

Link Touch Surface Mount

Manual



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Introduction

Overview



HMIs have developed heavily in the last decades.

With more and more development available with the use of HTML5, improved graphics and high-resolution panels, displays now are opening on visualizations that look so nice to be used in kiosk dashboards on stores, in public places, showing data transformed and with clear graphic that becomes an addition to the system rather than just a tool to interface with by engineers.

Powerful high-resolution panels are becoming a must to get nice graphic displayed on touch screens, with the required high responsiveness that makes operating the system practical and easy.

At Innon we believe on helping our clients achieving the best results, achieving greatness. We started with the very powerful Link Touch 10 and 15 inches Android panels with 6 cores CPUs flushed mounted, a pair of success stories in our industry.

But we wanted to improve the product choice even further with a new device that was more geared towards the room installation and appreciated by end users.

The Link Touch Surface Mount comes with slightly less power compared to Link Touch flush mounted options, allowing to provide a clever ultra-thin profile (19mm max) 10.1 inches touch display that aims to be the perfect choice for a wall mount screen for office spaces, residential properties, and any other installation where look and durability need to go hand in hand.

Heat dissipation and durability are still guaranteed by the solid full metal case construction, completely designed to be optimised for being mounted cleverly to a wall or a VESA stand, without the need for external antennas and with cleverly positioned hidden away cabling, additionally optimisable by using a single PoE ethernet connection to provide both power and data.

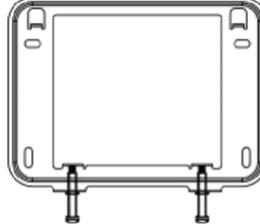


In the box you will find:

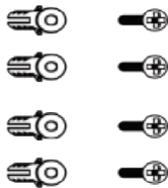
1x Link Touch Surface Mount display



1x wall mount bracket



4x wall mount screws



4x VESA screws



2x adhesive tapes for glass mount



Available model

LNK-T10-IP-SM (Original part number DS7610 OEM) 10.1" touch panel 1280x800

Hardware

Connectivity with the network devices can be achieved using the onboard WiFi or through an Ethernet cable using the RJ45 socket at the bottom. The power supply barrel connector and a USB type C connector are also located at the bottom of the device.

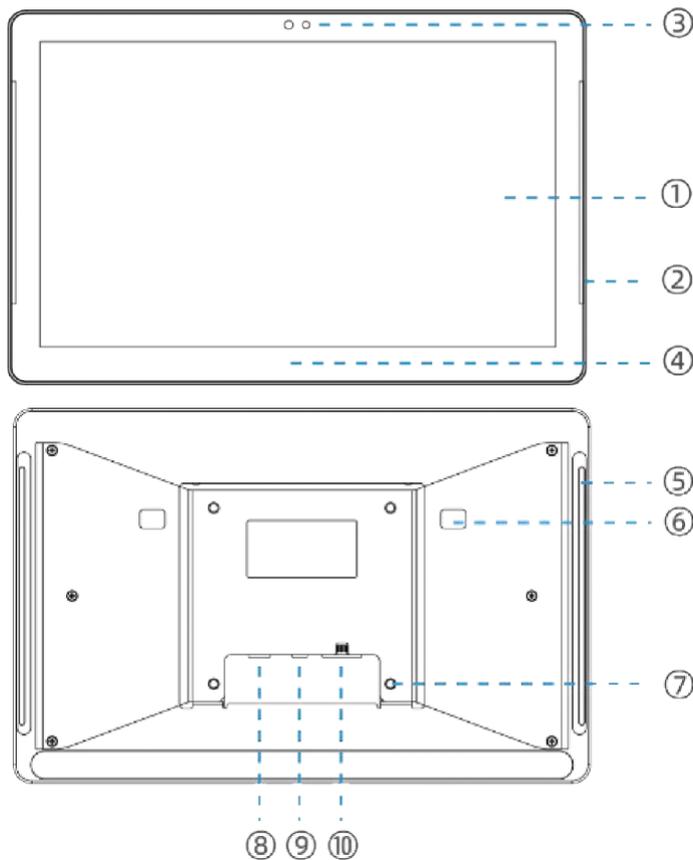
The integrated NFC reader and LoRa WAN gateway are not being used by the Link Touch app and there are currently no plans at Innon to use such features.

The SDK is primarily designed to use LoRa WAN data only within the app itself and not to distribute to other networked devices.

