

Overview

The TPT1040™ is an in-wall LCD touchscreen providing the ultimate in custom home control. It features a very high quality color 10.4" VGA touch panel with a wide viewing angle. The TPT1040 gives the user an elegant option for enhanced control of all types of audio, video, lighting and more. The TPT1040 is similar to Vantage's TPT650 but gives more screen area for additional items on each page. It is also helpful for viewing slightly larger images and text if desired. The completely new TPT1040 uses an Intel® X-Scale processor and runs on a Linux® operating system, which ensures system reliability and enhanced user experience. The Touchscreen connects to the InFusion System using *Ethernet* by way of Design Center's Ethernet Bus. As an additional benefit, the TPT1040 has four composite TV or security camera video source inputs with stereo audio. These four video/audio inputs are located on the back of the TPT1040 using standard RJ-45 connectors.

InFusion Design Center's *Touchscreen Designer™* software is used to program the TPT1040. Touchscreen Designer used in conjunction with Vantage's Patent-Pending *InFusion Media™* software allow drop-in components for *complete* touchscreen programming in as little as five minutes. The TPT1040 supports most InFusion Media drop-in components including Lighting, Music, Photo Albums, Intranet IP Cameras and Weather Components. Please see Design Center HELP for more information on Touchscreen Designer and InFusion Media.

Two hard buttons are centrally located on the front of the touchscreen for common usage programs, e.g., one could be programmed as a HOME button and the other as an AWAY button.



Shown with Pearl Black bezel (faceplate)

TPT1040 supports status objects allowing display of date, time, thermostat information, load status, custom messages via text widgets and most InFusion Media components. Using state tracking icons it can visually track individual loads. The backlight "On Time" may be adjusted from as little as 5 seconds to thousands of seconds. The backlight levels for ON and OFF states may also be adjusted. A built-in light sensor may be set to automatically adjust the brightness of the screen's ON level depending on the amount of ambient light in the room. A proximity detector senses movement and activates the backlight, illuminating sharp text and graphics. The user can easily navigate through pages making it an ideal central control interface.

Features

- Available bezel colors: Pearl Black, Silver, Arctic White and Custom - PLEASE NOTE: Order Bezels separately
- Fast IP downloads and firmware updates
- TPT1040 – digital 800x600 wide viewing angle 10.4" LCD
- Senses interaction with a proximity detector and activates the backlight

- Built-in light sensor provides step-less control of backlight to match ambient lighting
- Built-in IR receiver for use with Vantage IR
- SD Card expansion slot for nearly unlimited graphics
- Four (4) Audio/Video feed connections via RJ45 connectors
- Features status buttons to display date, time, thermostat information, load status, custom messages, most InFusion Media Components and more
- *Alpha Blending* graphics allow transparency for a modern interface, look and feel

Specifications of the TPT1040 Touchscreen

Description	Specification
Dimensions, HWD without Faceplate	9.11" x 11.22" x 1.73" 231.4mm x 284.9mm x 43.9mm
Bezel (faceplate) Dimensions HWD - Finished	9.5" x 11.6" x 0.245" 241.3mm x 294.64mm x 6.22mm
Weight	3.2lbs - 1.45kg
Display	Active Matrix Color LCD
Display Size	10.4" diagonal
Display Colors	16.777 Million
Display Resolution	800 x 600 pixels
Viewing Angle	160° horizontal, 160° vertical
Luminance	400 nits Dual CCFL
Video Input	NTSC; PAL; SECAM: with custom scalable window on screen
Audio Speakers	Built-in Stereo Speakers
Connectors	1x RJ-45 10/100 Mbps Ethernet with auto switching 4x input sources for composite video and stereo audio 1x Power connection; 2.1mm barrel plug
Memory	16mb Flash; 64mb SDRAM; Optional - SD Card
Expansion Slot	SD Card Slot for permanent memory expansion
Types of Objects	Bitmap, text, lines, sliders, navigation, status, programmed buttons, combination navigation/program buttons and most InFusion Media Components
Bitmaps	.png (buttons/sliders), jpg and bmp up to 800x600 pixels
Fonts	Any Windows font
AC Adapter Power Supply	Ships With 100-240VAC, 12VDC 4A Only connect 1, TPT to a power supply (minimum power required - 3A)
Ambient Temperature	10°C - 40°C (50°F - 104°F)
Ambient Humidity	10% - 90% RH (no condensation)

