

# M Series

*M282X, M322X, M322W and M402X digital projectors*

Easy to use and at the right price, M Series projectors using the latest DLP® technology from Texas Instruments provide all the essential features that you need to connect with your audience.



## Essential Features for Educational Facilities

- Plug and Play intuitive setup and operation
- Bright images easily viewed in any application
- Versatile, color-coded connections to computer, video sources and external monitor
- Automatic keystone correction technology instantly projects a square image even when the projector is set up at a steep offset angle to the screen
- AutoSense™ intuitively syncs the projector with most computer signals and features one-touch image optimization
- One-touch source changes and complete menu control using the intuitive projector keypad
- Powerful 20-watt speaker provides volume needed for large rooms
- High contrast images (10,000:1) from the latest Texas Instruments DLP engine featuring BrilliantColor™ technology with improved color accuracy
- With XGA and WXGA native resolutions, high brightness up to 4000 lumens and patented NEC technologies, M Series projectors display impressive image quality

## Designed with the Environment in Mind

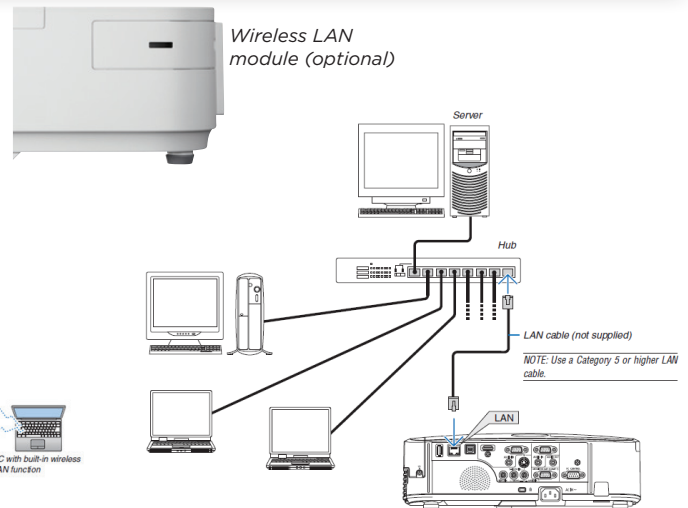
- Extended lamp life with ECO Mode™ technology increases lamp life up to 10,000 hours, while lowering power consumption
- Power management enables projector to automatically turn off when an incoming signal is not detected from any of the inputs
- Auto Power On via the RGB (15-pin) input connector when a signal is detected from a computer
- Carbon savings meter calculates the positive effects of operating the projector in ECO Mode, which is encouraged by an optional message at startup. A green ECO Mode button on the remote control makes the switch easy.
- Quick start (3 to 4 seconds) lets you begin presenting in seconds
- Sleep timer can be set to automatically turn off the projector at set countdown times
- Low power consumption (0.2W in stand-by mode) minimizes energy costs

# Advanced Networking Capabilities

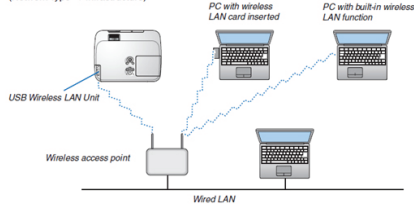
- Integrated RJ45 connection for quick connection to the LAN (10/100 base-T capability)
- Remote diagnostics enable the user to monitor and make adjustments to the projector remotely
- PC CTL 4.0 controls the power switching input selection and other functions while managing lamp usage and a variety of other vital information over the network. Email notification and projector scheduling for better asset management is included with the software.
- PC CTL 5.0 for MAC users
- Control and receive important broadcast messages via Crestron Roomview™
- Wireless Image Utility (WIU) sends images directly from an iPad to the projector (requires wireless LAN module NPO2LM1)
- Simple Access Point Sending photos and documents have never been easier from a computer or iPad.

## Image Express Lite

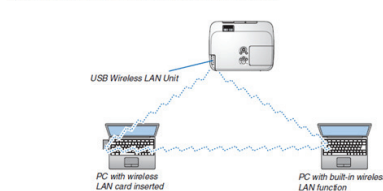
Dedicated projector software provides wired and wireless data and audio transmission via peer-to-peer or over the network.



Example of wireless LAN connection (Network Type → Infrastructure)



Example of wireless LAN connection (Network Type → Ad Hoc)



# Advanced ECO Mode

## ECO Mode

Lamp control selections with the ability to change power dependent on the ambient lighting conditions. With a built-in ambient light sensor, automatic adjustment of the projectors lamp provides unprecedented brightness control resulting in bright images for most environments.

Automatically dim the image with the new Auto-dim feature to control the brightness of static images and extend lamp life.

Constant brightness control prevents the usual drop in brightness over time while maximizing lamp life.

## Built-in wall color correction presets

These provide for adaptive color tone correction to display properly on non-white surfaces.

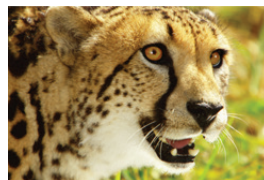
On a green wall...