Being constantly evaluating innovation and improvements, we will notify should we implement new features to the app and by consequence to the product itself.



LNK-T10-IP-SM connections



- 1) Touch screen
- 2) Front RGB LED light strips
- 3) Light and proximity sensors
- 4) NFC area (not used)
- 5) Back RGB LED light strips
- 6) Wall mount bracket holes
- 7) 75x75 VESA mount screw holes
- 8) Type C USB port (can be used also for power)
- 9) DC power jack
- 10) RJ45 ethernet port (PoE enabled)

Important notes:

- 1) The back RGB LED light strips will need the blackout cover removed to be used
- 2) Please do not operate the reset button placed near the USB type C connection without consulting the manual carefully or checking with Innon. Operating the reset button wrongly might brick the device



Wiring power supply

Note: a power supply is NOT provided with the device.

Link Touch Surface Mount can be powered in 3 different ways:

- **Via DC barrel jack**



Requires a 3.5 x 1.35mm barrel jack connector with the following configuration



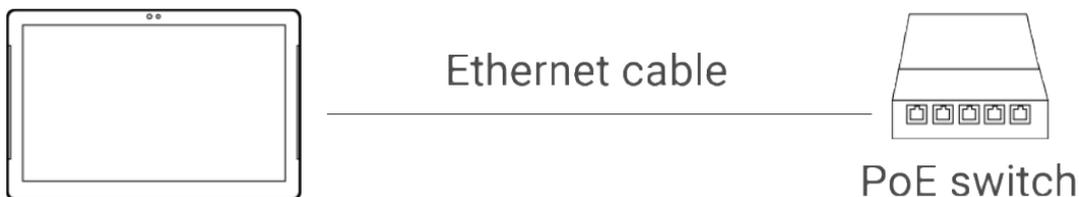
And a power supply unit providing 12Vdc and at least 1A

- **Via USB type C**



Requires a USB type C connection providing 5Vdc and at least 2A. This can be a dedicated USB power supply unit or another device powering the screen with at least the 2A required

- **Via ethernet over PoE**



Requires either a PoE enabled ethernet switch (picture above) or a PoE injector. The device will receive power directly from the ethernet cable together with the data

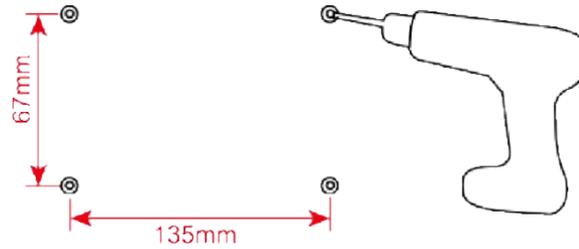
Internal speaker

Link Touch is provided with an internal small mono speaker. The volume control is available also when using the Link Touch application.

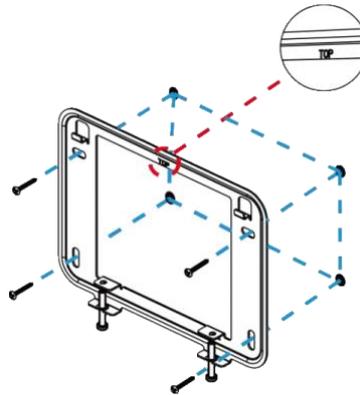


Wall installation

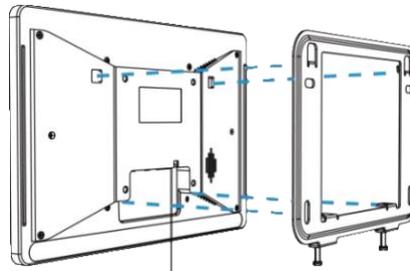
- 1) Install the 4 mounting screws for the wall bracket (6mm drill bit, 30mm depth)



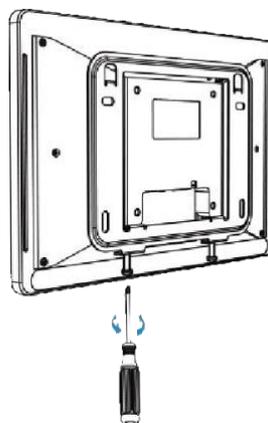
- 2) Mount the wall bracket to the wall using the 4 provided screws, carefully positioning the “TOP” signed part of the bracket the right way around



- 3) Connect the cables to the device and mount it carefully to the wall bracket, starting from the top



