

Technical specifications

HARDWARE SPECIFICATIONS

GENERAL

Active display area

503.8 x 503.8 mm (19.83 x 19.83 inch)

Active screen diagonal

712.4 mm (28.05 inch)

Equivalent to 29 inch glass size

OPTICAL

Luminance

Peak brightness: > 240 cd/m²

Brightness: 150 cd/m² calibrated

Dimming ratio: typically 100:1

Contrast ratio

200:1 in dark environment

Front glass with high quality

anti-reflective treatment

Color performance

Color temperature: 7500°K typical

Display colors (without dithering):

16.7 Mio (24bit)

Pixel arrangement: RGB vertical stripe

Hor. & vert. pitch 0.246 mm (103 dpi)

Active screen area

2048 x 2048 pixels (4.2 MP)

Viewing angle

Hor. & vert. (min.) +/-80° typical

Removable backlight system

4 trays - field replaceable

Lamp lifetime typically >25000 hrs

INTERFACING

Video inputs

Modular input system; up to 2 inputs

can be installed

Analog / DVI

Input selection by control system

Max. 1 analog input

Analog RGB

Connector type: 5 x BNC

Termination: R,G,B 50 Ohm;

HS, VS 75 Ohm

Signal standard: 0.714V p-p

Resolution: 2048 x 2048

Timing: hor. frequency 126.84 kHz

Other details on request

DVI

Number of video inputs:

1 input/module

Connector type: DVI Panellink

Resolution: 2048 x 2048

Dual Link DVI

DDM BITE Compatibility

Video input and DB15 BITE interface

CONTROLS

• Front control module / OSD

• Maintenance keypad

• Remote serial control

Control module also available separately to be integrated into console

AUTOMATIC FUNCTIONS

Automatic Phase Adjust (APA)

Backlight aging compensation

Auto mains voltage adapt

Auto amplitude (during setup)

Autocenter (during setup)

ELECTRICAL

Power supply

Nominal voltage: 115 Vac & 230 Vac

Operates between: 90-264 Vac

Frequency range: 45-65 Hz

Power consumption

Pnom: 200 Watt

Pmax: 250 Watt

Power connector type: IEC

MECHANICAL

Chassis version

HxWxD: 595 x 595 x 144 mm

(23.42 x 23.42 x 5.67 inch)

Weight: 19.8 kg (44 lbs)

Panel-mount version

HxWxD: 595 x 595 x 177 mm

(23.42 x 23.42 x 6.97 inch)

Weight: 22 kg (48.2 lbs)

Desktop version

HxW: 669 x 659 mm (26.4 x 25.9 inch)

Weight: 32 kg (71 lbs)

ENVIRONMENTAL

Temperature

Operating: 10 to 40°C

EMI/EMC

FCC Class A Vol II, EN 5082-2

Safety

UL950, cUL1950, IEC950, CE, CCC

INPUT MODULES

Analog / DVI

OPTIONS

Spare backlight tray

CHECKUP!™ maintenance software

Conversion kits

Maintenance training

ISIS™



2K x 2K large size LCD display for Air Traffic Control



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Technical specifications are subject to change without prior notice

Large size 2K x 2K, low life cycle cost LCD display

Barco is a recognized international technology leader providing high-performance visualization solutions for demanding niche markets. A continued, focused investment of in-house research and development has given the company a unique expertise in providing LCD solutions for air traffic control applications. AQAP-110 and ISO 9001 certifications, configuration control and extensive environmental and lifetime testing programs ensure that the display solutions presented meet the requirements of aviation authorities worldwide. Barco's advanced display solutions have been integrated by major system integrators for leading air navigation service providers worldwide, including Eurocontrol and the US Federal Aviation Authorities.

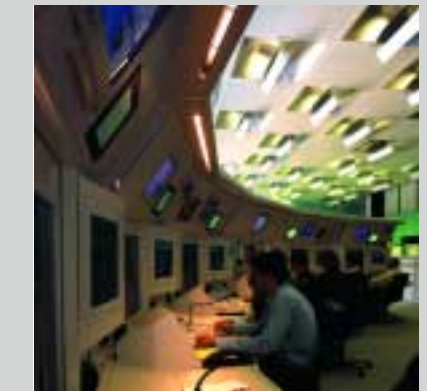
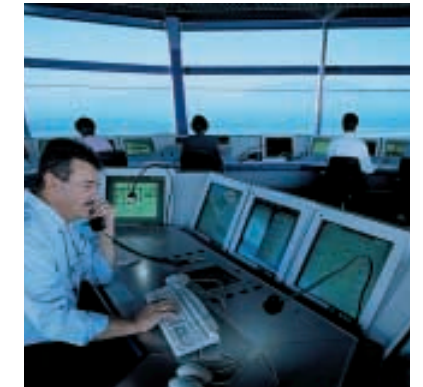


LCD technology offers new exciting opportunities for ATC applications. LCDs present an ergonomic, lightweight solution for ATC controller workstation positions.

