

NEC NEXT GENERATION SERIES 2

Empowered by Innovation **NEC**

# DIGITAL CINEMA PROJECTORS

THE FUTURE OF CINEMA VIEWING

2K AND 4K 3D DIGITAL CINEMA PROJECTORS



NC1200C | NC2000C | NC3200S | NC3240S DC Projectors



# DIGITAL CINEMA SERIES 2 PROJECTORS

## DIGITAL CINEMA | 2012

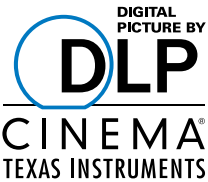
### Improve Your Establishment Experience, Increase Site Revenue and Reduce Costs

Bring your establishment into the future with a 'Next Generation' NEC Digital Cinema Projector.

Delivering the most exceptional image quality, brightness, resolution, contrast and colour together with a wealth of new revenue generation opportunities and backed by the trusted performance of one of the biggest names in Digital Cinema Technology. An ideal solution for theatres and cinema events.

## RANGE VARIATIONS

<b>NC3240S</b>	1.38" DLP Chip 4K (4096 x 2160) 33000 Lumen
<b>NC3200S</b>	1.2" DLP Chip 2K (2048 x 1080) 33000 Lumen Upgradable to 4K
<b>NC2000C</b>	0.98" DLP Chip 2K (2048 x 1080) 18300 Lumen
<b>NC1200C</b>	0.98" DLP Chip 2K (2048 x 1080) 9700 Lumen



### DIGITAL CINEMA DELIVERS GENUINE BENEFITS

#### GENERATE GREATER PER SEAT REVENUE

Achieve additional income from showing higher quality more entertaining media and arranging alternative sports, broadcast and education media during off peak operational times.

#### PLAY CAPTIVATING 3D AND 4K CONTENT

Take your establishment into the next generation and stay ahead of your competition with the latest Digital Content, which is becoming more and more an essential element of the latest movies and media.

#### ENJOY LOWER TCO

With easy servicing, more durable components and advanced servicing options you can enjoy better quality imaging whilst experiencing an overall lower cost of ownership.

#### VERSATILE MEDIA MANAGEMENT

Easy scheduling, distribution of movies and additional Media with copyright and licensing management together with simple and advanced control via a network.

### Complete Screen Size Coverage from Small to Large Screens



## TOTAL SERVICE SOLUTIONS

### World Leading Cinema Projectors with a World Leading Backup Service

#### A QUICK RESPONSE MONITORING SERVICE FOR YOUR PROJECTORS

NEC now offer an unrivalled support service to support chain installations of our Digital Cinema Projectors. A service that can guarantee professional support for a wide installation base and secure effective spare parts supply. Agreements can be entered into locally, nationally or even across Europe.

#### Benefits of the NEC Support Service include:

Proactive service solving up to 40% of support issues up front.

- Live monitoring for any quantity of projectors with all Installation details (Lamps, temperatures, voltages, automation).
- An automated system with GPS technology improving time for logistics support.
- Remote access for online service from any place.
- A Complete secure and closed solution.
- Database for ASP to improve Quality and Service .
- Clear Cost reductions on Service and support
- Manpower reduction and time optimisation

## 3D 3D MOVIES

Worldwide box office takings reached an all-time high in 2009 of \$29.9 billion, driven by Digital and 3D Screens that are bringing in record repeat business and driving up ticket prices

Source USA Today March 2010 - Motion Picture Association of America



NEXT GENERATION | CINEMA

New Standards, Traditional Values

Exceptional image and colour quality meet the latest in digital cinema technology to deliver new revenue-generating opportunities for theatre and cinema events. Further, these advanced solutions are backed by NEC, the trusted leader in Digital Cinema Technology.

NEC Series 2 Projectors are fully compliant with DCI requirements. Using DLP Cinema® technology from Texas Instruments®, NEC's innovative Digital Cinema projectors deliver exceptional image quality, brightness, resolution, contrast and colorimetry. NEC's 2K and 4K projectors are designed with a focus on quality and ease-of-use for movie theatres of all sizes.

Together with the new, optional integrated NEC 2K/4K Media Block and NEC Local Storage Server, they provide complete and compelling industry solutions for showing digital movies.

STUNNING COLOURS WITH 4K RESOLUTION AND 3D CAPABILITY

With the highest brightness, highest contrast and consistent screen colours on all screens, combined with the new ultra high 4K resolution, playing the most captivating content at super large size will create an outstandingly memorable experience for your viewers.

QUALITY FOR THE LONG TERM

With digital reproduction there are none of the deterioration issues that can arise from reproducing film. This means your viewers see it straight from the source, just as the producers intended it to be seen.

TOTAL FLEXIBILITY

Another advantage of digital projection is it's flexibility and ease of use. Managing play-lists, uploading film and performing playbacks has never been easier - and they can all be controlled from anywhere in the multiplex.

CONCERTS

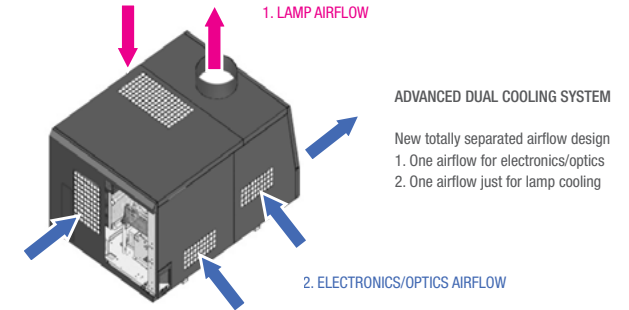
PLAY VIRTUALLY ANY MEDIA

3D Movies, Animations, Sports Events, Concerts, News Items or Live Feeds can all be played at superb Digital Cinema quality and content can be alternated during the day to match the optimum revenue generating times and differing audience sectors.

PERFORMANCE TO TRUST

BAR-SETTING RELIABILITY

New completely independent airflow systems help secure best in class reliability with one airflow section for electronics/optics and another strictly for lamp cooling.



This new system prevents any cross contamination between sections. In addition, advanced dust/oil prevention is achieved with higher inside air pressure and specially designed high tech electrostatic fiber filters that can be exchanged from outside the projector without any special tools.