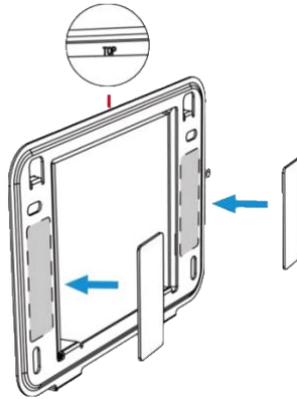
- 4) Fix the display using the 2 screws at the bottom of the wall mount bracket



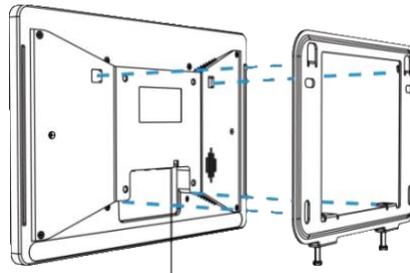


Glass/stickers installation

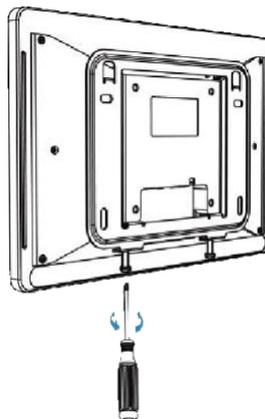
- 1) Attach the 2 adhesive strips to the wall bracket first, then stick the wall bracket to the desired location on glass, making sure the “TOP” signed part is the right way around



- 2) Connect the cables to the device and mount it carefully to the wall bracket, starting from the top



- 3) Fix the display using the 2 screws at the bottom of the wall mount bracket

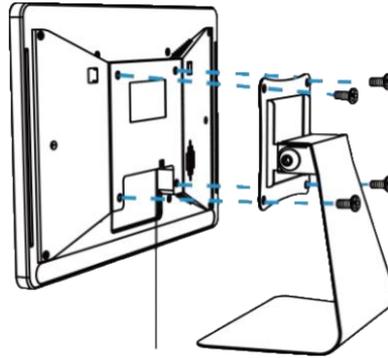




VESA mount installation

NOTE: VESA brackets are not provided by Innon. These brackets are standard and can be found on any retailer, including Amazon. Look for “VESA wall mount 75x75” or “VESA desk 75x75”. VESA arms can be also found, depending on the mounting requirements.

- 1) Provide a standard VESA mount bracket (wall mount, desk or arm) and fix the Link Touch Surface Mount device to it using the provided 4 VESA mount screws



With this installation the wall mount bracket will not be used



First power up from factory: select the right launcher

When factory defaulting the screen or when powering ON for the very first time, the Android operating system is going to ask which launcher you would like to use (bottom part of the screen, see image below).

Please select “Link Screen” to get the right application running and leave the device powered ON for at least 1 minute for Android to save the setting.

This will not be asked again on future reboots.



If you accidentally selected the wrong launcher, you can factory default the screen from the Android settings to start again.



