For more detailed installation, configuration, programming, file transfer, and operating instructions, refer to the *12"* and *15" Modero Touch Panel Series* Instruction Manual, available on-line at **www.amx.com**.

FIG. 1 Sample Wall Mount and Table Top CV Touch Panels

ATTENTION!

Verify you are using the latest NetLinx Master Firmware (available from ***www.amx.com****) on your ME260/64 and NI-Series Controllers. Verify the TPDesign4 program being used is* ***Version 2.4*** *or higher.*

Overview

The 12" (NXT/NXD-CV12) and 15" (NXT/NXD-CV15) Video panels are 4th generation graphics touch panels that provide richer colors and crisper contrast than any panels currently on the market.

Modero tilt panels now come with an optional NXA-BASE/B battery base that allows it to function off the collective charge of two internal NXT-BP batteries that can be charged either in the base or in an optional NXT-CHG charger.

Specifications

Modero CV Specifications	
Dimensions (HWD): NXT-CV15 (**FG2252-11**) NXD-CV15 (**FG2253-12**) CB-TP15 (**FG032-10**)	• 12.94" x 14.95" x 11.73" (32.87 cm x 37.97 cm x 29.78 cm) Fully lowered height: 7.45" (18.92 cm) • Decor faceplate included: 14.37" x 15.20" x 3.31" (36.50 cm x 38.61 cm x 8.40 cm) • Conduit/wallbox: 13.48" x 14.18" x 3.49" (34.24 cm x 36.00 cm x 8.85 cm) (***optional***)
Dimensions (HWD): NXT-CV12 (**FG2250-11**) NXD-CV12 (**FG2251-12**) CB-TP12 (**FG031-10**)	• 10.91" x 12.34" x 12.50" (27.70 cm x 31.33 cm x 31.75 cm) Fully lowered height: 6.77" (17.20 cm) • Decor faceplate included: 12.38" x 12.59" x 3.25" (31.43 cm x 31.97 cm x 8.25 cm) • Conduit/wallbox: 11.52" x 11.60" x 3.50" (29.27 cm x 29.47 cm x 8.89 cm) (***optional***)
Power Requirements (CV12):	• Constant current draw: 2.04 A @ 12 VDC (stand-alone) • Startup current draw: 3.0 A @ 12 VDC (stand-alone)
Power Requirements (CV15):	• Constant current draw: 3.45 A @ 12 VDC (stand-alone) • Startup current draw: 5.1 A @ 12 VDC (stand-alone)
Minimum power supply required:	• **CV12**: requires a PSN4.4 Power Supply (**FG423-45**) - using accessories can increase the power draw requirements • **CV15**: requires a PSN6.5 Power Supply (**FG423-41**) - using accessories can increase the power draw requirements
Memory:	• 64 MB SDRAM (upgradable to 256 MB) • 64 MB Compact Flash (upgradable to 1 GB factory programmed)
Resolutions:	• 12" panels: 800 x 600 pixels • 15" panels: 1024 x 768 pixels
Front Panel:	• Light Sensor: Photosensitive light detector for automatic adjustment of the panel brightness • Motion Sensor (PIR): Proximity Infrared Detector to wake the panel when panel is approached • Sleep Button: Pushbutton (grey) used to either put the panel into a "sleep" or "wake" state • Microphone: Used for intercom applications • Speakers: Frequency response 450 Hz - 7 KHz
Rear Connectors:	• PCMCIA Card Slot: Provides wireless connectivity (with upgrade) • Stereo Ouput Connector: Stereo output through a 3.5mm mini-jack (for use with external speakers or headphones) • Audio/Video Connector: RJ-45 connection for A/V signals between the NXA-AVB Breakout Box and the panel • Ethernet 10/100 Port: RJ-45 port for 10/100 Mbps communication • ICSNet Connector: RJ-45 connection for ICSNet interface