A new all metal cabinet delivers confidence in stability and resistance to external impact.

MINIMAL COST OF OWNERSHIP / SIMPLE MAINTENANCE

Quick and easy components/parts replacement with modular electronics:

- Clear electronic layout and wiring.
- Easy prism replacement can be completed in only a few minutes.
- Truly modular electronics; custom DMD shielding gaskets and patented reflector design help reduce maintenance costs.

Industry-leading system service and support:

- Quick and easy troubleshooting by self-diagnosis with built-in system test and error log analysis.
- Built-in web server allows you to access and control projectors from any authorised web browser.
- Remote one-click firmware update via network from long distances.

BEST-SUITED PROJECTOR FOR 3D APPLICATIONS

The NC3200S and NC3240S are the brightest digital cinema projector available, boasting 33,000 lumens.

3D presentation using a single projector - Support for all major suppliers of 3D accessories, including:

- Special 3D control connector.
- Optional automatic turret to mount polarisers in front of lens when displaying 3D content.

UNRIVALED EASE OF USE

One-Touch Operation and Memory Functions include Direct-select buttons for eight of 100 stored projector configurations; simplifying the display of different aspect ratios through pre-set lens shift position, zoom and focus, and lamp power settings.

Empowered by Innovation



The Auto Lamp Brightness Control feature maintains constant brightness of the lamp by adjusting the lamp power as the lamp ages.

Series 2 projectors optimise lamp performance and ensure the brightest and most uniform image possible for the life of the lamp.

Enjoy Trouble-Free Lamp Replacement. Maintenance personnel can replace lamps simply from the back of the projector even in a cramped space. An intuitive keypad layout also provides for easy operator control.



Intuitive keypad layout provides for easy operator control.

INDUSTRY-LEADING MEDIA BLOCK - ONE-STOP SOLUTION

NEC optional 2K/4K Media Block - Integrated design for content management, screen management and higher security, providing greater peace of mind, whilst designed to work with third-party company legacy media blocks and servers.

\* NC1200C, NC2000C and NC3200S have passed the Digital Cinema System Specifications Compliance test and are listed on the DCI url <http://www.dcimovies.com/compliance/>



4K  
4096 x 2180 RESOLUTION

THE FUTURE OF CINEMA VIEWING

Industry's first lens and first lamp memory and industry's first separated airflow

Super high 4K resolution available

High Frame Rate (HFR) Support (48fps, 60 fps)

Uses standard cinema lamps, with lamp replacement from the back and easy lamp adjustment

Quick and easy maintenance with dust and oil resistance

Covering all screen sizes from 4m to 32m

Working with all 3D systems in market

Triple flash in full 2K resolution standard

Fully DCI compliant

Own IMB/server development

ANIMATED MOVIES

ENHANCED FEATURES

HIGH RESOLUTION CONTENT PLAYBACK

Utilising DLP Cinema Technology from Texas Instruments. Exceptional image and colour quality with contrast ratios of 2200:1\* or higher by using DMD chips that support a resolution of 4096 x 2160. This projector faithfully reproduces digital cinema and high-definition input sources requiring superior colour reproduction and wide gradation.

HIGH RELIABILITY

Newly designed separate cooling system creates positive air pressure internally to prevent contaminations from entering the optical and electrical system. Lamp cooling air flow is separate from the main optics and electronics.

AUTOLAMP BRIGHTNESS AND CONTROL

Minimise fluctuations that occur during the lamp's life. The brightness level will not decrease as the lamp is consumed. These projectors optimise lamp performance and ensure the brightest and most uniform image possible for the life of the lamp.

MINIMAL MAINTENANCE AND SIMPLE OPERATION

Trouble-Free lamp replacement. Technicians can replace lamps simply from the back of the projector even in cramped space.

One touch operation, ergonomic keyboard layout and memory functions. Optional scaler/switcher for alternative content processing.

BUILT IN WEBSERVER

Access and control projectors from any authorised web browser

Choosing the Optimum DC Solution

NC3240S

Suitable for large cinemas that require state of the art highest image quality.

DLP Cinema Chip: 1.38" DLP  
Resolution 4096 x 2160

Brightness: 33000 Lumen

Screen Width:\*  
At screen gain of 1.3/14-ft-L 25M  
At screen gain of 1.8/14-ft-L 32M

NC3200S

Suitable for large and outdoor cinemas.

DLP Cinema Chip: 1.25" DLP  
Resolution 2048 x 1080

Brightness: 33000 Lumen

Screen Width:\*  
At screen gain of 1.3/14-ft-L 25M  
At screen gain of 1.8/14-ft-L 32M

NC2000C

Suitable for the majority of cinemas.

DLP Cinema Chip: 0.98" DLP  
Resolution 2048 x 1080

Brightness: 18300 Lumen

Screen Width:\*  
At screen gain of 1.3/14-ft-L 17M  
At screen gain of 1.8/14-ft-L 20M

NC1200C

Suitable for smaller screens and post production.

DLP Cinema Chip: 0.98" DLP  
Resolution: 2048 x 1080

Brightness: 9700 Lumen

Screen Width:\*  
At screen gain of 1.3/14-ft-L 12M  
At screen gain of 1.8/14-ft-L 14M

\*subject to installation conditions. Contrast ratio of NC3240S-A is 2000:1 when iris mounted



DIGITAL SIGNAGE | VENUE SOLUTIONS

Total Display Solutions from the Entrance to the Movie Seat

INTERNAL OR EXTERNAL LED SOLUTIONS

LED Signage Module Solutions are the latest solution for driving more business to your venue. With their resistance to weather and temperature changes and more affordable per metre cost than traditional LCD Digital Signage, NEC LED Solutions offer an affordable high impact choice to promote your business to passing transport, pedestrians or shoppers.

Content can be easily switched between promoting off-peak content like sports events or concerts or playing trailers from the latest movies or simply displaying opening times or multiplex promotions.

Whatever you choose to communicate digitally at your venue, NEC Display solutions can provide the ideal digital signage solution.