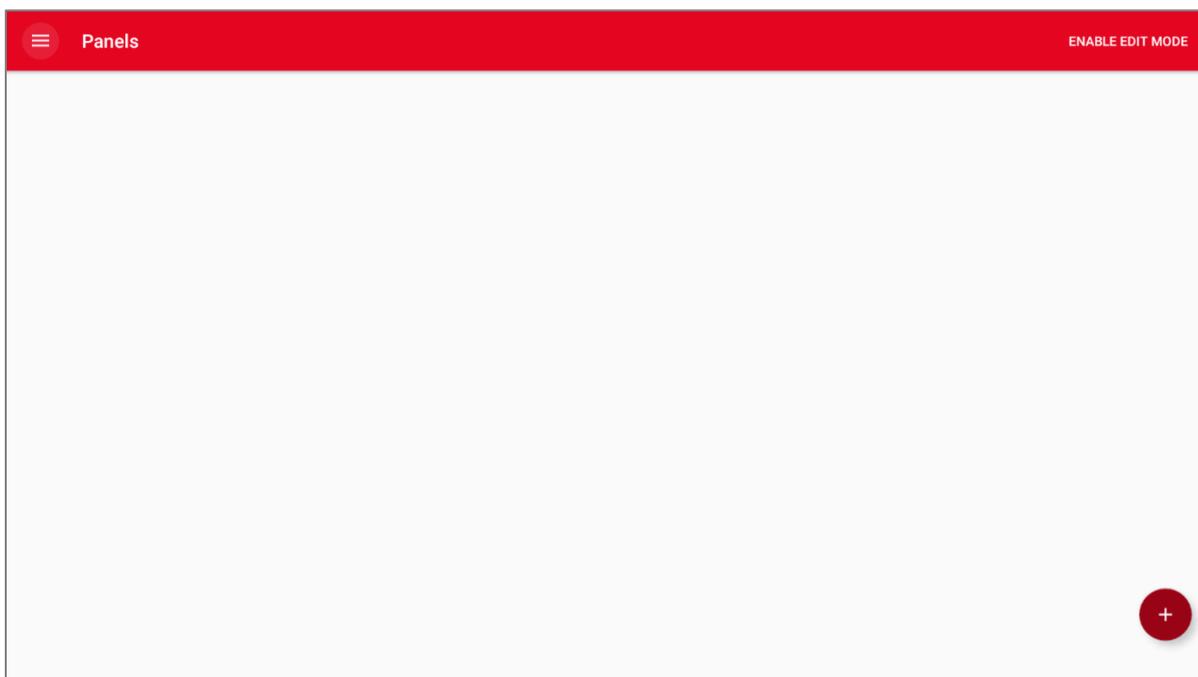
The Link Touch App

Note on the app: the Link Touch App is signed and protected to work only on the LNK-T10-IP-SM. Trying to load the Link Touch App on another screen (including a standard DS7610 from Milesight) will cause the app to fail and provide a “device not compatible” error.

Navigation

When the screen is powered up, the Link Touch application runs natively and cannot be overridden. The Link Touch app sets the device in “kiosk” mode and prevents the user from accessing the Link Touch as a regular Android tablet. Android settings are only available through the app and are password protected by default. See the next chapter for more information.

The app starts by default from the “Panels” page.



What is a panel?

A “panel” defines a specific IP address and port to connect to and visualise the available graphical web pages. A panel can be a Tridium Jace or supervisor (where auto login is supported for both secure and unsecure connections), or any generic device that provides HTML pages to display

Scrolling on the screen from the bottom side to the top, the Android button bar is shown.



Hide the bar by pressing the 2 chevrons on the left side.

Note: the on/off button is disabled. Use the physical button on the back of the screen or remove power supply to power down the device.



When navigating inside a panel, a small button is shown at the bottom when touching the screen:
Pressing it will expand some useful navigation buttons:



This will allow to navigate to back and forward on the HTML pages, reach the home page configured in the panel address, refresh the visualised web page, or go back to the “panels menu”

Scrolling on the screen from the left side to the right, the app menu will be shown.

- “Panels”. From here you can add, modify, or view your panels.
- “Settings”. Allows the configuration of Link Touch
- “About”. Provides information about the app release





A couple of notes about security

The Link Touch App is not only a tool that makes the Link Touch display versatile and designed for the HMI. The Link Touch App adds important security layers, an essential topic in a BMS network.

As quickly mentioned in the chapter above, the App basically sets Android in kiosk mode, not the same as a tablet. The app basically controls the screen and cannot be overridden unless the user decides to factory default Link Touch and use it as a regular Android tablet (there is a dedicated chapter in this manual).

What the Link Touch App protects:

- The Android settings are limited with some settings locked, and the ones available are accessible only if the settings password is inserted
- Installation of any other app or anything else on the screen is blocked
- The USB ports are locked. When connecting any device, the app verifies the content and will allow access only to the update apk file of the Link Touch App (which is a signed app, so any other app with the same name would not work)
- External commands are blocked

