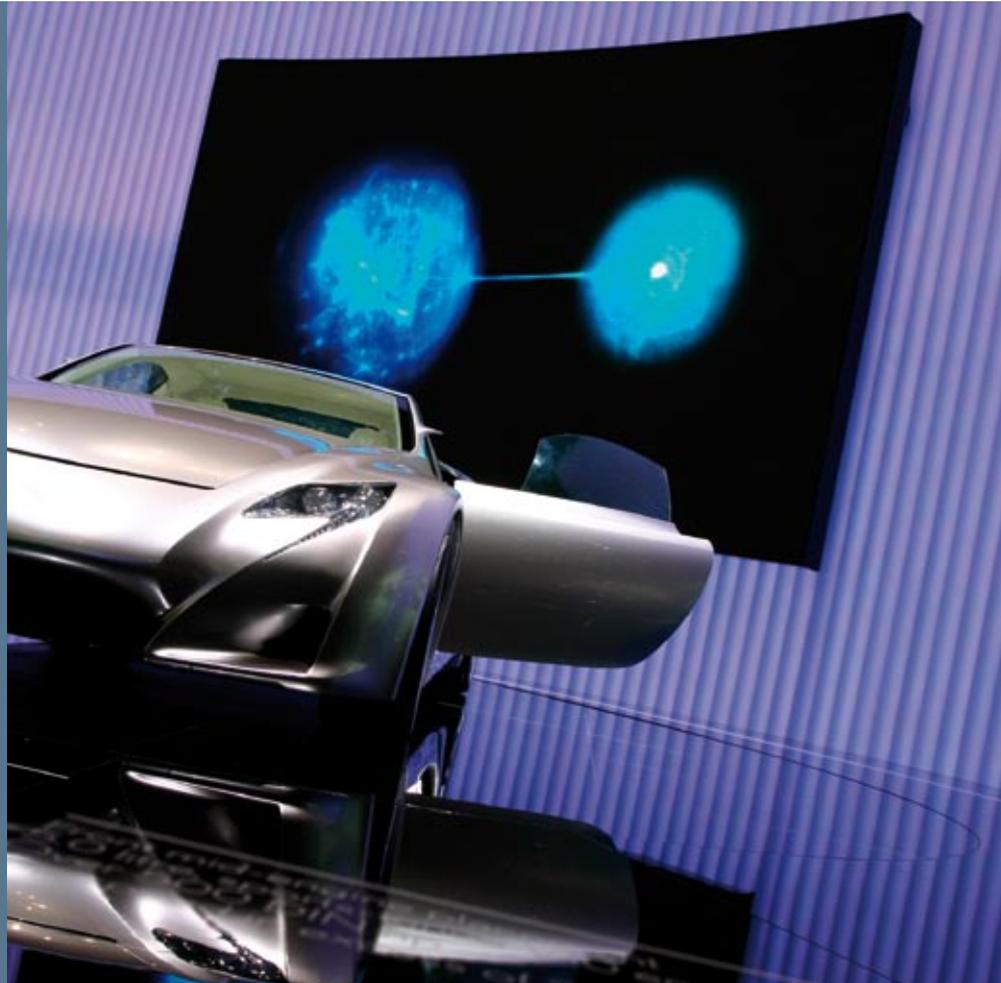


# NX-4

## The true Black LED display



### Key benefits include:

- Phenomenal black levels
- Contrast ratio of 4000:1
- Brightness output of 2000 Nit
- Seamless & lightweight
- 16-bit color & greyscales
- Consistent uniformity over time
- Creativity options
- Serviceable without tools

Barco introduces the next breakthrough in LED displays — the NX-4, the industry's new visual standard in indoor LED technology. With its revolutionary Black LED, the NX-4 delivers the deepest black levels of *any product* on the market.

But the new Black LED is only one element that makes the NX-4 unique. Key advances in base materials, mechanical design and color processing have raised the bar of LED displays to new heights of image quality.

NX-4 is not simply an incremental advance in 4mm LED tile technology — it's more, much more. In fact, the term "quantum leap" doesn't even come close.