DIGITAL SIGNAGE DISPLAYS

As a market leader in digital signage, NEC offers a large selection of powerful digital signage solutions that can provide reliable outstanding images over long periods of use.

Digital Signage can serve several purposes such as informing, entertaining or providing a purchasing incentive. For instance, a public display with tantalising content placed above a concession stand can boost sales of popcorn, cola and other items. Public Displays in waiting areas playing trailers of current movies can draw people into other shows and generate future ticket sales while shortening the perceived waiting time.

Way finding or simply displaying the movie poster at the door of the respective movie theatre are other great examples of using public displays in a cinema environment. Digital Signage solutions let you change content in a split second

and allows for great flexibility if movies are cancelled or additional movies are added to your schedule.



X SERIES VIDEO WALL  
with WallMount Chief

HIGH IMPACT VIDEO WALL SOLUTIONS

NEC video wall solutions can be as large as 100m<sup>2</sup> with advanced innovation to ensure cross wall consistency and accuracy. Video walls offer an outstanding way to showcase the latest titles either in the Cinema Complex or displayed in the Shopping Centre where the Theatre is located.

PRODUCTS	NEC CINEMA SIGNAGE SOLUTIONS
P SERIES X SERIES LED MODULES	PROFESSIONAL 40 - 70" PUBLIC DISPLAYS 46 AND 55" VIDEO WALL/SPECIAL DISPLAYS 6 OR 15MM PITCH 50CM LED MODULES
SOLUTIONS	NEC Option Solutions NEC Wallmount Chief



LCD LARGE FORMAT DISPLAYS  
The ideal solution for on-site  
promotion and wayfinding



LED WALLS  
Combinations of LED modules provide an ideal  
solution for outdoor or semi-outdoor signage

Empowered by Innovation



NEC GREEN VISION

Saving the Environment with Lower Total Cost of Ownership

Displaying the most outstanding and versatile content can have a demonstrable effect on helping to save our planet's resources and eliminate waste. NEC's unique lower cost of ownership proposition means a longer life cycle and less cost and less waste. More importantly digital means eliminating 35mm media with its harmful production and disposal implications.

Ecological Innovation:

Using the latest IT Communications and Security Features media can be safely transferred without involving couriers or physical production of any media.

Ecological Materials:

Minimal Use of Harmful Materials. Digital Media means virtual production with massive savings on resources from a movie's initial concept to its premiere and distribution.

Reduced Consumption:

Less power usage, eliminate waste and landfill implications associated with 35mm Media.

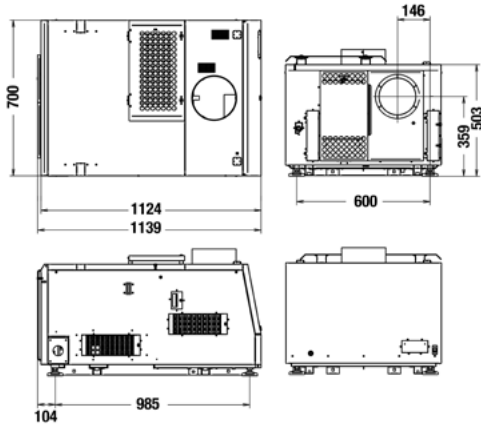




PROJECTOR SPECIFICATIONS



OPTIONAL PEDESTAL



LPSU stands for Lamp Power Supply Unit. \* Color-corrected / center lumens.  
\*\* Subject to installation conditions. Maximum screen size is under the conditions of 14-ft-L @ screen gain 1.8. \*\*\* When iris is mounted.

NEW NC3240S

4K

NC3240S

1.38“ DLP Chip

4K (4096 x 2160)

