# MXD-2000XL-PAN 20.3" Modero X® Series Wall Mount Touch Panel

## Overview

The MXD-2000XL-PAN 20.3" Modero X Series® Panoramic Wall Mount Touch Panels feature a beautiful, panoramic capacitive multi-touch screen that provides users access to multiple applications with minimal navigation. It is hardware-ready for support of Near Field Communication™ (NFC) Technology to allow integration with NFC capable personal devices. The panoramic design offers the ability to perform multiple functions simultaneously. The MXD-2000XL-PAN is available in Portrait and Landscape layouts:

| Portrait | MXD-2000XL-PAN-P | FG5968-05 |
|---|---|---|
| Landscape | MXD-2000XL-PAN-L | FG5968-11 |



**FIG. 1** MXD-2000XL-PAN-P/L (PORTRAIT AND LANDSCAPE)

## Product Specifications

| MXD-2000XL-PAN SPECIFICATIONS | |
|---|---|
| Dimensions (HWD) | • Landscape: 9 1/2" x 20 3/8" x 11/16" (242mm x 519mm x 19mm)<br>• Portrait: 20 3/8" x 9 1/2" x 11/16" (519mm x 242mm x 19mm) |
| Weight | 9.1 lbs (4.13 Kg) |
| Power Consumption | • Full-On: 32W (13.5V⎓, 2.4A)<br>• Standby: 3.10 W (13.5V⎓, 0.27A)<br>• Start-Up Inrush Current: 4.0A for 80 µsec |
| External Power Supply Required | Requires one of these AMX power sources (not included):<br>• PSR4.4 Power Supply, 4.5A, 3.5 mm Phoenix with Retention Screws (FG423-46)<br>• PSN4.4 Power Supply, 4.5A, 3.5 mm Phoenix, 13.5V⎓ (discontinued) (FG423-45)<br>• MXA-MPL Modero X Series Multi Preview Live (FG5968-10)<br>• MXA-MP Modero X Series Multi Preview (FG5968-20) |
| Certifications | • UL 60950-1<br>• FCC Part 15 Class B<br>• C-Tick CISPR 22 Class B<br>• CE EN 55022, EN 55024 and EN 60950-1<br>• IEC 60950-1<br>• IC<br>• IEC/EN-60950<br>• RoHS/WEEE compliant |
| Environmental | • Temperature (Operating): 32°F to 104°F (0°C to 40°C)<br>• Temperature (Storage): 4°F to 140°F (-20°C to 60°C)<br>• Humidity (Operating): 20% to 85% RH<br>• Humidity (Storage): 5% to 85% RH<br>• Power ("Heat") Dissipation:<br>    On: 109.2 BTU/hr<br>    Standby: 10.6 BTU/hr |
| Included Accessories | • Locking 2-pin Phoenix mate (41-0002-SA)<br>• MXA-USB-C, USB Port Cover Kit (FG5968-18)<br>• MXA-CLK, Modero X Series Cleaning Kit (FG5968-16)<br>• Installation Template 20.3" (68-5968-01) |

*Note: The MXD-2000XL-PAN-P-NC (FG5968-33) and MXD-2000XL-PAN-L-NC (FG5968-34) No Comm touch panels do not have camera, microphone, or NFC capability. These otherwise have all of the functionality of the MXD-2000XL-PAN panels.*

## MXD-2000XL-PAN Installation

• For more detailed installation instructions including important notes on thermal concerns with Rack and Wall installations, refer to the *X-Series Touch Panels MXD/T-2000-XL-PAN & MXD/T-1900 -PAN Instruction Manual* (available to view/download from www.amx.com).
• Detailed specifications drawings for the MXD-2000XL-PAN are available to download from www.amx.com.

The MXD-2000XL-PAN may be installed directly into a solid surface environment, using either solid surface screws or the included locking tabs for different mounting options. Once installed, the panel is contained within a clear outer housing known as the Backbox. The Backbox is removed to install it into a wall, or when using the optional Rough-In Box accessory (**FG039-15**).
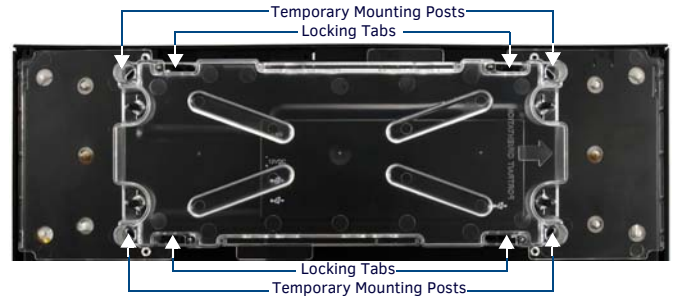