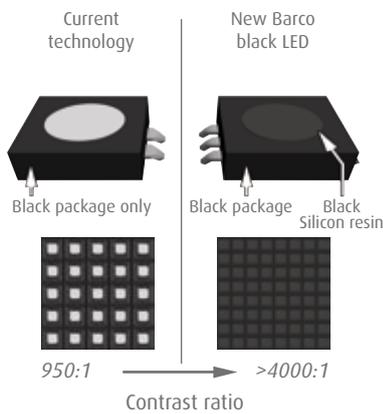
**BARCO**

Visibly yours

## The elegant contradiction - black and bright

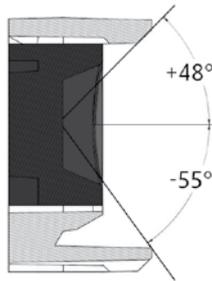
By far, the key factor that sets the NX-4 apart from all other LED displays is *immediately* evident — even when the LEDs are turned off. With the NX-4, Barco has developed a *true* black LED — not just a black package, but a radically new design, from the interior resin to the exterior shaders.

Using black silicon resin instead of the traditional white epoxy, not only does the NX-4 appear black, but each LED outputs the deepest blacks and brightest luminance levels of *any product* on the market — with a phenomenal contrast ratio of 4000:1 and a calibrated light output of 2000 Nit.



In addition, NX-4's remarkable output is enhanced by a new "light-trap" shader that combines a super-black shader casting with optimized geometry. The result — dramatically enhanced horizontal and vertical viewing angles, a significant reduction in light reflections and deeper black levels than ever before.

Is "black and bright" a contradiction? Yes — but a most elegant one, and only from Barco.



New visual

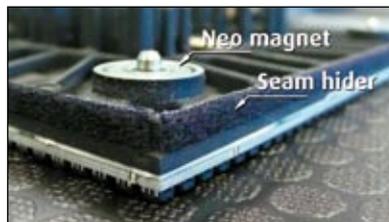
## Seamless and lightweight

Today's industry standard for mounting an LED wall is metal. While strong and roadworthy, metal frames are heavy, and very sensitive to deformation. To complement NX-4's new LED display benchmark, Barco has engineered the industry's new *structural* benchmark — the "Mag-frame".

Mag-frame is built of carbon fiber and is designed in a *framework* — rather than a box. The result is a support system far stronger, far lighter, and ten times less sensitive to deformation than the current "metal" structures. For added strength and fewer components, the structure uses optimized glue rather than screws, providing extremely tight tolerances along all three structural axes (x, y and z).

Not only is carbon fibre incredibly strong, it is also super light. The weight of the NX-4 tile including structure and cables is 59kg/sqm, 21% less than ILite 6XP. For the crew, this translates into significant savings in terms of transportation, serviceability, and far less stress on the overhead truss.

Barco has also transformed the *entire science* of mounting the modules within the tile. With Mag-frame, LED modules connect directly to the structure via high-strength neodymium "neo" magnets, rather than traditional screws. No tools are required for mounting or removal. With each magnet capable of holding over 1000 times its own mass, the result is precise positioning, super easy setup, and a totally seamless display.



Neo magnet and seam hider

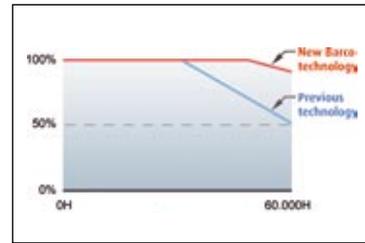


New Mag-frame

## Consistent uniformity over time

The NX-4's "black and bright" attributes will revolutionize the display industry, but *not* if the product's lifetime has to suffer as a result. To address this, Barco has engineered an "anti-aging" solution on three levels:

- By using next generation, highly efficient LED dies and running the LEDs at lower temperatures, extremely high brightness levels have been achieved at much lower currents. It's simple — Less stress equals longer life.
- Within the LED itself, the use of silicon instead of epoxy resin also slows the aging process, and provides a greater degree of reliability in humid operating conditions.
- NX-4's new "tri-color" LED calibration further ensures display stability and uniformity over time.