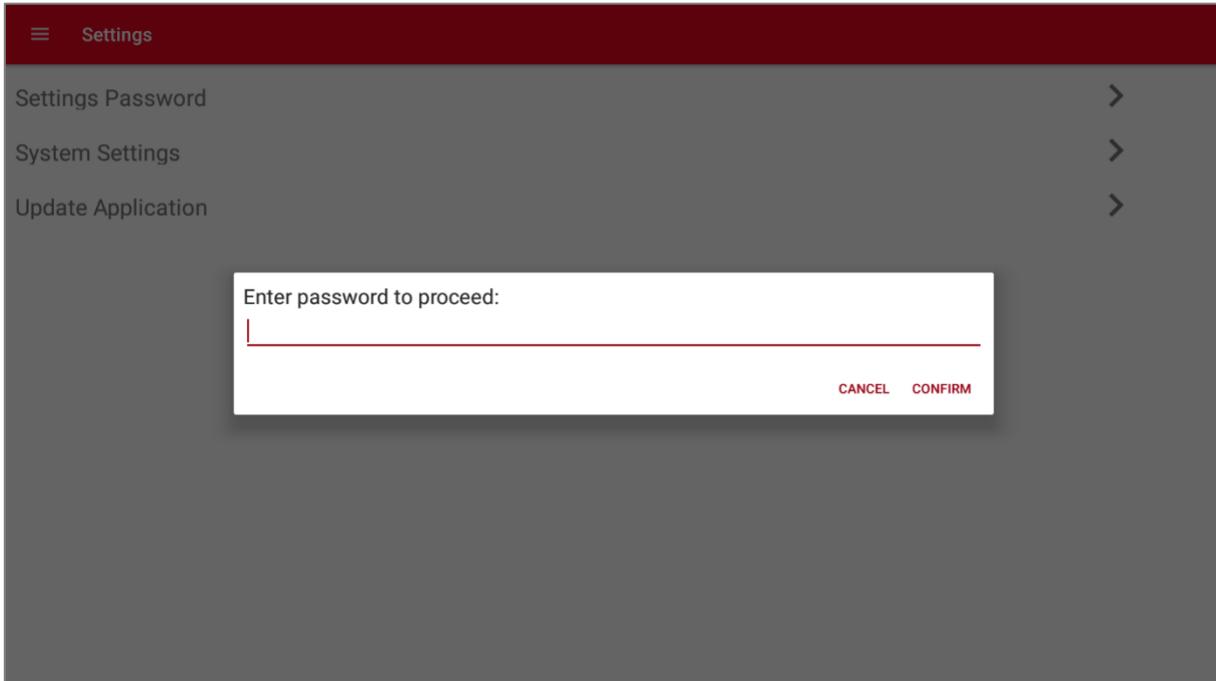
The Android version running on the device cannot be upgraded, The Link Touch App is locking any access to keep the device secured from malicious attacks.

Be aware that when proceeding with the factory default and deleting the app, Android will unlock completely allowing the installation of any app and removing all the layers of protection offered by the Link Touch system.



