

PRODUCT SECURITY

Description CTOUCH Canvas

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INTRODUCTION

This document discusses the various security aspects of the CTOUCH displays. This document is organized around the components which make up the CTOUCH Canvas product.

Note: this document does not especially touch upon Privacy aspects. Privacy aspects are described in the CTOUCH privacy statement, this document should be seen in conjunction with the CTOUCH privacy statement.

IN GENERAL

This document describes the security measures that can be taken with the CTOUCH product. Please make yourself aware of the possible security options the product offers. When you order a CTOUCH product in the default setting, we will format all settings in the most user and privacy friendly way possible. Configuring our products is a balance between more secure – less functionality. The customer should always take the setting where the CTOUCH product is used into account when choosing its preferable option. Please also note that a number of add-ons are available for CTOUCH products, which can enhance privacy and security of our products.

Please note that the settings on our products are only part of a security solution. We recommend incorporating the security of the screens into your overall security measures and policies. Pay attention to secure behaviour, like changing pin codes or passwords on a regular basis and do not store pincodes and/or passwords at places that are not safe. But also, be aware of who uses your screens for what purposes.

CANVAS SOFTWARE ARCHITECTURE

CTOUCH Canvas is designed to be secure from the ground up by architecture, choice of chip platform, configurability of interfaces and use of access levels for settings (user, dealer and factory levels).

In contrast to many other touchscreens, Canvas does not run an operating system (such as Android) or a general-purpose applications processor. Therefore, no applications can be installed on the screen itself. This means no (user) data or login credentials are stored and common threats (such as browser vulnerabilities) are absent.

The heart of the screen is a dedicated video processor, which is aided by a standby (STM32) microcontroller. Both run without an operating system. The video processor takes care of scaling, enhancing/switching audio-video streams and displaying the screen's configuration menus. The standby-microcontroller allows for the screen to wake up from standby by means of wake-up-on-LAN, ON-timer, CTOUCH button or a remote control event, while using minimal power.

Nearly all physical interfaces - including video, data, USB and network - can be disabled and re-enabled from the dealer menu to increase local security and reduce unauthorized access on site. Note that in order to increase ease-of-use when setting up the screen, these interfaces are enabled by default. More info can be found in the 'Display settings' chapter below.

An important part of security is application security and data access. Since the Canvas screen does not include an operating system and does not allow installing or running applications, it does not store any application data on the screen itself. It is possible to run application either by connecting external devices such as PCs.

SOFTWARE UPDATES

As this screen does not have an operating system, browser or any user applications, very limited need for firmware updates is expected. In order to do a firmware update, CTOUCH will provide an optional OTA-checker and installer with its installer for OPS-es.

This optional application - that runs on the CTOUCH Windows OPS - will regularly check the CTOUCH OTA-server new firmware. When new firmware is detected, the updater will always ask the user whether it wants to update or not. In case the user likes to update, the OAT updater will update the firmware through the OPS's RS232 connection.

In case the user does not or cannot to use the OTA-checker, new firmware can be downloaded manually from the CTOUCH website and be manually installed onto the screen with a blank USB stick.

PIN CODE

Canvas settings and screen unlock can be protected behind an (optional) pincode. This pincode is set in the settings menu and enabled/disabled in the dealer menu. Note that other than the settings/unlock pin code, there are no other passwords or pin codes used on the display, as there are no user accounts/applications. It is strongly advised to change the default pin code and enable it in the dealer menu.

THE DISPLAY SETTINGS

The CTOUCH Canvas has a very extensive configuration set. The large number of configuration options provide user the best possible personalized CTOUCH user experience but may also provide extra security options when needed. The configuration data is stored locally in the screen to enable complete stand-alone operation, so even without any network or device connected it can operate.

The configuration data is divided into three levels: user level, a dealer level, and a factory level. At the dealer level the following options are available to restrict access and functionality to lower level users:

- Enable/Disable USB ports (incl. USB-C)
- Enable/Disable Network (LAN) ports
- Enable/Disable Wake-on-LAN
- Enable/Disable Touch functionality
- Enable/Disable CTOUCH Button

The Canvas product has these functionalities switched on by default to facilitate ease of use. It is advised to consciously go through each of the settings and determine if the functions enabling is needed for the use of the display in the applicable situation. Both the dealer menu and factory menus are only accessible by remote (standard vs. factory remote).

Service and maintenance activities from CTOUCH or support partners, cannot be carried out remotely on the display. Please be aware that when applying password protection on your device, there is no resetting option. In case of lost passwords, CTOUCH or her service partner can just do a complete reinstall of the screen. All settings, applications as well as local stored content will be lost if user pin codes are lost. This should be taken into account when choosing a pin code for the CTOUCH device.

NETWORK CONNECTIVITY

The Canvas screen can be connected to the internet using a LAN connection. Please note that this means that customers must make sure this LAN environment is safe to connect to.

It is recommended to place the screens in a dedicated network segment protected by firewalls. Please note that if a customer does not have a specialized IT professional that will install the CTOUCH products, that we recommend our dealers to ensure that the product is installed in a safe (digital) environment. Whether or not extra consultancy should be obtained to ensure a secure environment, should follow from the CTOUCH intake.

As described in the section display settings the screen provides options to disable network connectivity interfaces, including to slide-in module, OPS and USB-C.

Network connection to the screen connects is connected to the two Canvas Ethernet interfaces through a dedicated, internal Ethernet switch chip. The Ethernet switch is also connected to the standby-microcontroller (STM32 with no OS) to provide wake-on-LAN functionality to the screen and (upon switching on in the dealer menu) the HTTP JSON API. This connection can physically be disabled from the settings (Ethernet sub-menu) and dealer menu.

INSTALLING APPLICATION SOFTWARE

Together with each Canvas screen, CTOUCH offers the Canvas Elements. Canvas Elements consists of FlatFrog whiteboard Pro and AirServer wireless sharing software. For details on security of these two Windows 10 applications, see the Canvas Elements security note.

FINGERPRINT SCANNER AND NFC READER

A fingerprint scanner and NFC reader are supported by the screen (optional accessories) and can be used to setup more enhanced authentication and authorisation scenario's for access to the configuration data or your Windows environment. Please consult with CTOUCH or its dealers on how to install these extra features.