Software/Firmware

This station is compatible with InFusion Design Center software 2.3 and Controller firmware 2.2 or higher. Additionally the TPT1040's firmware should be kept current for optimum performance and functionality. For new projects it is recommended that firmware and software be kept to the most current release. NOTE: TPT1040 and TPT650 use the same firmware.

Installation

Installation of Vantage products should be performed or supervised by a *Certified Vantage Installer*. Installation requires the **1040 ROUGH IN ASSEMBLY – TPT1040-INSTALL-16** installation instructions. The recommended wall mounting height is 6" above that of a typical keypad station or approximately 50" to 58" from the bottom to the floor.

However, it may be installed at any height fitting *your* installation requirements / local codes. The LCD TouchScreen is mounted in the wall using a metal mounting box. After connecting the power, network bus and other input cables and confirming proper communication, tighten the screws snugly but *do not over tighten*. The bezel (faceplate) snaps securely onto the station after the installation is complete.

NOTE: Only use one power supply for each TPT1040. . Never use a large capacity power supply to power multiple TPT1040s.

Software, Firmware and Configuring

1. Add the TPT1040 in Design Center and program.
2. Remember to **configure** the TPT1040 to Design Center by entering the serial number manually or by tapping the screen with Design Center in configure stations mode and the TPT1040 selected (highlighted) in Design Center. When Design Center is in Configuration Mode the TPT1040 says *Configuration Mode* at the top with a darkened screen.
3. Touch *Configuration Mode* may be disabled in Design Center under *Settings | System Preferences*.

Firmware is updatable from Design Center by clicking on *System | Update TPT Firmware*. You must enter the IP address of the TPT1040 to update the firmware.

Exporting or Downloading Screen Designs

Connecting a computer to each touchscreen, one at a time, in order to download the program is no longer necessary. As long as the TPT1040 is on the network the screen design can be exported from Touchscreen Designer using the TPT1040's IP address.

TPT1040 Hardware Setup (Configuring) Screens

The TPT1040 has on-board programmed screens allowing access to the following *localized* information and settings.

- System •Brightness •Network •Sound

Simply draw a large imaginary "C" on the Touchscreen to navigate to the hardware setup screens.

Draw a "C" for Configuration Screens



TPT1040 System Screen

After drawing the imaginary "C" on the screen, the first screen showing is *System*, showing the date, time and firmware version. From this screen it is possible to navigate to the Calibrate or Erase screens.

