Nio Color 5MP (MDNC-6121)

5.8 MP high-bright color display

1.1. NIO COLOR 5MP
5.8 MO didelio šviesumo spalvoti monitoriai

1.1. „Nio Color 5MP“ silo itin ryškius, sukalibruotus spalvotus ir detaliausius medicininius vaizdus, iskaitant mamografija ir krutu tomosinteze.

- **Designed for radiology and mammography**
- **High-bright, steady colors and grays**
- **Front sensor and QAWeb Enterprise for always-on compliance**

Nio Color 5MP offers super bright, color calibrated and the most detailed medical images, including mammography and breast tomosynthesis. It's how we help you improve your workflow and make more confident diagnoses.

No detail goes unnoticed

Barco's Nio Color 5MP renders excellent color and grayscale images used in general radiology as well 2D and 3D mammography. Its high brightness and high contrast ratio help you discern the most subtle image details for an accurate diagnosis. And the additional resolution allows you to fit more of the image on the screen for reduced panning and zooming.

Using Barco's integrated front sensor, the Nio Color 5MP works perfectly together with Barco's QAWeb Enterprise solution for automated Quality Assurance and calibration. QAWeb Enterprise guarantees stable DICOM grayscale images and, with SteadyColor, consistent calibrated color images throughout the display's lifetime.

Work smarter

With the integrated smart features, you can easily take control and improve your productivity. SpotView™, for example, allows you to focus on an area of interest to unveil even more details. And with DimView™, auxiliary displays can be dimmed automatically so they don't interfere with your reading experience.

The Nio Color 5MP is an excellent solution for radiologists who want to angle their desktop: it lets you choose your preferred viewing angle and offers a highly ergonomic display configuration. It's also possible to switch between Clearbase and Bluebase viewing modes on-the-fly. Whether to suit the image type or to change reading preferences, you decide which color you want, and

when.

Ultimate peace of mind

Thanks to the high-performance LED backlights, the Nio Color 5MP has a positive impact on both maintenance and operational costs. The display is equipped with an integrated glass cover to safeguard your investment.

Barco is the only company that provides complete system solutions, from display and controllers to workflow tools and calibration via QAWeb. All components are covered by our full 5 -year warranty. At product release, we extensively test our displays' compatibility with all major PACS applications.

Ensuring diagnostic confidence with MDR Class IIa

Our radiology displays are MDR-certified as Class IIa. Their product information has been reviewed and cleared by independent medical and technical experts, and is audited yearly. In other words, we ensure diagnostic confidence and peace of mind for our users.

Please consult your Barco representative or distributor in your country or territory to confirm availability. A reference to any product or service on this site does not imply that such product is or will be available in your location.

Product specifications	NIO COLOR 5MP (MDNC-6121)
General specifications	
Screen technology	LCD
Active screen size (diagonal)	541 mm (21.3")
Active screen size (H x V)	324.45 x 432.6 mm (12.77" x 17")
Aspect ratio (H:V)	3:4 for each display in portrait mode, 3:2 overall
Resolution	5.8 MP (2100 x 2800 pixels)
Pixel pitch	0.1545 mm
Color imaging	Yes
Gray imaging	Yes
Bit depth	30 bit
Viewing angle (H, V)	178°
Uniformity correction	ULT
SteadyColor Calibration	Yes, when used as system with MXRT display controller
SteadyGray	Yes
I-Luminate	Yes
Ambient Light Compensation (ALC)	Yes, reading room selection
Front sensor	Yes
Maximum luminance	1300 cd/m^2
DICOM calibrated luminance	600 cd/m^2
Contrast ratio (panel typical)	1400:1
Response time ((Tr + Tf)/2) (typical)	12.5 ms
Housing color	RAL 9003 / RAL 9004
Video input signals	DVI-D Dual Link (2x) DisplayPort (2x)
USB ports	1x USB 2.0 upstream (endpoint) 2x USB 2.0 downstream
Power rating	24 VDC, 5 A; 5 VDC, 0.1 A
Power requirements	This device shall only be powered by the following medical approved power supplies: Adapter Technology, type CMD160-P240 Ratings marked on the medical power supply: ▪ Input rating: 100–240 VAC, 1.9–0.8 A, 50/60 HZ ▪ Output rating: 24 VDC, 6.3 A; 5 VDC, 0.5 A
Power consumption	60 W (nominal) < 0.5 W (standby)
Dimensions with stand (W x H x D)	Portrait: 378 x 528~628 x 235 mm Landscape: 491 x 472~572 x 235 mm
Dimensions w/o stand (W x H x D)	Portrait: 378 x 491 x 84 mm Landscape: 491 x 378 x 84 mm
Dimensions packaged (W x H x D)	500 x 280 x 670 mm
Net weight with stand	With protective cover: 11.6 kg Without protective cover: 10.2 kg
Net weight w/o stand	With protective cover: 6.6 kg Without protective cover: 5.2 kg
Net weight packaged	With protective cover: 17.0 kg (without optional accessories) Without protective cover: 15.7 kg (without optional accessories)