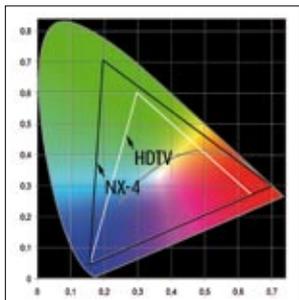


It's a fact that LEDs age, and their output declines in brightness over time. But with NX-4's technical advances, Barco has not only engineered an "anti-aging" solution, but an ROI solution as well — With the product's brightness declining to only 85% after 60,000 hours!



standard in LED displays

## Brilliant colors, breathtaking greyscales



Color triangle of new 'Black LED'

With the introduction of the NX-4, color processing advances to a new industry pinnacle — 16-bit processing and new "tri-color" calibration on all three colors simultaneously. Each NX-4 LED can deliver up to 281 trillion colors, enabling tiles to reach staggering new levels of color depth, uniformity, and gray-scale range — a critical requirement for all low brightness applications.

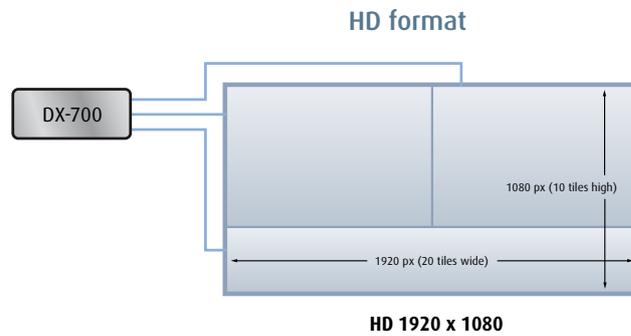
With a tight selection of LEDs and the 16-bit processing power of the NX-4, tiles can be calibrated to a larger color triangle — one that is actually *wider* than the HDTV standard,

delivering vibrant images with deep, uniform colors across the entire display surface. In combination with the DX-700, Barco's new 16-bit digitizer, the NX-4 delivers more colors, more detail, and a higher degree of uniformity than ever before — without sacrificing color depth. Effectively, NX-4 and DX-700 provide a brilliant "no compromise" system that must be experienced in person to fully appreciate — print simply does not do it justice!

## Native HD — by design

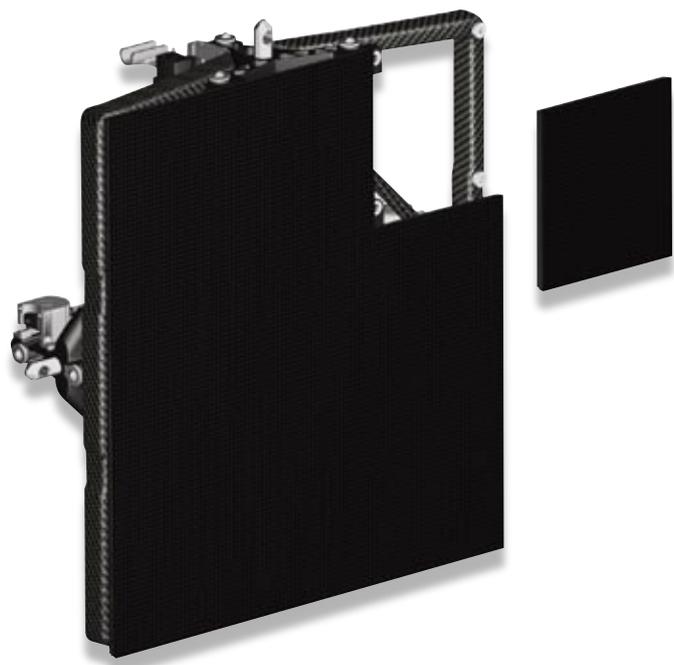
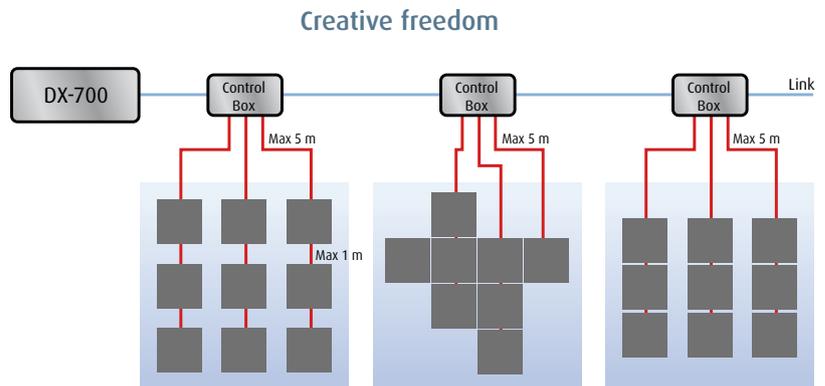
Each NX-4 tile consists of nine modules, plus a single control unit, which also houses the power supply and interface board. NX-4 tiles are 448mm wide by 504mm high (17.6 x 19.8 inches), with a 96 x 108 pixel resolution.