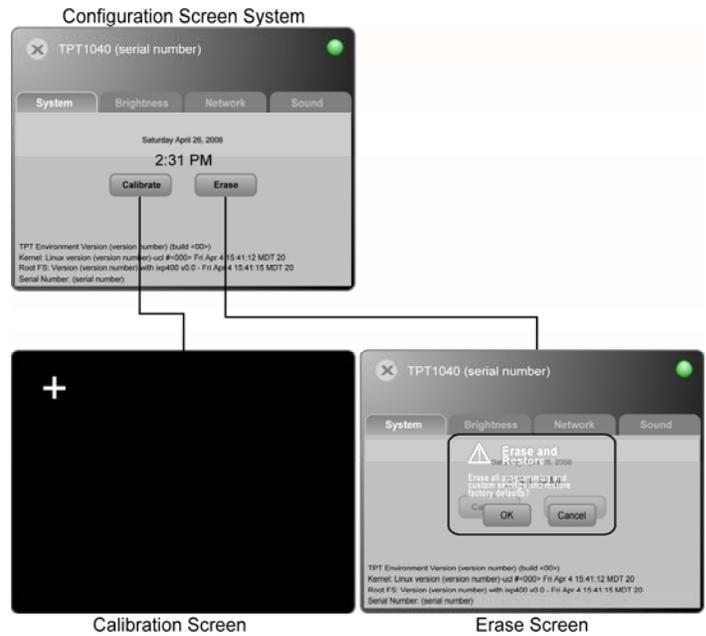
Calibrate

The touchscreen calibration utility draws crosses on the screen. To calibrate tap the center of each cross as it appears until the process is finished. If calibration is necessary, it is recommended that a fine tool be used, i.e., a Touchscreen stylus.

Erase

The Erase screen allows the TPT1040 to be returned to the state it was shipped in. This does not affect Firmware, only application programming and other user settings, e.g., motion settings, backlight settings, sound settings, etc. Please use

caution if you erase the screen, remember all Touchscreen Designs **will be erased**.

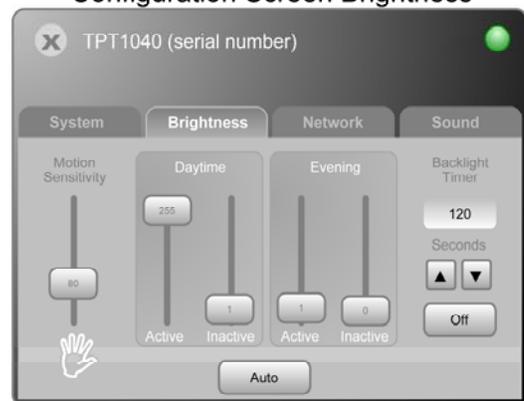


Brightness

The Brightness screen allows fine tuning of:

- Motion Sensitivity for backlight activation
 - o The "hand" icon image flashes as motion is seen. Use this to help determine the sensitive level of the motion/proximity sensor
- Daytime and Evening, Active and Inactive light levels
 - o Auto – with Auto selected Daytime and Evening settings are ignored. The built-in ambient light sensor sets the backlight intensity, smoothly adjusting the brightness as the ambient light changes. If the Backlight Timer is enabled the screen backlight turns to the Inactive level when the timer expires.
 - o Manual – with Auto not selected the Daytime and Evening settings are used. Switching between Daytime and Evening settings is controlled by Design Center programming (a night/day button or time-of-day event) using *Advanced | Stations | Set Mode*. Mode 1 is Evening and Mode 0 is Daytime. Using *Set Mode* this way **does not** require an LED Style.
- Backlight Timer adjustment in seconds
 - o Enabled or Off
 - o When Off, the screen uses the Active or Auto brightness level
 - o When On, the screen switches to the Inactive brightness level when the timer expires

Configuration Screen Brightness



Network

The Network screen allows setting the screen name and setup of an IP address for the TPT1040. As with most IP based products the TPT1040 may obtain an IP address automatically using the DHCP setting. It is also possible to assign a Static IP address which may be more desirable for most applications. The current IP address, DHCP or Static, is displayed on this screen.

Device Name

The "Device Name" is the name that will identify the TPT1040 in Design Center for exporting. It may be changed from "TPT1040 (serial number)" to whatever is desired. It is recommended that the name match the name used in Design Center.

- To enter the name, simply touch the Device Name section of the table to open the soft keyboard screen then enter the name and touch Save.

DHCP

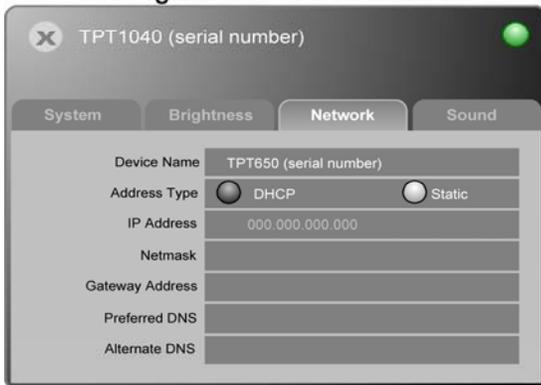
- To set a DHCP address, simply click the DHCP button and then click the X to exit the configuration screen.