Product specifications	NIO COLOR 5MP (MDNC-6121)
Tilt	-10° to +30°
Swivel	-45° to +45°
Pivot	90°
Height adjustment range	100 mm
Mounting standard	VESA (100 mm)
Screen protection	Protective, anti-reflective optical glass (optional)
Recommended modalities	All digital images, including digital mammography
Certifications	CE0123 (Medical Device) FDA 510(K) K170476 for General Radiology, Digital Mammography and Breast Tomosynthesis CCC (China), KC (Korea), INMETRO (Brazil -Product numbers K9300360B, K9300361B), BIS (India), EAC (Russia, Kazakhstan, Belarus, Armenia and Kyrgyzstan) Safety specific: IEC 60950-1:2005 + A1:2009 EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013 IEC 62368-1:2018 EN IEC 62368-1:2020 IEC 60601-1:2005 + A1:2012 EN 60601-1:2006 + A1:2013 + A12:2014 ANSI/AAMI ES 60601-1:2005 + R1:2012 CAN/CSA C22.2 No. 60601-1:14 EMI specific: IEC 60601-1-2: 2014 (ed.4) EN 60601-1-2:2015 (ed.4) FCC part 15 Class B ICES-001 Level B VCCI (Japan) Environmental: China Energy Label, EU RoHS, China RoHS, REACH, Canada Health, WEEE, Packaging Directive
Supplied accessories	User guide Documentation disc System sheet Video cable (1 x DisplayPort) Mains cable(s) USB 2.0 cable External power supply
Optional accessories	Display controller
QA software	QAWeb
Warranty	5 years, including 40000 hrs backlight warranty
Operating temperature	0 °C to 40 °C (15 °C to 30 °C within specs)
Storage temperature	-20 °C to 60 °C
Operating humidity	8% to 80% (non-condensing)
Storage humidity	5% to 85% (non-condensing)
Operating pressure	70 kPa minimum
Storage pressure	50 to 106 kPa

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MXRT-4700

4GB small form factor display controller

- **Optimal performance**
- **Reliable longevity**
- **Guaranteed workflow support**

Redefining entry-level workflow

The Barco MXRT-4700 graphics card packs all the power expected from larger display controllers into a compact package capable of delivering seamless performance whether reading at the hospital or from home. With 4GB of graphics memory driving three DisplayPort 1.4 outputs, it is the ideal solution for those looking for a no-compromise, reliable professional graphics card versatile enough to drive larger resolution displays.

Accelerate your workflow application responsiveness with 512 stream processors and enable more efficient data transfers between the GPU and CPU with PCIe® 3.0 support. Key features include 3 ports to cover most basic display configurations, increased memory for larger PACS data loading, EDID emulation for multi-workstation configurations, and 30-bit color depth support in a low power, compact form factor.

Please consult your Barco representative or distributor in your country or territory to confirm availability. A reference to any product or service on this site does not imply that such product is or will be available in your location.