Their high brightness displays more detailed information, offers enhanced user comfort and counteracts eye fatigue. Moreover, Barco's LCD displays have an extremely low life cycle cost: they do not need regular adjustments and replacing their backlight tray is less expensive and time-consuming than changing a traditional Cathode Ray Tube.

In addition, these field-replaceable backlights allow continuous image quality over the entire lifetime of the display.

The ISIS™ display's low weight, low power, small volume, high brightness and mechanical flexibility allow control center designers a new degree of freedom to reduce plant costs and improve operator comfort and performance.



Multi-functional design for ATC controller workstation positions

Low life cycle cost

ISIS™ offers breakthrough LCD technology at the lowest life cycle cost available and an investment cost similar to traditional CRT-based working positions. The



displays feature four field-replaceable backlight trays. If one of the backlights fails, the image remains completely readable, a must for safe image interpretation. Replacing these backlight trays costs substantially less than replacing a complete CRT picture tube. The ISIS™ LCD panels can be instantly mounted, easily interfaced and do not require regular adjustments after installation. Moreover, ISIS™ monitors the health and lifetime of its backlight assembly. This information can be accessed on a periodic basis by maintenance personnel to plan routine backlight replacement or re-lamping.

Built-In-Testing functionality and versatile remote connectivity make it possible to use the optional CheckUp!™ maintenance software to schedule proactive maintenance for a network of ISIS™ displays from one central location.

ISIS™ has been designed with a highly efficient power supply (that greatly reduces heat output) and an intelligent backlight system (that calibrates the light output of all ISIS™ displays). As a result, the LCD display takes considerably less console space and needs only 30% of the cooling of a traditional CRT display.



High-performance display system

The 4.2 megapixel, 20" x 20" ISIS™ flat panel main display exceeds the specifications imposed by the ATC Community, resulting in more detailed and crisper images that remain stable over time. The enhanced LCD brightness and the excellent viewing angle present users with detailed information, even in difficult ambient light conditions.

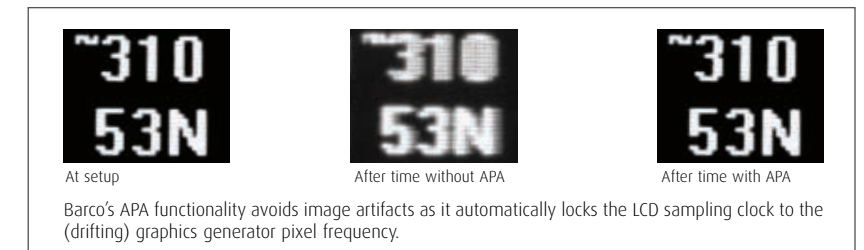


CRT compatibility

Barco considers the large investment the ATC community has made in 2048 x 2048 CRT displays for the last 15 years. ISIS™ provides mechanical, visual, and electrical compatibility with these displays to allow easy integration into consoles designed for CRTs or replacement of CRTs in existing consoles. An analog interface, identical to the one used for CRT displays, is available and the compatible RS-422 BITE port provides protocol emulation.

In addition, the mechanical "footprint" of ISIS™ is smaller (although the viewing area is identical), allowing it to be adapted to existing mechanical structures.

Although the ISIS™ LCD is truly digital, conversion of analog video into a digital image occurs with a high degree of accuracy, eliminating digital sampling artifacts thanks to Barco's unique Automatic Phase Adjust (APA).



Open architecture

The ISIS™ family offers a light-weight, low-depth, ergonomic solution that can easily be installed into both new and existing ATC workstations. The ISIS™ architecture has been designed to keep its functionality over time.

The open system approach makes it possible to connect any high quality (2K x 2K) graphics controller and change from analog to digital input at any point in time, thus securing your initial investment. Mechanical adaptation kits are available as an option.



The product family - MDP 471 series

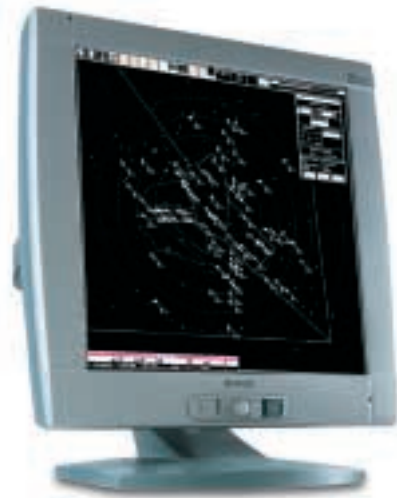
Chassis version MDP 471/CH

The chassis version has been especially designed for integration into workstations with rear side mounting. The OSD control unit can be purchased separately and can be built in into the console.



Desktop version MDP 471/DT

The desktop version, with a tilt and swivel base, has been styled for use on office desks.