Static

- To set a Static IP address, simply click the Static button and then click on the IP Address section of the table.
- A soft keyboard is opened allowing the static IP address to be entered.
- Click Save when finished
- Additional IP settings are also available for more advanced network configurations
 - Netmask
 - Gateway Address
 - Preferred DNS
 - Alternate DNS

Use a DHCP or assign a Static IP address. Try to keep the TPT1040 on the same network as the InFusion Controller.

Configuration Screen Network

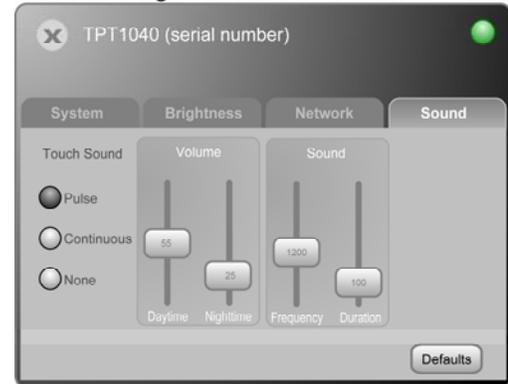


Soft Keyboard Screen

Sound

The Sound configuration screen allows changes in Volume, Frequency and Duration of pulse or Continuous sound when the screen is touched. The Volume levels may be adjusted for Daytime and Nighttime using the same programming as mentioned in the **Brightness** section above. Experiment with settings on this screen to obtain a desired sound for buttons.

Configuration Screen Sound



Front Of TPT1040

On the front of the TPT1040 are two hard buttons that may be assigned to any task in Design Center like a keypad button. There is also a built-in Light sensor and Motion sensor, behind the translucent diffuser in the front, bottom center of the screen. To set these up, see the **Brightness** section above. The two very small holes on each side of the Sensor lens balance the design. The left hole contains a Reset button. Note: the Reset button requires a long - 1/4" - straight piece of wire, e.g., a straightened paper clip would be ideal. The hole contains a plastic tube to guide the wire preventing it from wandering when inserted to reset the station.

Video/Audio Connections

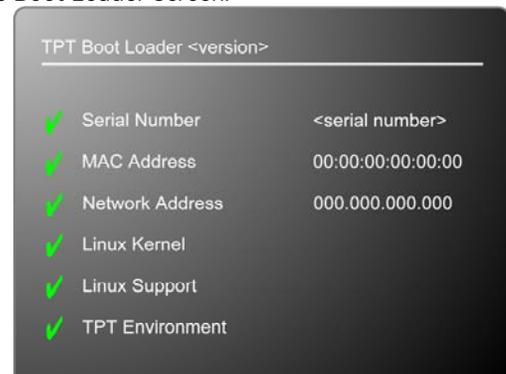
A/V connector cables are available from Vantage, part number VDA-0176. To build your own A/V connector cables please study drawings below. CAT-5 wire should be used when building A/V cables. Note: A/V cables should not exceed 200ft.

Reset

To reset the TPT1040 to *Boot Loader Screen* (below) while holding in hard buttons 1 and 2, press and release the Reset button in the right hole. Do this if the screen is in an unstable mode and communication cannot be established. When the screen boots to the *Boot Loader Screen* communication should be possible again allowing firmware updates. Pressing Reset without holding buttons 1 and 2 simply resets the screen. Also see *Trouble Shooting Tips* below.

