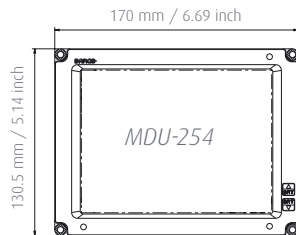
NVG compatibility: MIL-STD-3009 (optional)

Viewing angle:
 MDU-254: Horz: +/-60°, Vert: -15°/+45°
 MDU-268: Horz: +/-80°, Vert: +/-80°

CONTROLS

Controls (front): Brightness via rocker switch
 Automatic Light Control via 2 sensors

Keys: Programmable softkeys
 Customer selectable softkeys
 Touch screen interface (optional)



INTERFACES

Video inputs:
 1 DVI digital video
 Analog video (maximum 6,
 depending on format, including
 custom video timings)
 RS-170, NTSC, PAL, VGA to XGA RGB
 (SoG or+H,+V), STANAG 3350B & 3350C

I/O:
 Keyboard communication via RS-422
 status, video source/mode and OSD
 control

IMAGE PROCESSING

Functionality: Picture-In-Picture (optional), scaling,
 rotating, image dithering for high-precision
 grayscale rendering

ENVIRONMENTAL

Compliance: RTCA/DO-160E

High temperature: +55°C / +131°F (operational)
 +71°C / +160°F (30 mins)
 -40°C / -40°F (operational)

Low temperature:
 Warm-up time: 5 min.
 Operational: 10 min. full specs

Humidity: Up to 95% RH; 60°C condensing

Vibration: DO-160E, cat R, all curves

Operational shocks: DO-160E 20g (6g for 268)

Altitude: 50,000 ft (operational)

EMI/EMC: DO-160E

MTBF (calculated): 15,000 hrs (AIC)

OPTIONS

- Keyless bezel
- NVG compatibility: MIL-STD-3009
- Contrast control on second rocker switch for MDU-268



In search of continuous improvement

M00281-R03-04110-PB April 2011
 Technical specifications are subject to change without prior notice

www.barcoaerospace.com

Barco
 Pres. Kennedypark 35 - B-8500 Kortrijk, Belgium
 Phone: +32 56 233 045 - Fax: +32 56 233 588
 Email: sales.aerospace@barco.com

Barco, Inc.
 3059 Premiere Parkway, Duluth, GA 30097
 Phone: +1 678 475 8000 - Fax: +1 678 475 8007
 Email: avionics.sales_US@barco.com