**FIG. 2** MXD-2000XL-PAN BACKBOX

*Note: For typical mounting surfaces, such as drywall, use the locking tabs as the primary method for securing the Backbox to the surface. For thin walls or solid surfaces, use mounting screws (not included).*

## Installing the MXD-2000XL-PAN Into a Wall

The MXD-2000XL-PAN comes with a clear plastic Backbox (FIG. 2) designed to attach the panel to most standard wall materials. This Backbox has four locking tabs (2 on top, 2 on bottom) to help lock the Backbox to the wall. These locking tabs are only extended AFTER the Backbox is inserted into the wall.

• When installing the Backbox, make sure that the assembly is in the correct position and in the correct place. Once the locking tabs are extended and locked into place, removing the Backbox may be difficult without having access to the back of the wall or causing damage to the wall.
• In order to ensure a stable installation of the MXD-2000XL-PAN, the thickness of the wall material must be a minimum of .50 inches (1.27cm) and a maximum of .875 inches (2.22cm). The mounting surface should also be smooth and flat.
The Backbox also has four slots for accepting the temporary mounting posts mounted on the back of the device.
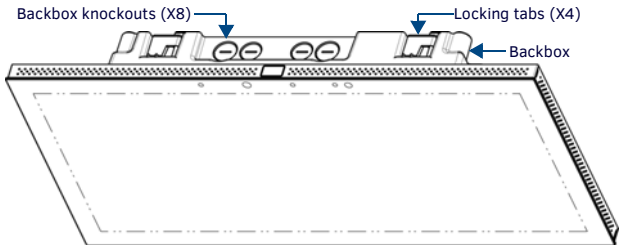


**FIG. 3** MXD-2000XL-PAN (LANDSCAPE)

## Installing the Backbox

Since the cutout for the Backbox is off-center from the edges of the touch panel, use the included Installation Template (**68-5968-01**) to ensure proper placement. The template is marked on one side with directions for both landscape and portrait installations to ensure that the touch panel and Backbox are properly aligned.

*WARNING: Using the Installation template to select the final placement of the Backbox is highly recommended. The outside edges of the template are the same dimensions as the touch panel, which allows you to troubleshoot possible conflicts with wall edges, doors, and other potential obstacles.*

1. Prepare the area by removing any screws or nails from the drywall before beginning the cutout process.
2. After ensuring proper placement, cut out the mounting surface for the Backbox, using the (included) Installation Template as a guide.
   *CAUTION: Making sure that the actual cutout opening is slightly smaller than the provided dimensions is highly recommended. This provides a margin of error if the opening needs to be expanded. Too little wall material removed is always better than too much.*
3. Thread the incoming power and Ethernet wiring from their terminal locations through the surface opening (see FIG. 4 on reverse). Leave enough slack in the wiring to accommodate any re-positioning of the panel.
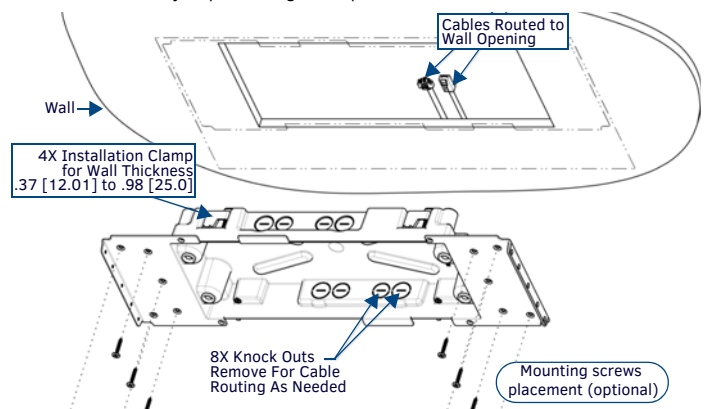