BEFORE  
auto wall correction



AFTER  
auto wall correction

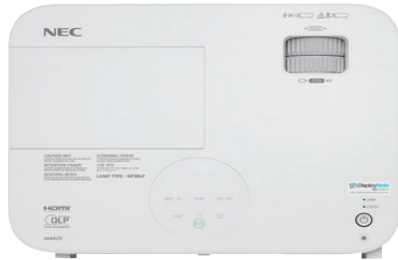


When combined with active shutter glasses (NP02GL), 3D Ready M Series Projectors use DLP Link™ technology, developed by Texas Instruments, to create 3D images from a computer. The M282X/M322X/M322W/M402X are certified as a display device for NVIDIA® 3D Vision™, which allows you to view 3D images using supported graphics boards or software. HDMI 3D images can be viewed using a 3rd party 3D glass from XPAND or Volfoni.



### Top cover lamp change

This feature provides for easy lamp changes without removal of the projector from the mount.



### Active lens cover

This cover enables presenters to immediately mute the audio and video, then seconds later lower the lamp brightness to 25% for a short period of time.



## Get Connected with a Wide Selection of Inputs

- Dual HDMI inputs ensure quick switching between presentations
- Four audio inputs (two mini stereo, R/L and HDMI™) make it easy to add sound to enhance your presentations

### Remote control

Easy control from remote allows you to adjust lamp mode, aspect ratio, volume and image all with the touch of a button.



### Dual HDMI inputs

Among the M Series' wide selection of inputs is an HDMI w/HDCP for connecting to high-definition sources such as Blu-ray players, cable boxes, satellite receivers and personal computers.



**HDMI™**  
HIGH DEFINITION MULTIMEDIA INTERFACE

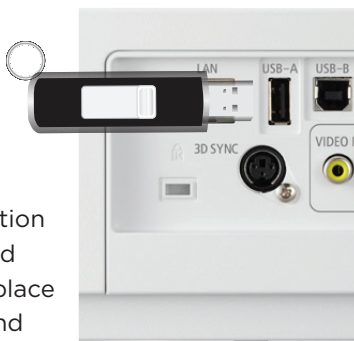
### Variable audio-out

This input enables the remote control to be used to adjust volume of self-powered external speakers that are connected to the projector. In stand-by mode the audio-out stays active, allowing the last input used to pass to the self-powered external speakers.



### USB Viewer

In instances when you'd prefer to leave your laptop behind for a presentation, M Series projectors can deliver a solution. Using the presentation conversion software included with your projector, simply place your file onto a USB drive and plug it into the projector's USB port. This allows you to display images stored as .jpgs from optional USB memory.



### USB input

Your connection options go even further with the M Series. Connect your laptop or PC directly to the projector using the USB port and a standard USB cable.



## UNIQUE FEATURES

**BrilliantColor** advanced video processing from Texas Instruments delivers more vibrant and realistic colors and blacks rich in detail.

**DICOM Simulation** enables users in medical training environments to display accurate diagnostic images

**Advanced AccuBlend™** ensures detailed images when non-native resolution sources are connected to the projector

**Filter Free** with shielded engine eliminates the hassle and time spent monitoring and / or changing filters.

**Built-in closed captioning** enables decoding and display of text information from a video

**64-step image magnification** with location control

**Countdown sleep timer** can be set to automatically turn off the projector

## WARRANTY

Registered owners receive a 2-year parts and labor warranty including InstaCare. The lamp is covered for one year or 500 hours, whichever comes first. InstaCare provides the original owner one year of either limited 3 business day repair/return or next business day exchange.

## SHIPS WITH

Carrying case, remote control, batteries, power cord, RGB signal cable, built-in lens cover, user's manual on CD-ROM, quick start guide, product registration card and DisplayNote Presenter License

## ORDERING MODEL NUMBERS

NP-M282X  
NP-M322X  
NP-M322W  
NP-M402X



Additional accessories are available, including screens, carts, mount accessories and replacement cables. Visit [www.necdisplay.com](http://www.necdisplay.com) for details.

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## Specifications for M282X/M322X/M322W/M402X

### OPTICAL

Display Technology

Light Output (lumens)

Resolution  
Native

Maximum  
Contrast Ratio (up to)  
Lamp Type

Lamp Life (up to)

Screen Size (diagonal)  
Throw Ratio  
Projection Distance

Projection Angle

Lens\*

Zoom  
Focus  
F-#, f-#  
Keystone Correction

M282X/M322X/M402X: 0.55" DLP by Texas Instruments w/ BrilliantColor  
M322W: 0.65" DLP by Texas Instruments w/ BrilliantColor  
M282X: 2800  
M322X/M322W: 3200  
M402X: 4000