33000 Lumen

4K

NC3200S

1.2“ DLP Chip

2K (2048 x 1080) Upgradable to 4K

33000 Lumen

UPGRADE  
OPTION

Projection system	3 chip DMD reflection method		3 chip DMD reflection method	
DLP® Chip specifications (size and resolution)	1.38 inches, 4096 x 2160 pixels		1.2 inches, 2048 x 1080 pixels	
Brightness*1	33000lm with NC-32PS01(7kW LPSU) & USHIO DXL-70SN 7kW lamp* 22500lm with NC-32PS02(4kW LPSU) & USHIO DXL-41SN 4kW lamp* *****		33000lm with NC-32PS01(7kW LPSU) & USHIO DXL-70SN 7kW lamp* 22500lm with NC-32PS02(4kW LPSU) & USHIO DXL-41SN 4kW lamp* ****	
Supported screen sizes (maximum)	Width 32m/105ft with NC-32PS01(7kW LPSU) ** Width 22m / 72ft with NC-32PS02(4kW LPSU) **		Width 32m/105ft with NC-32PS01(7kW LPSU) **Width 22m / 72ft with NC-32PS02(4kW LPSU) **	
Contrast ratio	2000:1 (full on/off) ***		2200:1 (full on/off)	
Primary lens (option)	L2K-12ZM	1.13 to 1.31 :1 zoom	L2K-12ZM	1.25 to 1.45:1 zoom
	NC-50LS12Z	1.13 to 1.66:1 zoom	NC-50LS12Z	1.25 to 1.83:1 zoom
	NC-50LS14Z	1.30 to 1.85:1 zoom	NC-50LS14Z	1.44 to 2.05:1 zoom
	NC-50LS16Z	1.45 to 2.17:1 zoom	NC-50LS16Z	1.6 to 2.4:1 zoom
	NC-50LS18Z	1.63 to 2.71:1 zoom	NC-50LS18Z	1.8 to 3.0:1 zoom
	NC-50LS21Z	1.95 to 3.26:1 zoom	NC-50LS21Z	2.15 to 3.6:1 zoom
L2K-30ZM	2.71 to 3.89:1 zoom		3.0 to 4.3:1 zoom	
Lens adjustment function	Motorized focus, zoom, horizontal/vertical shift, light shutter (dowser) / Lens memory stores lens setting (shift/zoom/focus) /Range of shift is dependent on lens		Motorized focus, zoom, horizontal/vertical shift, light shutter (dowser) / Lens memory stores lens setting (shift/zoom/focus) /Range of shift is dependent on lens	
Lamp bulbs	NEC certified digital Xenon lamp bulbs w/ NC-32PS01(7kW LPSU): 4.5kW/6kW/7kW lamp bulb w/ NC-32PS02(4kW LPSU): 4kW Compatible standard film projector lamp bulbs listed by NEC		NEC certified digital Xenon lamp bulbs w/ NC-32PS01(7kW LPSU): 4.5kW/6kW/7kW lamp bulb w/ NC-32PS02(4kW LPSU): 4kW Compatible standard film projector lamp bulbs listed by NEC	
Cooling system	Liquid cooling inside, air cooling with dust-preventing electrostatic filter Total thermal dissipation: 35850BTU with NC-32PS01(7kW LPSU)19800BTU with NC-32PS02(4kW LPSU) Projector exhaust: Top mounted Demand of exhaust duct: 565CFM (16m3/min) w/ NC-32PS01(7kW LPSU); 565CFM (16m3/min) w/ NC-32PS02(4kW LPSU); 460CFM (13m3/min)		Liquid cooling inside, air cooling with dust-preventing electrostatic filter Total thermal dissipation: 35500BTU with NC-32PS01(7kW LPSU) 19500BTU with NC-32PS02(4kW LPSU) Projector exhaust: Top mounted Demand of exhaust duct: 565CFM (16m3/min) w/ NC-32PS01(7kW LPSU); 565CFM (16m3/min) w/ NC-32PS02(4kW LPSU); 460CFM (13m3/min)	
External Controls	LAN port [RJ-45] x 1 / USB port [Type A] x 1 / Serial port (RS-232C) [D-sub(9-pin) x 1 / General Purpose I/O [D-sub (37-pin)] x 1 / General purpose I/O for 3D [D-sub [15-pin] x 1)		LAN port [RJ-45] x 1 / USB port [Type A] x 1 / Serial port (RS-232C) [D-sub(9-pin) x 1 / General Purpose I/O [D-sub (37-pin)] x 1 / General purpose I/O for 3D [D-sub [15-pin] x 1)	
Input Terminals	HD-SDI port [BNC] x 4 / DVI port [DVI-digital] x 2 (option)		HD-SDI port [BNC] x 4 / DVI port [DVI-digital] x 2	
Noise level	66dB with NC-32PS01(7kW LPSU) 60dB with NC-32PS02(4kW LPSU)		66dB with NC-32PS01(7kW LPSU) 60dB with NC-32PS02(4kW LPSU)	
Power supply voltage	NC3240S(Projector head): 100 to 240V AC, 50/60Hz, single phase w/ NC-32PS01(7kW LPSU): 200 to 230V / 380 to 415V AC, 50/60Hz, 3 phases w/ NC-32PS02(4kW LPSU): 200 to 240V AC / 50/60Hz, single phase		NC3200S(Projector head): 100 to 240V AC, 50/60Hz, single phase w/ NC-32PS01(7kW LPSU): 200 to 230V / 380 to 415V AC, 50/60Hz, 3 phases w/ NC-32PS02(4kW LPSU): 200 to 240V AC / 50/60Hz, single phase	
Rated Input Current	NC3240S(Projector head): 8A-4.2A w/ NC-32PS01(7kW LPSU): 28A@200 to 230V / 16A@380 to 415V w/ NC-32PS02(4kW LPSU): 25A		NC3200S(Projector head): 7A-3.5A w/ NC-32PS01(7kW LPSU): 28A@200 to 230V / 16A@380 to 415V w/ NC-32PS02(4kW LPSU): 25A	
Power Consumption	7kW LPSU: 9500W (max.) / Projector Head: 540W (max.) Total: 10,040W (max.)		7kW LPSU: 9500W (max.) / Projector Head: 455W (max.) Total: 9,955W (max.)	
Operating environment	Operational temperatures: 50°F - 95°F / 10°C - 35°C Humidity: 10% - 85% (non-condensing) Storage temperatures: 14°F - 122°F / -10°C - 50°C Humidity: 10% - 85% (non-condensing)		Storage temperatures: 14°F - 122°F / -10°C - 50°C Humidity: 10% - 85% (non-condensing) USA: UL60950 FCC Class A / Canada: CSA60950 ICES-003 Class A / Europe: EN60950 EN55022 1988. Class A/EN55024-1998/EN61000-3-11/EN61000-3-12 (Marking: TUV-GS, CE) /	
Regulations	USA: UL60950 FCC Class A / Canada: CSA60950 ICES-003 Class A / Europe: EN60950 EN55022 1988. Class A/EN55024-1998/EN61000-3-11/EN61000-3-12 (Marking: TUV-GS, CE) /		Europe: EN60950 EN55022 1988. Class A/EN55024-1998/EN61000-3-11/EN61000-3-12 (Marking: TUV-GS, CE) / NC3200S(Projector head): 27.6 x 44.3 x 19.8 in. / 700 x 1124 x 503mm Excluding lens, lens hood, exhaust stack and handle. Including feet. NC-32PS01(7kW LPSU): 23.4 x 15.7 x 17.8 in. / 594 x 398 x 452mm NC-32PS02(4kW LPSU): 23.4 x 15.7 x 15.5 in. / 594 x 398 x 394mm	
External dimensions(W x D x H)	NC3240S(Projector head): 27.6 x 44.3 x 19.8 in. / 700 x 1124 x 503mm Excluding lens, lens hood, exhaust stack and handle. Including feet. NC-32PS01(7kW LPSU): 23.4 x 15.7 x 17.8 in. / 594 x 398 x 452mm NC-32PS02(4kW LPSU): 23.4 x 15.7 x 15.5 in. / 594 x 398 x 394mm		NC3200S(Projector head): 27.6 x 44.3 x 19.8 in. / 700 x 1124 x 503mm Excluding lens, lens hood, exhaust stack and handle. Including feet. NC-32PS01(7kW LPSU): 23.4 x 15.7 x 17.8 in. / 594 x 398 x 452mm NC-32PS02(4kW LPSU): 23.4 x 15.7 x 15.5 in. / 594 x 398 x 394mm	
Weight	NC3240S(Projector head): 213.8 lbs. / 97 kg Excluding lens and lamp bulb. NC-32PS01(7kW LPSU): 114.7 lbs. / 52 kg NC-32PS02(4kW LPSU): 90.4 lbs. / 41 kg		NC3200S(Projector head): 213.8 lbs. / 97 kg Excluding lens and lamp bulb. NC-32PS01(7kW LPSU): 114.7 lbs. / 52 kg NC-32PS02(4kW LPSU): 90.4 lbs. / 41 kg	