**FIG. 4** MXD-2000XL-PAN BACKBOX INSTALLATION (LANDSCAPE)

4. Remove any knockouts as needed on either long dimension of the Backbox to facilitate incoming wiring and pull the wiring through the resultant holes.
5. Push the Backbox into the wall opening. Insure that the locking tabs lie flush against the Backbox.
6. Extend the locking tabs on the sides of the Backbox by tightening the screws inside the box until snug. Apply enough pressure to the screw head to keep the box flush with the wall: this ensures that the locking tabs will tighten up against the inside of the wall.
7. For additional strength, #4 mounting screws (not included) may be secured through the mounting holes located at the left and right sides of the panel (FIG. 4). In order to prevent damage to the touch panel, make sure that these are flush with the Backbox.
8. Insert each connector into its corresponding location along the back of the device.
9. Test the incoming wiring by attaching the panel connections to their terminal locations and applying power. Verify that the panel is receiving power and functioning properly to prevent repetition of the installation.
   Remove power before continuing with the installation.
   *Note: Do not disconnect the cables from the touch panel. The panel must be installed with the cables attached before being inserted into the drywall.*
   *Note: Configurations that use the limited access USB port on the side of the connector box may require a right angle mating connector (not included).*
10. Insert the four temporary mounting posts of the panel into the openings on the Backbox and slide the panel onto the Backbox. This will temporarily hold the panel during the rest of the installation (FIG. 5).
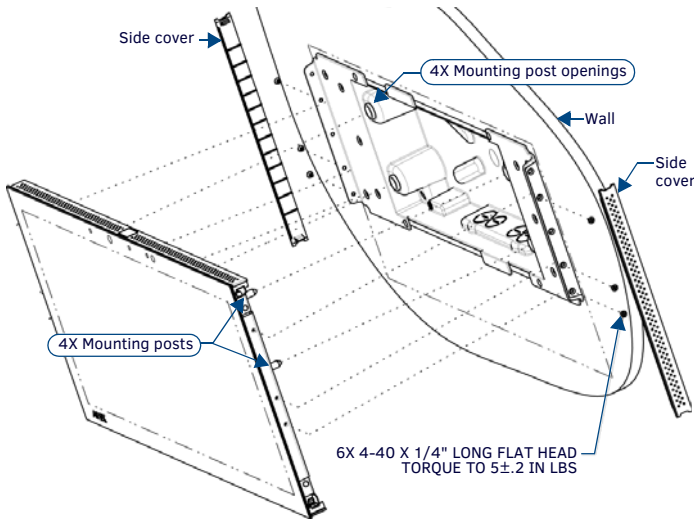


Side cover

4X Mounting post openings

Wall

Side cover

4X Mounting posts

6X 4-40 X 1/4" LONG FLAT HEAD TORQUE TO 5±.2 IN LBS

**FIG. 5** MXD-2000XL-PAN INSTALLATION (LANDSCAPE)

*WARNING: When installing the panel, do NOT press on or near the center of the panel. Too much stress at the center may damage the touch screen surface. When installing the panel, pressure should be applied toward the ends of the panel ONLY.*

11. Use the six provided screws, three at each end, to secure the touch panel to the Backbox (FIG. 5). Use only the provided screws, as other screws may damage the touch panel.
12. Snap the side covers onto each end of the touch panel.
13. Reconnect the terminal Ethernet and USB to their respective locations on either the Ethernet port or NetLinx Master.

## Panel Connectors and Wiring

Connectors are located on the underside of the MXD-2000XL-PAN. The Micro-USB port is used for camera video output. A second, limited access USB port is accessible on the back side of this cover.

### Wiring Guidelines

The MXD-2000XL-PAN uses a 13.5V --- -compliant power supply to provide power to the panel via the 2-pin 3.5 mm captive wire PWR connector. Use the previously provided power requirement information to determine the power draw. The incoming PWR and GND wires from the power supply must be connected to the corresponding locations within the PWR connector.

*Note: Apply power to the panel only after installation is complete.*

*Note: Connecting power to the MXD-2000XL-PAN should be done using the included 2-pin 3.5mm captive wire connector included with the device. This connector uses retaining screws (instead of the pins on each side of standard captive wire connectors); using excessive force to insert a standard captive wire connector may damage the device.*

### Wiring a Power Connection

To use the 2-pin 3.5 mm captive wire connector with a 13.5V --- -compliant power supply, the incoming PWR and GND wires from the external source must be connected to their corresponding locations on the connector (FIG. 6). The connector uses locking screws to insure a connection to the device, so make sure to insert and tighten the screws before applying power.