- 4GB GDDR5 display memory
- 96 GB/s memory bandwidth
- 128-bit memory interface
- 1 DisplayPort 1.4 & 2 mini DisplayPorts 1.4 (2 mDP to DP locking adapters included)
- Maximum power consumption: <50W

Product specifications	MXRT-4700
General specifications	
Bus compatibility	PCIe Gen3 x8
Power consumption	< 50W
Form factor	168 mm (L) x 60mm (H) single wide PCIe slot
Operating system	Windows 7 (64-bit), Windows 10 (64-bit)
Platforms	Intel® and AMD architectures
Power Connector	None
Graphics accelerator	AMD Radeon Pro™
Display memory	4GB DDR5
Memory interface	128-bit 1.2. Anmintines sasaja 128 bitai.
Memory bandwidth	96 GB/s
Pixel depth	32-bit pixels (10-bit grayscale and 30-bit color) 1.2. Pikselio gylis 32 bitai (10 bitu pikajai skalei, 30 bitu spalvotai)
Electrical standard	DisplayPort (DP) v1.4
Direct3D hardware support	Microsoft® DirectX v12, Vulkan® 1.1, Shader Model 5.1
OpenGL hardware support	OpenGL 4.5
Connectors	(1x) DisplayPort 1.4 (2x) Mini-DisplayPort 1.4
Connectivity	Native DisplayPort suggested DisplayPort to Single-link DVI adapter available separately (2x) Mini-DP to DP locking adapter included
Operational temperature	0° to 55°C
Approvals and compliance	FCC Part 15 Class B, CE EN 55032 Limit B, EN 55024, UL-60950-1, BMSI CNS, CISPR-32/24, IEC609050-1, VCCI, CSA C22.2, EU RoHS directive (2011/65/EU), Certificate of Information & Communication Equipment (Republic of Korea)

Last updated: 17 May 2023

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MXRT-x700 Workstation Compatibility Matrix

- All PC workstations previously validated with the MXRT-x600 series are compatible with the new MXRT-x700 series display controllers
- The following table represents the latest validated offerings from each vendor
- The workstations listed are tower configurations, unless if explicitly indicated otherwise

MXRT Display Controller	MXRT-2700	MXRT-4700	MXRT-6700	MXRT-8700[1]	eGFX-VTMx700
Video outputs	*DisplayPort x 1* *Mini-DP x 2*	*DisplayPort x 1* *Mini-DP x 2*	*DisplayPort x 4*	*Mini-DP x 6*	*6700: DPx4* *4700: DPx1/mDPx2*
DELL EMC	T7820 T5820 T3630 T3431 (SFF) T3240 (SFF) Precision 3460 (SFF) 3260 Compact	T7820 T5820 T3630 T3431 (SFF) T3240 (SFF) Precision 3460 (SFF) 3260 Compact	T7820 T5820 T3630	T7820 T5820 T3630	Precision 3551 7550 / 7750 3561 / 3571 5560 / 7560 5760 / 7760
hp	Z8 Z6 Z4 Z2-G4 (SFF) Z2-G9 HP Z2 G9 (SFF[5])	Z8 Z6 Z4 Z2-G4 (SFF) Z2-G9 HP Z2 G9 (SFF[5])	Z8 Z6 Z4 Z2-G9 HP Z2 G9 (SFF[5])	Z8 Z6 Z4[2] Z2-G9 HP Z2 G9 (SFF[5])	Zbook G5 / G6 / G7
Lenovo	P720 / P520 P340 P350 (SFF[3]) P360 P360 Ultra[6]	P720 / P520 P340 P350 (SFF[3]) P360 P360 Ultra[6]	P720 / P520 P340 / P350 P360[4]	P720 / P520 P340 / P350 P360[4]	ThinkPad P1 / P43s P14s / P15v P14s Gen3 P15v Gen3

1.2. Vaizdo plokštės ir kompiuterio suderimnmumas

MXRT-x700 series requires WIN7 or WIN10 / WIN11 (64-bit versions only). eGFX compatible with WIN 10/11 only.

[1] MXRT-8700 requires a 6-pin PCIe power connector and consumes up to 130W. Contact PC vendor to confirm power supply options for specific models.