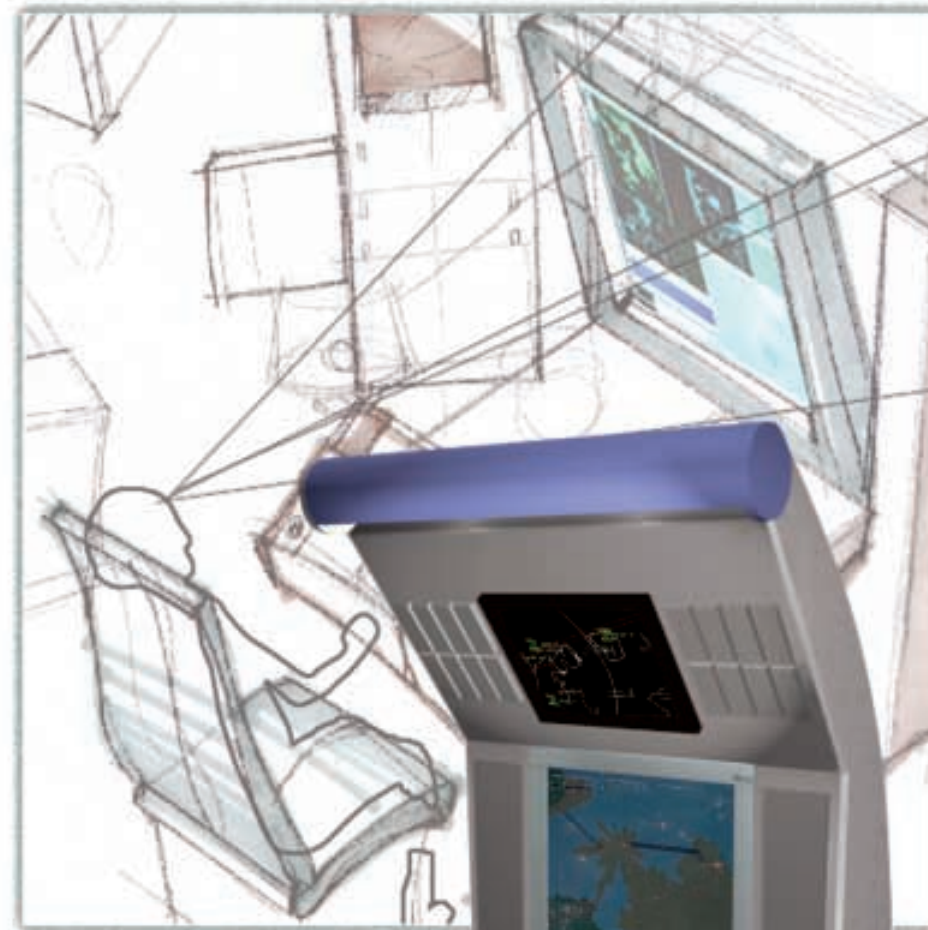
Panel-mount version MDP 471/PM

The panel-mount version, equipped with bezel and OSD control unit, features front side mounting.



Vesa-mount version MDP 471/VM

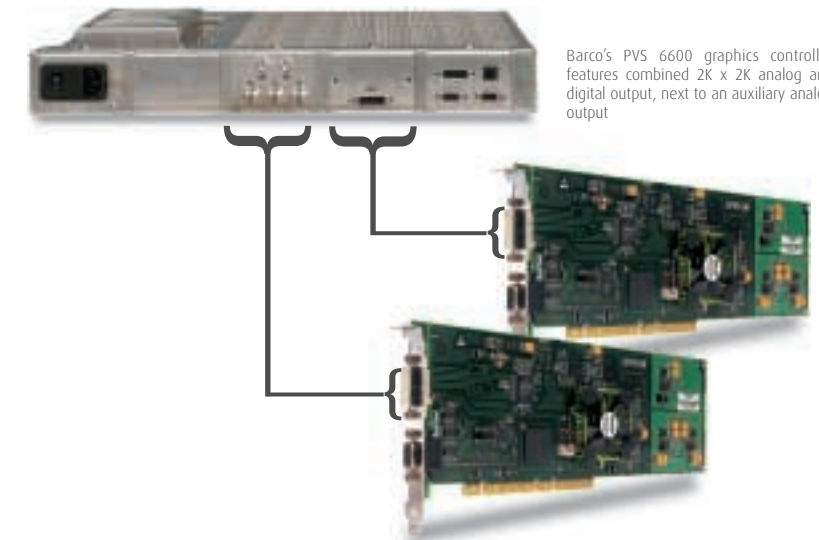
The VESA Mount version includes a rear cover and tilting arm with standard 100 mm VESA-interface. The kit can be used with arms that support 30 kg (66 lbs) or more.



Input options

The ISIS™ flat panel has up to three module bays, which can be filled with analog or DVI input boards (with maximum one analog board). These input boards process the image data received from analog and DVI 2K x 2K graphics controllers.

The modular ISIS™ architecture can be expanded with multiple input boards to provide redundancy or a stepped upgrade of an existing system. Automatic switchover and manual selection (OSD or remote) are provided.



Barco's PVS 6600 graphics controller features combined 2K x 2K analog and digital output, next to an auxiliary analog output

CheckUp!™ ISIS™ maintenance software

- Provides centralized status and maintenance of multiple ISIS™ installations
- Uses existing network or optional ISIS™ networking
- Intuitive GUI with user-definable display hierarchy
- Provides planning information for scheduled maintenance

