

# 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.

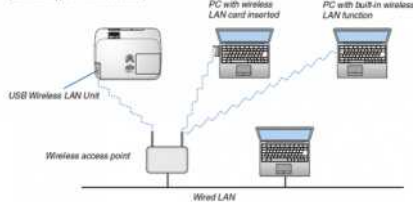
## Image Express Lite

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

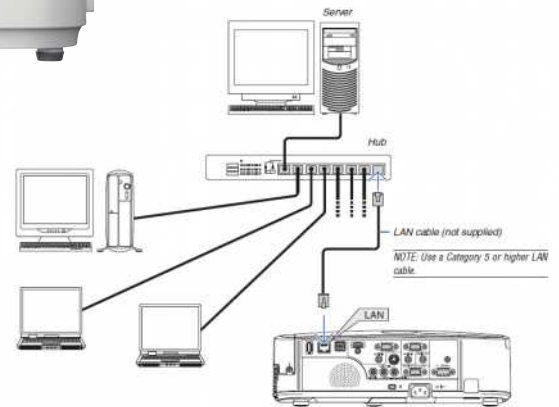


Wireless LAN module (optional)

Example of wireless LAN connection (Network Type → Infrastructures)



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.



NEC Projectors

### 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.

**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

**Specifications for M282X/M322X/M322W/M402X**

**OPTICAL**

Display Technology

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

Light Output (lumens)

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

Resolution Native

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: 1.5 - 2.5:1 M322W: 1.2 - 2.0:1  
 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°

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

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

**SIGNAL COMPATIBILITY/ CONNECTIVITY**

Scan Rate Horizontal Vertical Supported Video Standards SD/HD Video Signal 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

PC Signal Compatibility Macintosh Compatibility Input/Output Terminals

VGA 15-pin D-sub HDMI w/ HDCP HDMI w/ HDCP USB A Type RCA S-Video 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

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

Audio External Control Sync Compatibility

**ELECTRICAL**

Power Requirements Input Current

100 - 240V AC, 50/60Hz M282X: 3.0A / 1.5A M322X/M322W: 3.3A / 1.8A M402X: 3.9A / 1.9A M282X: 257W / 187W / 2.4W / 0.2W M322X/M322W: 282W / 202W / 2.4W / 0.2W M402X: 335W / 246W / 2.4W / 0.2W

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

**MECHANICAL**

Installation Orientation Dimensions (WxDxH) Net Weight

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: 37 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

Fan Noise

Regulations

**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 AECO06009 AECO12018 AECO203 AECO305 SCP200 NP27LP NP28LP NP30LP RMT-PJ36 NECEW1-MP NECEW2-MP ADVEXON1-MP ADVEXON2-MP NECECO PWRCRD-PJPX RGBCBL-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

Available At



Where Projectors Roam Free

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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