[2] HP Z4 requires additional fan unit.

[3] SFF=Small Form Factor workstation. Requires vacant 2nd HDD bay and bracket removal.

[4] Additional steps are required to install or remove MXRT-6700 and MXRT-8700 display controllers from the system. Please refer below knowledge base article for detailed instruction. https://www.barco.com/en/support/knowledge-base/6185-installation-and-removal-of-the-mxrt-7600-8700-from-the-lenovo-p360

[5] Full Height Graphics Enabled Chassis. Please refer below knowledge base article for how to insert and remove properly the Barco MXRT-x700 display controller from an HP Z2G9SFF workstation. https://www.barco.com/en/support/knowledge-base/7074-how-to-insert-and-remove-a-mxrt-8700-from-a-hp-z2g9sff-workstation

[6] System BIOS version S0FKT23A is required.

MXRT-x700 Display Configuration Matrix

- A versatile MXRT lineup enables workstation and display configuration flexibility
- The below chart provides guidance for recommended MXRT/display configuration combinations

MXRT Display Controller		MXRT-2700	MXRT-4700	MXRT-6700	MXRT-8700
	Video outputs	*DisplayPort x 1* *Mini-DP x 2*	*DisplayPort x 1* *Mini-DP x 2*	*DisplayPort x 4*	*Mini-DP x 6*
CONFIGURATIONS[6]	Dual 2/3MP or single 4/6MP w/wo aux. display	✓	✓✓	✓	✓
	Quad 2/3MP or dual 4/6 MP	—	—	✓✓	✓
	Quad 2/3MP or dual 4/6MP w/aux. display	—	—	✓[5]	✓✓
	Pathology 8MP	—	✓	✓✓	✓
	Dual 5MP or single Nio 12MP	—	✓✓	✓	✓
	Dual 5MP or single Nio 12MP w/aux. display	—	✓	✓✓	✓
	Quad 5MP or dual Nio 12MP	—	—	✓✓	✓
	Quad 5MP or Dual Nio 12MP w/aux. display	—	—	—	✓✓
	Coronis Uniti w/wo aux. display	—	—	✓	✓✓
	Dual Coronis Uniti w/wo aux. display	—	—	—	✓✓

[5] Only compatible with Barco's current MST-equipped 4/6MP displays. Additional auxiliary display configurations possible in combination with Intel onboard graphics.
[6] Some display/display controller configurations available only in select regions

— = Incompatible ✓ = Compatible ✓✓ = Recommended

MXRT and Display Compatibility Guide

Updated: 7/09/2022

Not all configurations available in all regions.