Modero CV Specifications (Cont.)	
Operating /Storage Environments:	• Operating Temperature: 10° C (50° F) to 40° C (104° F) • Operating Humidity: 20% - 85% RH • Storage Temperature: -20° C (-4° F) to 60° C (140° F) • Storage Humidity: 5% - 85% RH
NXA-AVB: A/V Breakout Box: **FG2254-01** (FIG. 2)	• Included accessory with CV12 and CV15 panels • Provides video/audio distribution to the A/V panel over CAT5 cable (up to 200'/60.96 m) and accepts either Composite or S-Video
Supported Audio Sample Rates:	• 48000Hz, 44100Hz, 32000Hz, 24000Hz, 22050Hz, 16000Hz, 12000Hz,11025Hz, and 8000Hz.
Included Accessories:	• Installation Kit for 12"/15" panels (**KA2250-02**): - One 2-pin mini-Phoenix connector (**41-5025**) and - Three Phillips-head screws (#4-20 x 0.250 Black) (**80-0114-08**) • Modero Table Top Cable (**CA2250-50**) provided with all NXT panels.
Optional Accessories:	• CB-TP12 Conduit/Wallbox (**FG031-10**) • CB-TP15 Conduit/Wallbox (**FG032-10**) • MB-TP12 Universal VESA Mounting Box (**FG031-50**): - One strain relief grommet (45-0004-03) - One black metallic VESA back box (62-0031-50) - One black plastic cover (with grommet opening) (60-0031-50) - Four Phillips pan-head screws (#8-32 x 0.50 Black) (80-0146-02) - Twelve Phillips-head screws (#6-32 x 0.500 Black) (80-0139) • MB-TP15 Universal VESA Mounting Box (**FG032-50**): - One strain relief grommet (45-0004-03) - One black metallic VESA back box (62-0032-50) - One black plastic cover (with grommet opening) (60-0032-50) - Four Phillips pan-head screws (#8-32 x 0.50 Black) (80-0146-02) - Twelve Phillips-head screws (#6-32 x 0.500 Black) (80-0139) • NXA-BASE/B Battery Base Kit (**FG2255K**) 1 battery base (**FG2255**) and 2 NXT-BP batteries (**FG2255-10**) • NXA-RK12 Rackmount kit for 12" Wall Mount panels (**FG2904-50**) • NXA-RK15 Rackmount kit for 15" Wall Mount panels (**FG2904-51**) • NXA-WC80211b, 802.11B Wireless Card (**FG2255-02**) • NXT-CHG Kit (**FG2250-50K**): 1 charger (**FG2250-50**) and 2 NXT-BP batteries (**FG2255-10**) • PSN4.4 Power Supply (12 VDC) (**FG423-45**) • PSN6.5 Power Supply (12 VDC) (**FG423-41**) • Upgrade SDRAM memory: NXA-EXM128M - 128 MB memory card (**FG079-01**) NXA-EXM256M - 256 MB memory card (**FG079-02**) • Upgrade Compact Flash (factory programmed with firmware): NXA-CFTP128M - 128 MB compact flash card (**FG2116-22**) NXA-CFTP256M - 256 MB compact flash card (**FG2116-23**) NXA-CFTP512M - 512 MB compact flash card (**FG2116-24**) NXA-CFTP1GB - 1 GB compact flash card (**FG2116-25**)

NXA-AVB A/V Breakout Box

FIG. 2 shows the front and rear connectors on the Breakout Box.

FIG. 2 Connector layouts on the NXA-AVB Breakout Box (included)

Connections and Wiring

FIG. 3 shows the layout of the connectors (located on the rear of the base on the NXT and on the left side panel of the NXD panels).
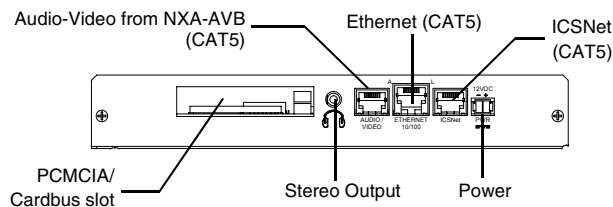

FIG. 3 Connector layout on the CV Touch Panels

Power Connection

A PSN4.4 or PSN6.5 Power Supply can indirectly supply power to the Modero panels via the NXA-AVB Breakout Box. FIG. 4 shows a sample wiring configuration using both an indirect or direct PSN power connection for a CV Modero Panel.
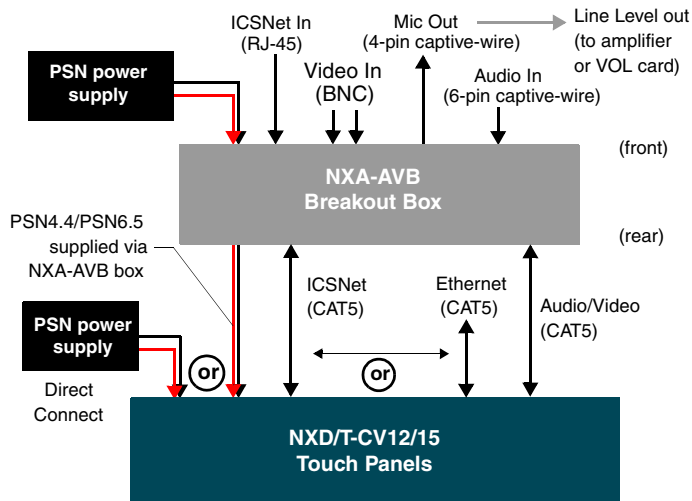
FIG. 4 Sample Wiring configuration on CV Modero Panels

RJ-45 Connections

Use a standard CAT5 Ethernet cable to provide communication between the touch panel, NXA-AVB, and the NetLinx Master.