FIXED 2K MODELS

2K

NC2000C

0.98“ DLP Chip

2K (2048 x 1080)

18300 Lumen

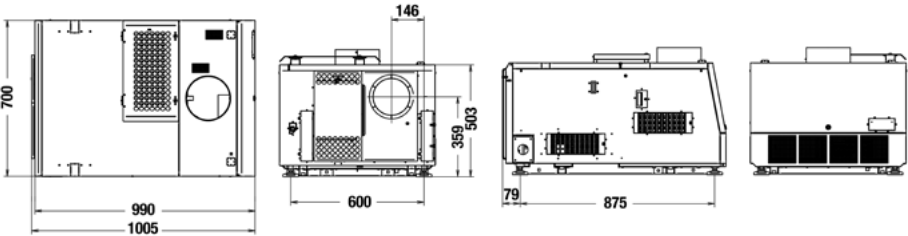
NC1200C

0.98“ DLP Chip

2K (2048 x 1080)

9700 Lumen

Projection system	3 chip DMD reflection method	
DLP® Chip specifications (size and resolution)	0.98 inches, 2048 x 1080	
Brightness*1	18,300 lm with USHIO DXL-40SN lamp	9,700 lm with USHIO DXL-20SN3 lamp
Supported screen sizes (maximum)	Width 20m / 65 ft*	Width 14m / 46 ft*
Contrast ratio	2200:1 (full on/off)	
Primary lens (option)	NC-60LS12Z	1.2 to 1.8:1 zoom
	NC-60LS14Z	1.4 to 2.05:1 zoom
	NC-60LS16Z	1.59 to 2.53:1 zoom
	NC-60LS19Z	1.9 to 3.25:1 zoom
	NC-60LS24Z	2.4 to 3.9:1 zoom
	NC-60LS39Z	3.9 to 6.52:1 zoom
Lens adjustment function	Motorized focus, zoom, horizontal/vertical shift, light shutter (dowser) / Lens memory stores lens setting (shift/zoom/focus) / Range of shift is dependent on lens	
Lamp bulbs	NEC certified digital Xenon lamp bulbs 4kW lamp bulb, Compatible standard film projector lamp bulbs listed by NEC	NEC certified digital Xenon lamp bulbs 2kW lamp bulb, Compatible standard film projector lamp bulbs listed by NEC
Cooling system	Liquid cooling inside, air cooling with dust-preventing electrostatic filter Total thermal dissipation: 20500BTU (Input 4KW power to 4.0KW lamp bulb) Projector exhaust: Top mounted Demand of exhaust duct: 460CFM (13m3/min)	Liquid cooling inside, air cooling with dust-preventing electrostatic filter Total thermal dissipation: 13000BTU Projector exhaust: Top mounted Demand of exhaust duct: 350CFM (10m3/min)
External Controls	LAN port [RJ-45] x 1 / USB port [Type A] x 1 / Serial port (RS-232C) [D-sub(9-pin) x 1 / General Purpose I/O [D-sub (37-pin)] x 1 / General purpose I/O for 3D [D-sub [15-pin] x 1)	
Input Terminals	HD-SDI port [BNC] x 4 / DVI port [DVI-digital] x 2 **	
Noise level	Less than 62 dB	
Power supply	For C1 Connections 200 to 240V AC 50/60Hz single phase, 30A (Projector power supply + Lamp power supply)	200 to 240V AC 50/60Hz single phase, 16.5A (Projector power supply + Lamp power supply)
	For C2 Connections 100 to 240V AC 50/60Hz single phase, 5-2.5 A(Projector power supply) 200 to 240V AC 50/60Hz single phase, 27A (Lamp Power Supply)	100 to 240V AC 50/60Hz single phase, 5-2.5 A(Projector power supply) 200 to 240V AC 50/60Hz single phase, 14A (Lamp Power Supply)
Power Consumption	5330W Maximum	2680W Maximum
Operating environment	Operational temperatures: 50°F - 95°F / 10°C - 35°C Humidity: 10% - 85% (non-condensing) Storage temperatures: 14°F - 122°F / -10°C - 50°C Humidity: 10% - 85% (non-condensing)	
Regulations	USA: UL60950 FCC Class A / Canada: CSA60950 ICES-003 Class A / Europe: EN60950 EN55022 1988. Class A/EN55024-1998/EN61000-3-11/EN61000-3-12 (Marking: TUV-GS, CE) / 27.6 x 39 x 19.8inch /700 x 990 x 503mm Excluding lens, lens hood and exhaust stack. Including feet	
External dimensions(W x D x H)	218lbs. / 99kg (excluding lens and lamp bulb)	203lbs. / 92kg (excluding lens and lamp bulb)
Weight		



PROJECTOR LENS SELECTOR

PRIMARY LENS NC3240S

Model of Lens	Projection magnification
L2K-12ZM	1.13 -----1.31
NC-50LS12Z	1.13 -----1.66
NC-50LS14Z	1.30 -----1.85
NC-50LS16Z	1.44 -----2.16
NC-50LS18Z	1.63 -----2.71
NC-50LS21Z	1.95 -----3.26
L2K-30ZM	2.71 -----3.89

PRIMARY LENS NC3200S

Model of Lens	Projection magnification
L2K-12ZM	1.25 -----1.45
NC-50LS12Z	1.25 -----1.83
NC-50LS14Z	1.44 -----2.05
NC-50LS16Z	1.60 -----2.40
NC-50LS18Z	1.80 -----3.00
NC-50LS21Z	2.15 -----3.6
L2K-30ZM	3.00 -----4.30

PRIMARY LENS NC2000C | NC1200C

Model of Lens	Projection magnification
NC-60LS12Z	1.2 -----1.8
NC-60LS14Z	1.4 -----2.05
NC-60LS16Z	1.59 -----2.53
NC-60LS19Z	1.9 -----3.25
NC-60LS24Z	2.4 -----3.9
NC-60LS39Z	3.9 -----6.52

WIDE CONVERTOR LENS (x1.26)

NC-80LS13F      Use of the Wide Converter Lens requires the NCAT02 (installation stand)

\* Subject to installation conditions. Maximum screen size is under the conditions of 14-ft-L @ screen gain 1.8. \*\* See page 10 for the model without input terminals.  
\*\*\* When the AC power to the projector power supply and the lamp power supply are provided by a single cable. \*\*\*\* When the AC power to the projector power supply and the lamp power supply are provided by separate cables.