M282X/M322X/M402X: XGA 1024 x 768  
M322W: WXGA 1280 x 800  
WUXGA 1920 x 1200  
Up to 10,000:1  
M282X: 200 AC  
M322X/M322W: 225W AC  
M402X: 270W AC  
M282X: 4500 hours / 10,000 hours eco  
M322X/M322W/M402X: 3500 hours / 8000 hours eco  
30 - 300 in., 0.76 - 7.6m  
M282X/M322X/M402X: 1.6 - 2.72:1 M322W: 1.3 - 2.21:1  
M282X/M322X/M402X: 3.0 - 52.4 ft. / 0.9 - 15.97m  
M322W: 2.5 - 44.4 ft. / 0.76 - 13.53m  
10.5° - 17.6°

1.7  
Manual  
F=2.4 - 3.1, f=17.09 - 29.05mm  
+/- 30% Horizontal & Vertical (Automatic/Manual) adjustment

### SIGNAL COMPATIBILITY/ CONNECTIVITY

Scan Rate

Horizontal  
Vertical

Supported Video Standards  
SD/HD Video Signal Compatibility

PC Signal Compatibility  
Macintosh Compatibility  
Input/Output Terminals

RGB1 (analog)  
RGB2 (digital)  
RGB3 (digital)  
RGB4 (digital)  
Video  
Audio 1  
Audio 2  
Audio 3  
Audio Out  
Monitor Out

Audio  
External Control  
Sync Compatibility

15 - 100 kHz  
50 - 120 Hz  
NTSC, NTSC4.43, PAL, PAL-60, PAL-M, PAL-N, SECAM  
1080i, 1080p, 720p, 576p, 576i, 480p, 480i; Y/Cb/Cr component (with optional adapter - ADP-CV1E)  
VGA, SVGA, XGA, SXGA, SXGA+, UXGA, WUXGA  
Yes

VGA 15-pin D-sub  
HDMI w/ HDCP  
HDMI w/ HDCP  
USB A Type  
RCA  
L/R RCA (shared by video sources)  
1/8 in. stereo  
Microphone in  
mini stereo (variable audio out)  
Yes  
20W speaker  
RS-232, IR, LAN, DDC/CI, USB, Wireless LAN (optional)  
Separate Sync / Composite Sync / Sync on G

### ELECTRICAL

Power Requirements  
Input Current

Power Consumption (ECO Off/ECO Mode/  
Standby/Standby-Power Saving)

100 - 240V AC, 50/60Hz  
M282X: 3.0A / 1.5A  
M322X/M322W: 3.3A / 1.8A  
M402X: 3.9A / 1.9A  
M282X: 257W / 187W / 2.5W / 0.2W  
M322X/M322W: 282W / 202W / 2.5W / 0.2W  
M402X: 335W / 246W / 2.5W / 0.2W

### MECHANICAL

Installation Orientation  
Dimensions (WxDxH)  
Net Weight

Fan Noise

Regulations

Floor/Front, Floor/Rear, Ceiling/Front, Ceiling/Rear  
13.4 x 10.1 x 3.5 in. / 340 x 280 x 90mm  
M282X/M322X/M322W: 7.7 lbs. / 3.49 kg  
M402X: 8.0 lbs. / 3.6 kg  
M282X: 38 dB / 29 dB eco  
M322X/M322W: 38 dB / 30 dB eco  
M402X: 39 dB / 33 dB eco  
UL60950-1, CSA60950-1, FCC Part 15 Class B, ICES-03 Class B

### ENVIRONMENTAL

Operating Temperature  
Humidity  
Storage

41° - 104°F / 5° - 40°C  
20-80% non-condensing  
-14° - 122°F / -10° - 50°C

### ACCESSORIES

NP01MR  
NP02LM1  
SPKR30  
ADP-CV1E  
MP300CM  
NP01UCM  
NP02GL  
AEC006009  
AEC012018  
AEC0203  
AEC0305  
SCP200  
NP27LP  
NP28LP  
NP30LP  
RMT-PJ36  
NECEW1-MP  
NECEW2-MP  
ADVEXON1-MP  
ADVEXON2-MP  
NECECO  
PWRCRD-PJPX  
RGCBL-PJPX

IR receiver enables PJ remote to control PC and MAC functions  
802.11b/g/n wireless LAN adapter  
Amplified 30-watt speaker  
Component video to VGA adapter  
Ceiling mount  
Universal ceiling mount for projectors weighing less than 40 pounds  
Active shutter 3D glasses (PC only)  
6 to 9 inch adjustable extension column for use with projector mount  
12 to 18 inch adjustable extension column for use with projector mount  
2 to 3 foot adjustable extension column for use with projector mount  
3 to 5 foot adjustable extension column for use with projector mount  
Adjustable suspended ceiling plate for use with ceiling mount  
Replaceable lamp for M282X  
Replacement lamp for M322X and M322W  
Replacement lamp for M402X  
Replacement remote control  
Extends term of parts and labor warranty to 3 years  
Extends term of parts and labor warranty to 4 years  
Extends term of InstaCare service program to 2 years  
Extends term of InstaCare service program to 3 years  
Projector recycling program, disposal certificate  
Power cable  
RGB cable

## NEC Display Solutions

500 Park Boulevard, Suite 1100  
Itasca, IL 60143  
866-NEC-MORE

[necdisplay.com](http://necdisplay.com)

# NEC