Individually, each tile's aspect ratio is 8:9. Place two tiles side-by-side and you're spot on 16:9 — and precisely ready for HD. Given a 20 x 10 tile array, your exact pixel resolution is 1920 x 1080 — the native HD resolution.



## Get creative

NX-4 also employs the same small modular concept as Barco's renowned OLite series — allowing the tiles to be used either as a standard *integral* display, or split apart for creative designs. And when used in conjunction with Barco's Director Toolset, you can build displays of any shape or form — limited only by your imagination.

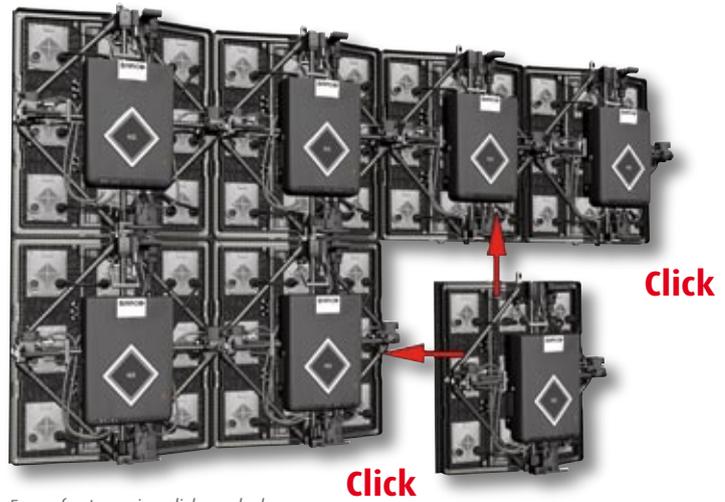


## Remove the tools, improve the serviceability

With the NX-4, Barco designers have given you less to work with! That is, no tools or cables are required to set up and secure an NX-4 LED wall, or take it apart for service. And because the Mag-frame is essentially an open structure, there's easy access to every module, the control unit and interface boards. The control unit can even be opened while the tile is fully operational. For added serviceability, if any shader is damaged, they are easily removed and replaced.

The inter-tile locking system has also been re-designed for ease of setup, with simplified electrical connections, accurate "click" pre-locks, robust horizontal and vertical locking mechanisms — and (once again), no cables or tools required.

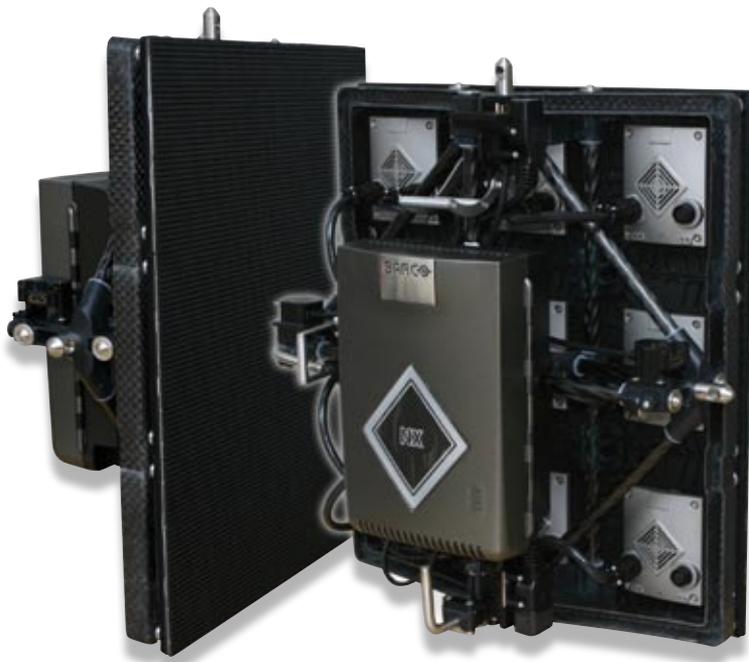
We give you less — to your distinct advantage!