Boot Loader

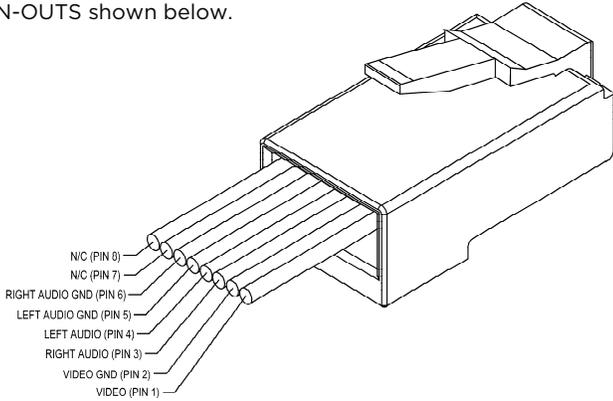
The Boot Loader screen is a root level boot screen and may be used when simply communicating with the screen at a rudimentary level (Touchscreen Designer Exports are not possible while in this mode). It also displays a green checkmark or red X for each section of the TouchScreen's operational status. This is valuable for troubleshooting. Reset the screen to exit the Boot Loader Screen.



Boot Loader Screen

RJ45 Connector for Audio/Video

To build your own A/V RJ45 connectors, please follow the PIN-OUTS shown below.



NOTE: TPT1040 Wiring

- CAT5e network cable with RJ45 connectors.
- Romex or equivalent 120-220VAC power supply*
- Each TPT1040 may also have up to four A/V cables using CAT5e with RJ45 connectors and an A/V Connector Cable – part number VDA-0176 shown above – on the A/V end.

*See the **TPT1040-INSTALL-16** sheet

VDA-0176 A/V Connector Cable

The **TPT1040-INSTALL-16** kit ships with one VDA-0176 A/V connector cable. Additional cables may be purchased from Vantage Controls. This cable connector is designed to connect directly to the A/V equipment using the RCA connectors. Use a straight through RJ45 (female) coupler allowing the installer to run longer CAT5e wire runs with male, RJ45 type connectors to the TPT1040 and the VDA-0176 connector cable. A/V wire runs should not exceed 200ft. Please see the **TPT1040-INSTALL-16** install sheet for details.

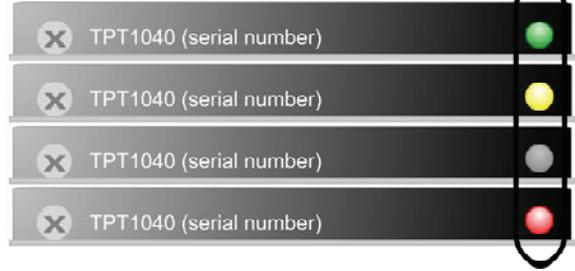
SD Memory Card

For most applications the built-in memory will be sufficient. However, the TPT1040 allows an SD Memory card to be inserted if it is anticipated that the design will require more than the default memory. Erase the current program on the TPT1040 first (see **TPT1040 System Screen** above).
NOTE: To avoid possible configuration issues, power down the TPT1040 when inserting or removing the SD Memory Card. Reprogram the TPT1040 after inserting an SD Memory card.

Connection Status Indicator

In the Configuration screens mentioned earlier, notice the round highlighted indicator in the upper right hand corner. This indicator changes appearance to indicate the connection status of the TPT1040. Use this indicator to help trouble shoot issues if the screen appears to have connection issues. The indicator changes colors as indicated below.

Connection Status Indicator Colors



Indicator Color	Connection Status
Green	Connected and properly configured
Amber	Connected to controller but not properly configured on the controller
Grey	Not connected to a controller
Red	Ethernet disconnected

Trouble Shooting Tips

Problem	Solution
TPT1040 Continually Reboots	The design application <i>may</i> be corrupted. Touch toward the outside edge of the screen, the instant the loading spinner displays. A message will pop-up asking, “Do you wish to start up without loading configuration?” To abort the design application from loading click OK. A new design application may now be downloaded to the screen from Design Center.
Can't Erase The Screen From The Configure System Menu	From the Boot Loader Screen (see Reset above) press the hard buttons in this order: LEFT & RIGHT (simultaneously) -then- LEFT RIGHT RIGHT LEFT When the screen is reset it should be back to factory settings