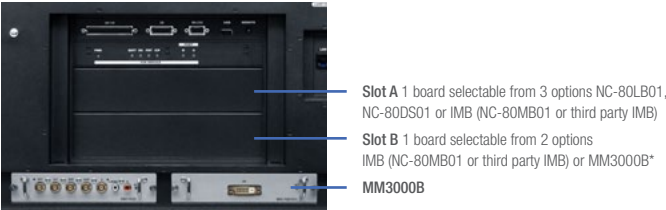


INTERFACE | AND OPTIONS

Expansion Slots to Support a Multitude of Diverse Input Formats.

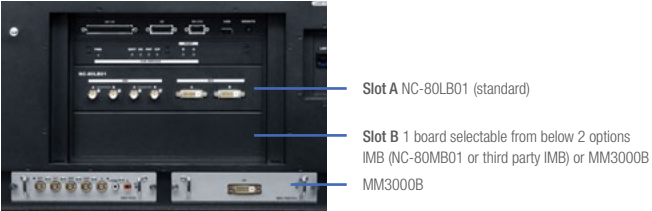
Easy access to all important electronic boards are accessible from one side, there is just one side panel to remove.

NC1200C-A /NC2000C-A /NC3200S-A /NC3240S-A (NC-80LB01 not built in)



Built-in Multi-Media Switcher MM3000B port

NC1200C/NC2000C/NC3200S (NC-80LB01 built in)



Built-in Multi-Media Switcher MM3000B port

NC3240S/NC3200S OPTIONS

Built-in Multi-Media Switcher MM3000B

Dedicated pedestal

4KW power Supply Option NC-32PS02

Filter Sets NC-80AF01 and NC-80AF02

\* Optional products and accessories are subject to change without prior notice. Contact your local dealer for more details. Please use NEC certified digital xenon lamps listed on the below URL:

[www.nec-display.com/ap/en\\_projector/dlpcinema/lamp/certified-lp.html](http://www.nec-display.com/ap/en_projector/dlpcinema/lamp/certified-lp.html)

NC2000C/NC1200C OPTIONS

Built-in Multi-Media Switcher MM3000B

Dedicated pedestal

Filter Sets NC-80AF01 and NC-80AF02

\* Optional products and accessories are subject to change without prior notice. Contact your local dealer for more details. Please use NEC certified digital xenon lamps listed on the below URL:

[www.nec-display.com/ap/en\\_projector/dlpcinema/lamp/certified-lp.html](http://www.nec-display.com/ap/en_projector/dlpcinema/lamp/certified-lp.html)

Optional 4K Power Supply

NC-32PS02

(SAP code 60003144)

For using with NC3240S

or NC3200S with smaller

screens



MM3000B MultiMedia Switcher

Alternative Content Processor

The built-in MM3000B is available for all models of the NEC Digital Cinema Projector Series.

Ideal as a built-in enhancement of NEC Digital Cinema Projectors, the MM3000B converts video signals from various external sources such as PCs, analog/digital tape decks and satellite receivers to allow DLP Cinema® projectors to screen everything from live concerts and sporting events to computer presentations.

HIGH-QUALITY VIDEO

- Integrated Realta® video processor with Hollywood Quality Video (HQV®) technology
- 3-D motion adaptive de-interlacing with multi-directional diagonal filter for standard-definition (SD) and high-definition (HD)
- Multi-cadence detection including automatic detection of 3:2 / 2:2 pull-down signals and many other film formats
- Per-pixel motion adaptive noise reduction for SD
- Per-pixel detail enhancement brings out more visible details
- Full 10-bit image processing for SD, HD and video sources
- High contrast images with NEC's unique contrast enhancement technology for SD

MM3000B



"HQV(R) powered by Teranex(R)" is used by Geo Semiconductor under license from Integrated Device Technology Inc. and Teranex Systems Inc. "HQV" is short for Hollywood Quality Video and is a registered trademark of Integrated Device Technology Inc. "Teranex" is a registered trademark of Teranex Systems Inc. Realta is a registered trademark of Geo Semiconductor, Inc. in the United States.

Empowered by Innovation



INTEGRATED DEVICE TECHNOLOGY HQV®

It is a high-performance video processing/scaling system designed for computer signals as well as standard or high-definition video. The technology produces superior video processing using pixel-based, motion-adaptive de-interlacing to remove undesirable motion artifacts typical of interlaced signals. This processing creates life-like images in applications such as video conferencing.

EASY TO OPERATE

- One-touch selection of input signals from NEC Digital Cinema Projector Series models
- Quick and flexible connection of input signals from two input modules

STANDARD INPUT BOARDS

- HDCP-compliant DVI input board (MM-70DV01)
- Analog/RGB input board (MM-RGB-E)

OPTIONAL INPUT BOARDS

- Single HD-SDI input board (MM-SDI-E)
- Video input board (MM-Video-E)





IMB | AND SERVER

A Simple One Stop Solution

NEC's industry-leading integrated 2K/4K Media Block and Local Storage Server combined with your NEC Digital Cinema Projector offer the ideal one stop solution for simple, fast and single service source Digital Cinema set up.

These introductions make NEC the only manufacturer in the market to offer a DLP cinema projector/server solution developed completely in-house. The IMB's internal design allows for content management, screen management and higher security.