Barco Display			Display Driver 10.184.3.1											
			Barco MXRT Display Controller											
			2700	4700	6700	8700	2600	4600	5600	7600	5550	7500	5450	1451
			1xDP, 2x mDP	1xDP, 2x mDP	4x DP	6x mDP	2x DP	4x mDP	4x DP	4x DP	2x DVI	4x DP	2x DVI SL	2x DVI SL
		EOS Date	Shipping	Shipping	Shipping	Shipping	Aug-25	Aug-25	Jun-25	Jul-25	*Sep-22*	*Sep-21*	Jan-22	*Jan-22*
	Clinical													
COLOR	MDRC-1119	Dec-22	X‡	X‡	X‡	X‡	X‡	X	X‡	X‡	X	X‡	X	X
COLOR	MDRC-1219	Shipping	X	X	X	X	X		X	X	X	X	X	X
COLOR	MDRC-1219 HB	Shipping	X	X	X	X	X		X	X	X	X	X	X
COLOR	MDRC-2120	*apr/17*	X‡	X‡	X‡	X‡	X‡	X	X‡	X‡	X	X‡	X	X
COLOR	MDRC-2224	*Oct-21*	X	X	X	X	X	X	X	X	X	X	X	X
COLOR	MDRC-2124	*Apr-17*	X	X	X	X	X	X	X	X	X	X	X	X
COLOR	MDRC-2221	*Aug-22*	X	X	X	X	X	X	X	X	X	X	X	X
COLOR	MDRC-2122	*Nov-20*	X	X	X	X	X		X	X	X	X	X	X
	Nio													
GRAYSCALE	MDNG-2121	*Apr-19*	X‡	X‡	X‡	X‡	X‡	X	X‡	X‡	X	X‡	X	X
GRAYSCALE	E-2620	*May-12*							X‡		X		X	
GRAYSCALE	MDNG-5221	Shipping	X	X	X	X		X	X	X	X	X	X	
GRAYSCALE	MDNG-6221	Shipping	X	X	X	X		X	X	X		X		
COLOR	MDNC-3121	*Mar-19*	X*	X*	X*	X*		X	X*	X*	X	X*	X	
COLOR	MDNC-3120	*May-14*							X*		X			
COLOR	MDNC-2221	Shipping	X	X	X	X	X	X	X	X	X	X	X	X
COLOR	MDNC-2121	*May-19*	X‡	X‡	X‡	X‡	X‡	X	X‡	X‡	X	X‡	X	X
COLOR	E-2320-C	*Dec-13*							X		X		X	X
COLOR	E-2320-C SE	*Dec-13*							X		X		X	
COLOR	MDNC-4130	*Sep-15*							X‡		X		X	
COLOR	MDNC-3321	*Nov-21*	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDNC-3421	Shipping	X	X	X	X	X		X	X	X	X	X	
COLOR	MDNC-6121	Shipping		X	X	X			X	X		X		
	Coronis													
GRAYSCALE	MDCG-2121-CB	*Nov-18*	X‡	X‡	X‡	X‡	X‡	X‡	X‡	X‡	X	X‡	X	X
GRAYSCALE	MDCG-3221	Shipping	X	X	X	X	X	X	X	X	X	X	X	
GRAYSCALE	MDCG-5121	*Sep-20*	X	X	X	X	X		X	X	X	X	X	
GRAYSCALE	MDCG-5221	Shipping	X	X	X	X	X		X	X	X	X	X	
GRAYSCALE	MDCG-10130	*Sep-20*			X	X			X	X	X	X	X	
GRAYSCALE	MDMG-5221	Shipping	X	X	X	X	X		X	X	X	X	X	
GRAYSCALE	MFGD-2320	*Mar-12*							X‡		X		X	
GRAYSCALE	MFGD-2621	*Dec-11*							X‡		X		X	
GRAYSCALE	MFGD-3420	*Nov-11*							X‡		X		X	
GRAYSCALE	MFGD-3621	*Nov-11*							X‡		X		X	
GRAYSCALE	MFGD-5621 HD	*Dec-14*							X‡		X		X	
COLOR	MDCC-2121	*Sep-18*	X‡	X‡	X‡	X‡	X‡		X‡	X‡	X	X‡	X	X
COLOR	MFCD-2320	*Jul-11*							X‡		X			
COLOR	MFCD-2321	*Jul-11*							X‡		X			
COLOR	MDCC-3120	*Sep-13*			X*				X*		X		X	
COLOR	MDCC-4230	*Mar-21*	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDCC-4330	Shipping	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDCC-4130	*Mar-21*	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDCC-4430	Shipping	X	X	X	X	X	X	X	X		X		
COLOR	MDCC-6130-DL	*Sep-18*			X*	X*			X*	X*	X	X*	X	
COLOR	MDCC-6230	*Apr-20*	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDCC-6330	*Aug-21*	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDCC-6430	Nov-24	X	X	X	X	X	X	X	X	X	X	X	
COLOR	MDCC-6530	Shipping	X	X	X	X	X	X	X	X		X		
COLOR	MDMC-12133	Shipping				X				X		X		
COLOR	MDPC-8127	Shipping	X	X	X	X			X	X				

2.1. MDNC-6121 suderinami su MXRT-4700

Blank	Not tested compatible by Barco
X	Compatibility verified by Barco
X*	Compatibility with Dual-Link Dongle Only
X‡	Compatibility with Single-Link Dongle
Mth/Yr	EOS (follows EOL+5 years)