Ethernet 10/100 Base-T Connector

The Ethernet cable (connected to the rear of the Table Top Panels or to the side of the Wall Panel) provides 10/100 network connectivity between the panel and the NetLinx Master.
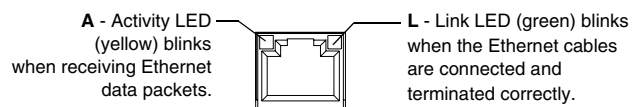

A - Activity LED (yellow) blinks when receiving Ethernet data packets.

L - Link LED (green) blinks when the Ethernet cables are connected and terminated correctly.

FIG. 5 Layout of Ethernet LEDs

Modero Setup and System Connection

1. Carefully remove the panel from the shipping box, peel the protective plastic cover from the LCD and apply power to the panel.
2. From below the LCD, press the grey Front Setup Access button for 6 seconds (passing-over the Setup page) to access the Calibration setup page and follow the on-screen instructions.
3. Press the grey Firmware Setup Access button for 3 seconds to open the Setup page and touch the on-screen **Protected Setup** button.
4. Enter the panel password into the keypad. Factory default is *1988*.
5. Press the *Device Number* field to open the on-screen Device Number keypad and enter a value for the panel (*default is 10001*).
6. Press **Done** when finished and press the on-screen **Reboot** button to cycle power to the panel.
7. Repeat step 3 to access the Protected Setup page and touch the **System Connection** button to open the System Connection page (FIG. 6).
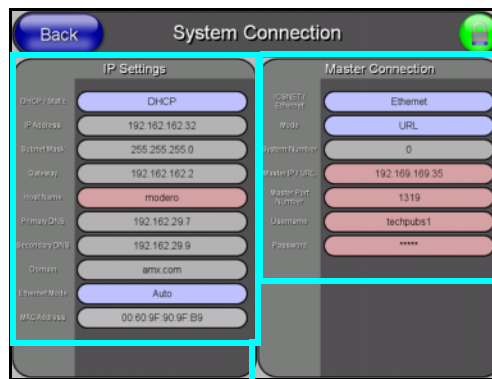
Setting up the System Connection Parameters

There are two choices for communication with the system Master: Ethernet **or** ICSNet. The default method used for Master connection is **Ethernet**.

First - Setup the Master Connection

To configure Ethernet communication:

1. Under the Master Connection column, toggle the *ICSNET/Ethernet* field until the choices cycle to **Ethernet**.
2. Press the **Mode** button:

   • **URL** - In this mode, enter the System Number (zero for an unknown System Number) and the IP/URL of the Master (Master Port Number is defaulted to **1319**).

FIG. 6 Sample System Connection page

   • **Listen** - In this mode, add the Modero's IP Address into the URL List of the Master (using NetLinx Studio). This mode sets the Modero panel to "listen" for broadcasts from the Master (using the panel IP from its URL list).

   • **Auto** - In this mode, enter the System Number of the NetLinx Master. This mode instructs the Modero to search for a Master that uses the same System Number (assigned within the Master Connection section) and that **resides on the same Subnet**.

To configure ICSNet Communication:

1. Under the **Master Connection** column, toggle the *ICSNET/Ethernet* field until the choices cycle to **ICSNET**.
2. All other settings are disabled and do not apply.

Second - Setup the IP Settings (Panel Communication)

Toggle the on-screen *DHCP/Static* field to select the appropriate setting for your system.

   • **DHCP** - With this setting, other settings are greyed-out and do not apply. Typically the Host Name can be left blank. These fields ("pulled" from the Ethernet connection) are filled-in by the panel after the unit is rebooted.

   • **Static IP** - With this setting, you must enter the network information as provided by your Network Administrator.

Remaining System Connection Parameters

1. Set the speed of the Ethernet connection to the panel by selecting from either: Auto (**default**), 10 Half Duplex, 10 Full Duplex, 100 Half Duplex, or 100 Full Duplex.
2. Enter a valid username and/or password (*if the target Master is secured*).
3. Press the **Back** button and then press the on-screen **Reboot** button to save the changes and cycle power.

> **NOTE: Press the on-screen Reboot button after any changes are made to the touch panel's Communication Parameters.**

Setting up a Modero Wireless Connection

Refer to the *12"* and *15" Modero Touch Panel Series* Instruction Manual for detailed wireless connectivity setup and configuration information.