*Ease of setup using click pre-locks*



*Control unit can be opened while the tile is operational*



## DX-700 processor – purpose-built for the NX-4

Barco's new DX-700 is a multi-window processor designed as a versatile, advanced digitizer for all current Barco LED products and all next generation platforms such as NX-4. With DVI output modules designed specifically for current products (such as MiPIX, DLite 7 and OLite 612 I6XP), and new "NNI" output modules designed specifically for NX-4 tiles, DX-700 provides the power of 16-bit processing, modularity, and multi-bank control.

DX-700 is further enhanced with "universal" input modules that enable you to connect DVI (RGB or YCbCr), Dual-DVI (RGB), Component Analog (RGB or YPbPr), SD-SDI, HD-SDI, and Dual HD-SDI formats.

You can also configure a single DX-700 with multiple input and output modules, in a variety of creative configurations, and link multiple DX-700's together for larger, more complex setups.



### Additional DX-700 features include:

- 16-bit processing
- 10-bit color depth, in either 4:4:4 or 4:2:2 input format
- Motion-adaptive de-interlacing
- Dynamic contrast enhancement on any input source
- Input adjustments, including saturation, balance and sharpness
- Seamless transitions between inputs
- Color-keying
- Digital video effects, including freeze, strobe and linear color transformations
- Comprehensive "wizards" for input and output setup
- Presets storage and recall

... and so much more. With DX-700 in your system, not only will your NX-4 tiles shine with the full spectrum of color and detail, but your *legacy* Barco tiles will appear more brilliant than ever before.

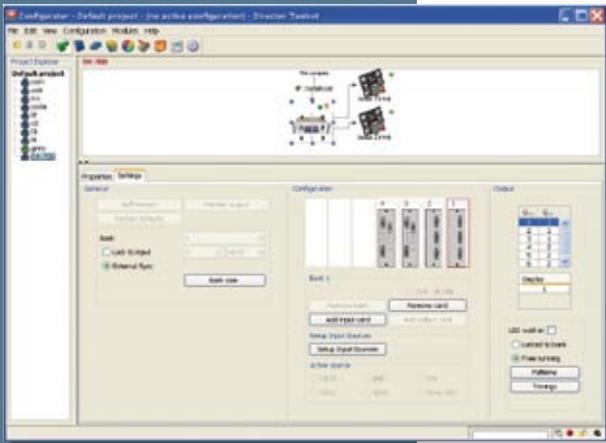


## Director Toolset

### Advanced installation and control software

Barco's Director Toolset is an integrated software package which provides an intuitive, graphical interface for fast installation, system calibration, layout configuration and display control.

As a modular application, the Director Toolset is now easier and faster to update and manage in the field. Key features include:



New configuration module

### Configuration module

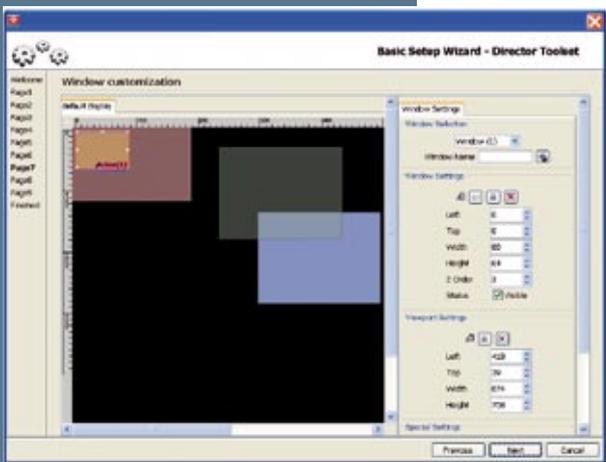
- Improved management system (copy, delete, save etc.)
- Complete projects can be created off-line
- Easy to switch between different setups (configurations)
- Clear connectivity overview
- Group presets, enabling you to recall presets on different displays simultaneously
- Direct access to all devices (LED, Digitizer, Fiber, AEC)