INTEGRATED MEDIA BLOCK NC-80MB01



- 2K DCI format, Upgradable into 4K DCI format
- GigaBit Ethernet Interface
- Security: DCI 1.2, FIPS 140-2, Watermark
- SMS: via LSS or via network pc
- Video: 2K & 4K DCI formats/2048x1080 2D&3D/4096x2160 2D
- Audio: AES-3, Balanced Digital 16 Channels (original pin assignment)

LOCAL STORAGE SERVER NC-80SS01



- Capacity 1.5 TB net
- Hot swappable redundant power supplies
- Interfaces: ESata, USB, RJ-45, RS232; GigaBit Ethernet

INTEGRATED MEDIA BLOCK AND SERVER BENEFITS

Internal design for content management, screen management and higher security, providing greater peace of mind

Server connection via GigaBit Ethernet, the easiest and most flexible connection

Both 2K and 4K content playback

Total cost down with open solution

- Provides control of Media Block from the projector
- Simpler management of cinema content/system
- Possible to integrate cinema ad into NEC Media Block/Server solution

Easy maintenance to minimize the downtime

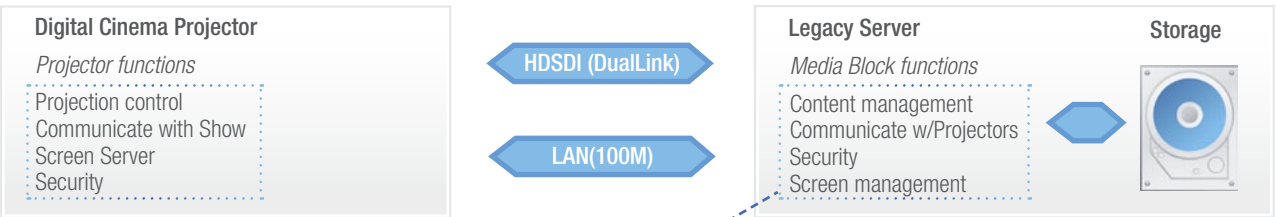
- Single maintenance window for NEC projectors, NEC Media Block and NEC Storage Server
- Easy and timely troubleshooting by self-diagnosis within the projector

High reliability

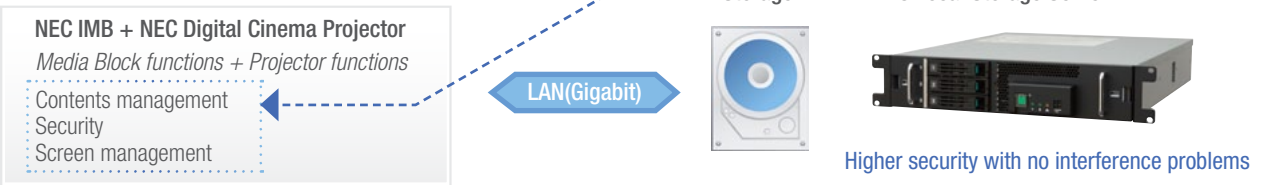
Higher (stricter) security

No interference between projector and existing screen server

System with Legacy Server



System with IMB



OPTION SPECIFICATIONS

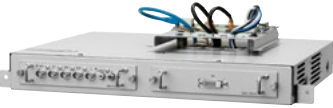


NC-80MB01 INTEGRATED MEDIA BLOCK

Item	Content		Remarks
Performance	Video	2K & 4K DCI Format	
		2048x1080 2D & 3D	
		4096x2160 2D	
		16channels, 24bits, 48k/96kHz Linear PCM	
	Audio	16channels, 24bits, 48k/96kHz Linear PCM	
Status Indication	Security	DCI 1.2, FIPS140-2, Watermark	
	SMS	From Network PC and LSS(NC-80SS01)	
	LED	5 modes	PLAY MODE, FIPS, LINK, MARRIAGE,
Terminals	Gigabit Ethernet	RJ-45	Front Panel
		PCI-Express	Control, SMS
	Digital Audio Out	D-sub 25	via projector Ethernet connector
Environmental	Ambient Temp.	Operational	AES-3, Balanced Digital 16 channels
		Storage	5 - 35[°C]
	Humidity	Operational	-10 - 50[°C]
Reliability	MTBF	Storage	10 - 90[%], without moisture dew and Oil mist
		Storage	10 - 90[%], without moisture dew and Oil mist
Safety Regulations	Europe	EN60950-1	more than 10,000 [h]
		EN55022 1998 Class A, EN55024-1998, EN61000-3-11, EN61000-3-12	

NC-80SS01 LOCAL STORAGE SERVER

Item	Content		Remarks
CPU	Intel Core2Duo		1
Memory	DDR2 ECC	DIMM 1GB	1
Storage	HDD	SATA750GB	3 For Data, RAID5 (Software), Hot-Swappable
Terminal	Gigabit Ethernet	RJ-45	1 For DCP data
		RJ-45	1 For Control and SMS
		RJ-45	1 For Automation
	USB2.0	Type-A	8
	RS-232C	D-sub9	2 For UPS
Power Supply	Hot-Swappable Redundant Power		2 AC100-240V ±10%, 50/60Hz, 200VA
External dimensions	W x D x H		19.0×21.6×3.4in / 483×550×86.7mm (2U rack mount)
Weight			43.8lbs/19.8kg
Environmental	Ambient Temp.	Operational	5 - 35[°C]
		Storage	-10 - 50[°C]
	Humidity	Operational	10 - 85[%], without moisture dew and Oil mist
Operating System	Linux	Storage	10 - 85[%], without moisture dew and Oil mist
		Cent OS	
Maintenance Parts	Air Filter	Life 1 year	Cleaning : Every month, Exchange : Every year
	HDD		
Safety Regulations	Europe	EN60950-1(2nd)	EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3