1. Insert the PWR and GND wires into the terminal end of the 2-pin 3.5 mm captive wire connector cable. *Match the wiring locations of the +/- on both the power supply and the terminal connector.*
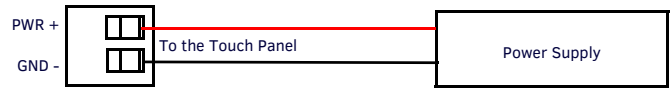


PWR +

GND -

To the Touch Panel

Power Supply

**FIG. 6** NETLINX POWER CONNECTOR WIRING DIAGRAM

2. Tighten the clamp to secure the two wires. *Do not tighten the screws excessively; doing so may strip the threads and damage the connector.*
3. Verify the connection of the 2-pin 3.5 mm captive wire connector to the external 13.5V --- -compliant power supply and apply power.

## Powering On/Off X Series Panels

X Series touch panels may be powered on by touching and holding the *Sleep* button. To power off the panel, press and hold the Sleep button, and select **Power Off**.

## Configuration and Programming

X Series touch panels are equipped with a *Settings* menu that provides the ability to configure various features on the panels. To access the *Settings* menu, press and hold the Sleep button, and select **Settings**.

*Note: Information on the Settings menu, panel configuration, and programming is provided in the Modero X Series Programming Guide, available at www.amx.com.*

### Setting the Panel's Device Number and Device Name

1. In the Settings menu, select **NetLinx**. This opens a password keypad.
2. Enter the panel password into the keypad (the default is **1988**) and select **OK** to access the *NetLinx* page.
3. Press **Device Number** to open the NetLinx editing window.
4. Enter a unique Device Number assignment for the panel and press **OK**.
5. Enter a unique Device Name assignment for the panel and press **OK**.

### Configuring the Panel's IP Address

These steps configure the panel to communicate with a network; it is still necessary to connect to the NetLinx Master (see *Connecting to a NetLinx Master* below).

#### Network Communication via DHCP

1. In the *Ethernet* page, press **DHCP/Static** field to open the *DHCP/Static* window. Note that *DHCP* is the default setting.
2. Select **Host Name**, enter the new host name
3. Press **OK** to save changes.

#### Network Communication via Static Address

1. In the *Ethernet* page, press **DHCP/Static** to open the *DHCP/Static* window.
2. Select **Static** to open the *Static IP* window.
3. Press any field to open a keypad or keyboard (depending on the field), and enter the appropriate network address information.
4. Press **OK** to save your changes and return to the *Ethernet* page.

### Connecting to a NetLinx Master

To establish the type of connection to make between the panel and the NetLinx Master:

1. In the *NetLinx* page, press **Mode** to choose the connection mode (*URL*, *Listen* or *Auto*):

| CONNECTION MODES | | |
|---|---|---|
| **Mode** | **Description** | **Procedures** |
| URL | The device connects to the target Master's IP address via a TCP connection. | 1) Select **URL** in the *Mode* menu.<br>2) Enter the *Master IP/URL*, *Master Port Number*, and *Username*/*Password* (if required by the Master).<br>3) Press **OK** to save changes. |
| Listen | This mode allows the panel to "listen" for the Master's communication signals. Note that in this mode, the *System Number* and *Master IP/URL* fields are read-only. | 1) Select **Listen** in the *Mode* menu.<br>2) Confirm the panel's IP address is on the Master's URL list (via NetLinx Studio).<br>3) Press **OK** to save changes.<br>*Note: The Host Name (set on the Ethernet page), can be used to locate the panel on the Master (particularly useful for DHCP connections where the IP address can change).* |
| Auto | Use this mode when both the panel and the NetLinx Master are on the same Subnet. | 1) Select **Auto** in the *Mode* menu.<br>2) Enter the System Number and Username and Password (if applicable).<br>3) Press **OK** to save changes. |

2. If password security is enabled on the target Master, enter the Username and Password:
   a. Select **Username** to open the *NetLinx* window.
   b. Enter the *Username* and *Password* required by the Master.
   c. Press **OK** to save changes and return to the *NetLinx* page.

## Related Software and Additional Documentation (at www.amx.com)

- Programming the Modero X Series touch panels requires the use of the latest versions of NetLinx Studio and TPDesign4, both available to download at www.amx.com. Refer to the NetLinx Studio and TPDesign4 online help for information.
- For additional information on the MXD-2000XL-PAN, refer to the *X-Series Touch Panels MXD/T-2000-XL-PAN & MXD/T-1900 -PAN Instruction Manual* .
- For detailed information on the Settings menu as well programming information and instructions on upgrading firmware, refer to the *Modero X Series Programming Guide*.

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