### Tile position module

- Selectable positioning method (auto or manual)
- Improved manual/creative positioning method
- Ability to configure creative wall configurations
- Ability to split displays into segments (e.g. long tickertapes, multiple walls driven by a single processor)

### Operations module

- Easy copy of setting (viewport & window)
- Selectable color/window and picture insertion
- Easy setup/recall of presets via preview/live window
- Undo/redo function
- New integrated stack manager, enabling you to easily manage stacked configurations



New basic module

### Monitoring module

- Semi automatic bug reporting tool
- Configuration report generation

### IX module

- Creative design module for NX-4, MiTRIX, MiSTRIP, OLite modules, MiPIX and MiSPHERE

### Basic module (new)

- An easy setup wizard which enables users to set up LED displays, align input sources and create presets with ease

### General features

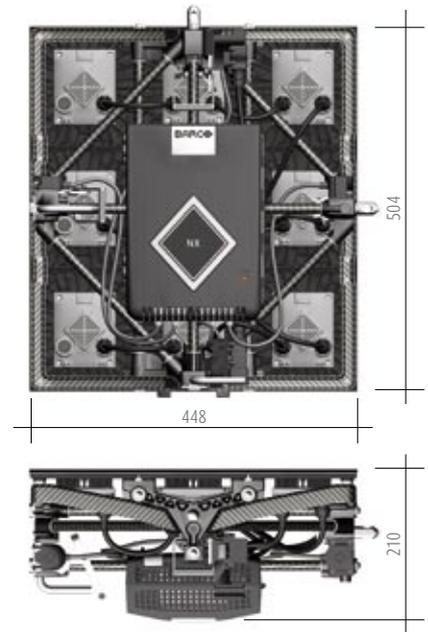
- Configuration report generation
- Automatic software/firmware downloads functionality (new)
  - Automatically scans and downloads the latest software and firmware from a secured web server
  - Eliminates the need to access the Partner Zone in order to have the latest code

## NX-4 specifications

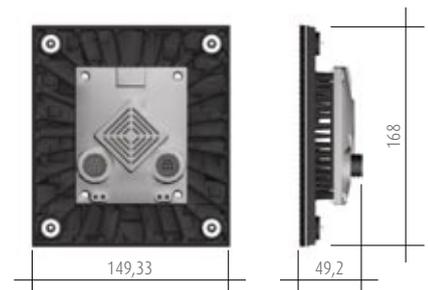
<b>Pixel pitch</b>	4.6 mm	
<b>Brightness</b>	2000 Nit	display calibrated at 6500K
<b>LED configuration</b>	3-in-1 SMD	
<b>Pixel density</b>	45,931/sqm	
	4,271/sqf	
	10,368/tile	
<b>Viewing angle</b>	120 degree	horizontal (min 50 % brightness)
	+48, -55 degree	vertical (min 50 % brightness)
<b>Contrast ratio</b>	4000:1	at 500 lux
<b>Lifetime</b>	60,000H	full white, 85 % brightness
<b>Power consumption</b>	300W	maximum
	132W	average
<b>Weight / tile</b>	13.3Kg	including structure, cable
	29.3lbs	including structure, cable
<b>Processing</b>	16 bit/color	
<b>Colors</b>	281 trillion	
<b>Refresh rate</b>	3,200Hz	
<b>Temperature</b>	0 - 40 degree	operating
	-20 - 60 degree	storage
<b>Humidity</b>	35 - 85 %	operating
	10 - 90 %	storage
<b>Source compatibility</b>	CVBS, YC, YUV, RGB, DVI (Single and Dual Link, up to 2048x1536), SDI, HD-SDI, Dual link HD-SDI	
<b>Certification</b>	CE class A, TUV, FCC Class A, ETL, Cebec	
<b>Order number</b>	R9052771	

## NX-4 dimensions

Tile



Module



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