MM3000B MULTIMEDIA SWITCHER

Input signal		Color Bit Depth		10 bits for all processes for each color (excluding optional RGB and DVI input board)
		I/P conversion		Multi-directional filtering method (SDTV, HDTV) 3:2, 2:2 pull down signal, animation format compatible type
		Noise reduction		Per-pixel motion adaptive method (SDTV)
		Enhancer		Multi-directional filtering method Contrast enhancement (function expansion)
		Image latency		Interface: 8 to 9 fields Progressive: 4 frames
Input slot				2 slots (MM-RGB-E and MM-70DV01 as standard)
Input signal	MM-RGB-E (standard)	RGBHV		R, G, B: 75Ω 0.7Vp-p Y:75Ω 1.0Vp-p (with Sync) Cb, Cr: 75Ω±0.35Vp-p H/V: 1KΩ/TTL 75Ω/0.7-2.0Vp-p Selection system - positive or negative polarity C S: 1KΩ/TTL 75Ω/0.7-2.0Vp-p Selection system - positive or negative polarity Sync on Green: 75Ω 1.0Vp-p75Ω 1.0Vp-p
				Maximum sampling frequency: 165 MHz Horizontal scanning frequency: 31 to 105 kHz Vertical scanning frequency: 24 to 96 Hz Maximum pixel clock frequency: 165 MHz, HDCP supported
	MM-70DV01 (standard)	DVI-D		
	MM-SDI-E (optional)	Signal format		SDTV SMPTE 259M Level-C HDTV SMPTE 292M
	MM-VIDEO-E (optional)	Composite video		BNC x 1, 75 Ω, 1.0 Vp-p
			S-video	BNC x 2, 75 Ω, Y: 1.0 Vp-p C: 0.28 to 0.3 Vp-p
Component video				BNC x 3, 75 Ω, Y: 1.0 Vp-p Cb, Cr: ±0.35 Vp-p
				Horizontal resolution
Input Output Ports	MM-RGB-E (standard)	Analogue RGB	Image input	BNC x 5 (component input port and sharing)
		Audio		Audio input
	MM-70DV01 (standard)	DVI-D	Image input	DVI-D×1
	MM-SDI-E (optional)	SDI MONITOR OUT	Image input Image output	BNC x 2 HD-SDI/HD-SDI signal BNC x 1 for monitoring
	MM-VIDEO-E (optional)	Video	Image input	BNC x 1 (composite signal) BNC x 2 (s-video signal) BNC x 3 (SDTV component signal)
Image output	Resolution	2048×1080p		
LAN port	Output system		10 bits of RGB LVDS method (connect to projector) RJ-45 x 1 (connect to projector)	
External dimensions (W x D x H)				17.7 x 13.4 x 3.9in./450 x 340 x 100mm (excluding protruding sections)
Weight				9.7lbs/4.4kg
Operating environment	Operating temperature and humidity			Temperature: 5°C to 35°C Humidity: 10 to 85% (non condensing)
	Storage temperature and humidity			Temperature: -10°C to 50°C Humidity: 10 to 85% (non condensing)
Supplied items				Ferrite clamp core x 4 (2 for RGB cable, 2 for DVI cable) Band x 4, User's manual





## NEC NEXT GENERATION SERIES 2

# DIGITAL CINEMA PROJECTORS

## NEC REGIONAL OFFICES

**NEC Display Solutions Europe GmbH – HQ**  
Landshuter Allee 12-14, D-80637 München  
inform@nec-displays.com  
Phone: +49 (0) 89 99 699-0  
Fax: +49 (0) 89 99 699-500  
www.nec-display-solutions.com

**NEC (UK) Ltd. – Display Solutions Division**  
NEC House  
1 Victoria Road, London W3 6BL  
Phone: +44 (0) 870 120 1160  
Fax: +44 (0) 208 752 3670  
www.nec-display-solutions.co.uk

**NEC France S.A.S Division Display Solutions**  
29 rue des Hautes Pâtures, F-92737 Nanterre Cedex  
necdisplay@eu.nec.com  
Phone: +33 (0) 1 46 49 46 49  
Fax: +33 (0) 1 47 68 92 86  
www.nec-display-solutions.fr

**NEC Display Solutions Iberica**  
C/ Anabel Segura, 7 – Planta 2a  
E- 28108 Alcobendas (Madrid), Spain  
Phone: +34 (0) 91 203 29 00  
Fax: +34 (0) 91 650 11 00  
www.nec-display-solutions.es

**NEC Italy S.r.l. – Display Solutions Division**  
Viale Enrico Forlanini 23, I-20134 Milano  
info.necdisplay-it@eu.nec.com  
Phone: +39 (0) 24 84 151  
Fax: +39 (0) 24 84 15 409  
www.nec-display-solutions.it

**NEC Display Solutions Europe GmbH Austria**  
Mooslackengasse 17, A-1190 Wien, Österreich  
inform@nec-displays.com  
Phone: +43 (1) 23060 3685  
Fax: +43 (1) 23060 3686  
www.nec-display-solutions.at

**NEC Display Solutions Europe GmbH Poland**  
ul. Bociana 22A  
PL-31-231 Kraków  
Phone: +48 (0) 12 614 53-53  
Fax: +48 (0) 12 614 53-54  
www.nec-display-solutions.pl

**NEC Scandinavia AB, Display Solutions, Sweden**  
Kronborgsgränd 1  
S-16487 Kista  
Phone: +46 (0) 10 214 8600  
Fax: +46 (0) 8 635 93 50  
www.nec-display-solutions.se

**NEC Scandinavia AB, Display Solutions, Norway**  
Olaf Helsetsvai 6  
NO-0621 Oslo  
Phone: +47 (0) 22 62 89 95  
Fax: +47 (0) 22 62 89 96  
www.nec-display-solutions.no

**NEC Finland OY, Display Solutions, Finland**  
Ahventie 4  
FIN-02170 ESPOO  
Finland  
Phone: +358 9 348 70204  
www.nec-display-solutions.fi

**NEC Display Solutions Europe GmbH Russia**  
Smolenskaya square 3, Office 760  
121099 Moscow, Russia  
Phone: +7 495 937 84 10  
Fax: +7 495 937 82 90  
www.nec-display-solutions.ru

**NEC Display Solutions, South Africa**  
P.O. Box 7243, Westwood, 1477  
Johannesburg, South Africa  
Phone: +27 (0) 11 918 6449  
Fax: +27 (0) 11 894 2973  
www.nec-display-solutions.co.za

**NEC Display Solutions Middle East**  
Office 0205, 2nd Floor, JAFZA View 18  
Jebel Ali, Dubai  
U.A.E.  
Phone: +971 50 158 53 71  
www.nec-display-solutions.com

Empowered by Innovation

**NEC**