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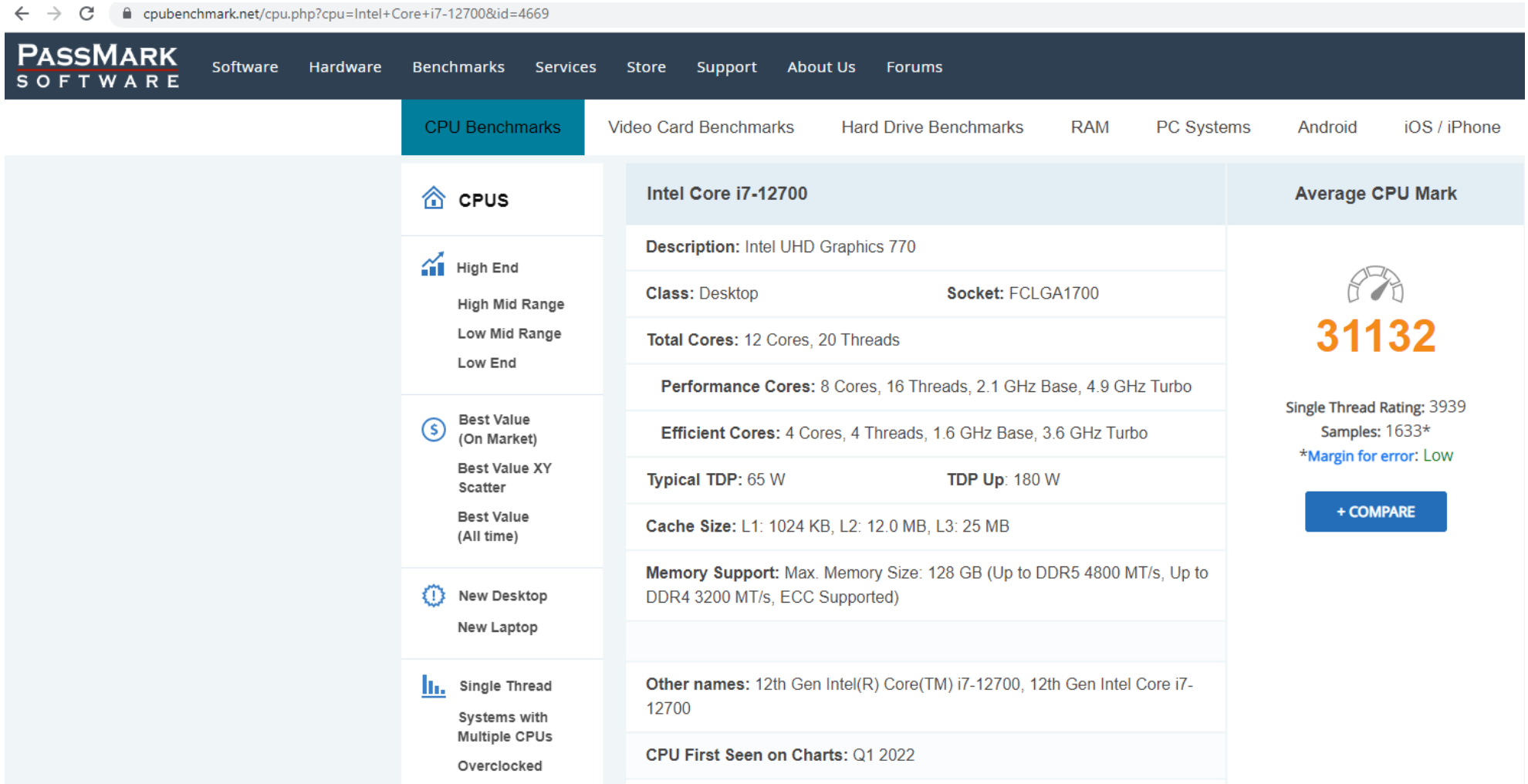
Punktas 1.4.1

Procesoriaus našumas pagal viešai skelbiamus Passmark performance CPU mark procesorių įvertinimo rezultatus: **31132**.

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