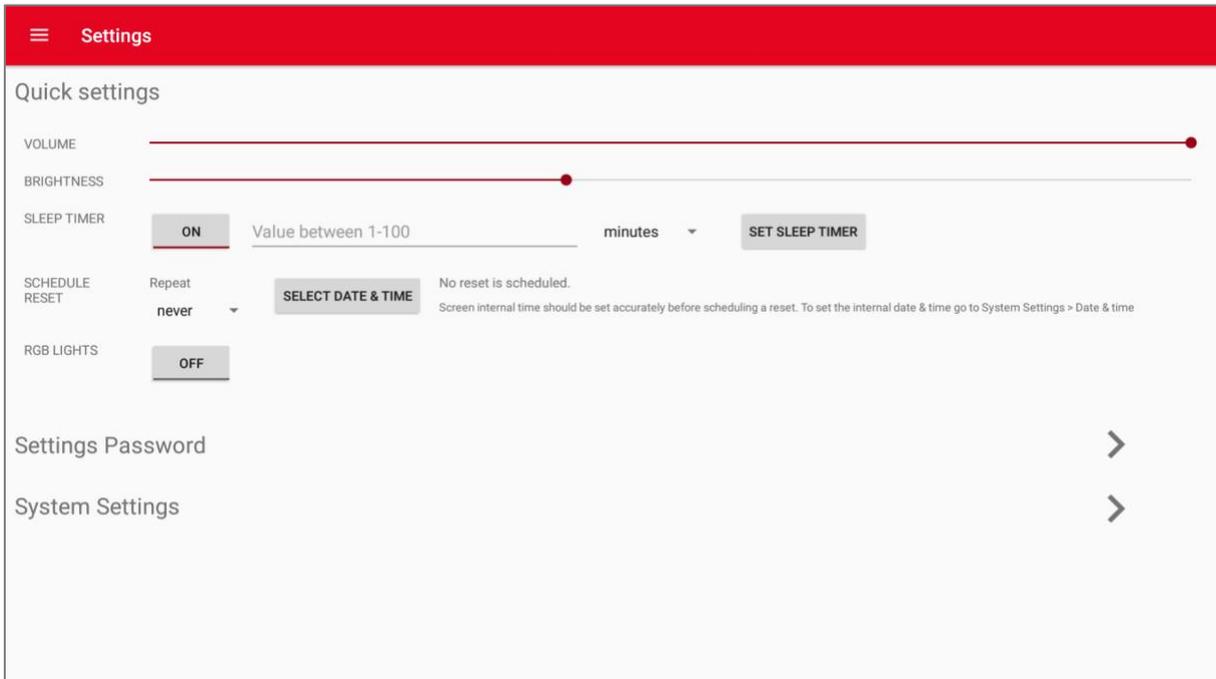
Navigation: Settings

If you select the option “Settings” from the app menu and a Link Touch password has been set up, it will be required at this stage.



The default password is **link1234** (the password is case sensitive). Newer releases of software come by default with no password, so you can set it later if needed.

Input the password and press “Confirm”. The settings menu is then available





Quick settings: Volume and Brightness

Adjust the loudspeaker volume and the screen brightness using the 2 sliders in the app.

Note: the first time you try adjusting these settings, Android will ask to provide the app permission to adjust the settings. Please allow the app such permission. This operation will be requested only once.

Quick settings: Sleep Timer

The sleep times allows just the display to switch off, while the app runs in the background, after the screen hasn't been touched for a certain number of minutes/seconds. This will help for example preventing pixel burn in, which though is not typical with these displays, it can still occur if the same image is displayed 24/7 for months to come.

To use this function, make sure the Sleep Times is set to "ON" (first button), then set the amount of minutes (or seconds) and finally press the button "SET SLEEP TIMER" to confirm.



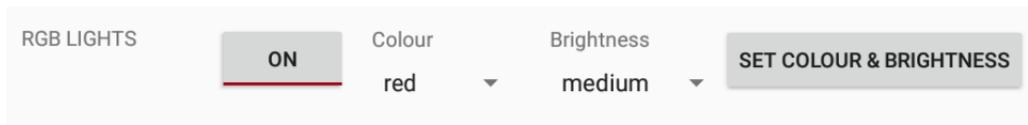
To disable it, simply press the "ON" button and it will revert to "OFF".

Note: the first time you try adjusting these settings, Android will ask to provide the app permission to adjust the settings. Please allow the app such permission. This operation will be requested only once.

Quick settings: RGB LED lights

At the moment the RGB LEDs can only be controlled via the Link Touch app with a fixed setting (colour and brightness).

Change the "Off" button to "On", set the desired colour and brightness for the RGB LED lights and then press the "Set Colour & Brightness" button



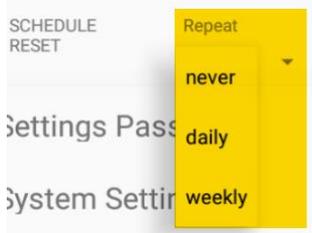
We are evaluating better use of this feature to make it controllable by networked devices, evaluating the best options for that.



Quick settings: Schedule Reset

Especially when using this screen with Niagara, we would strongly recommend the screen to be regularly rebooted. This restores the web server opened socket and also allows the screen to start fresh periodically. To use this function, start by selecting the “Repeat” option and selecting if you would like just a one-off reboot, reboot the screen periodically once a day or once a week.

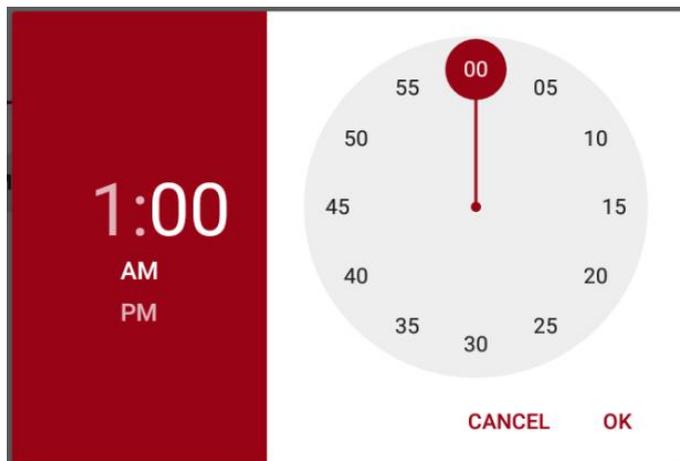
We would recommend rebooting at least weekly



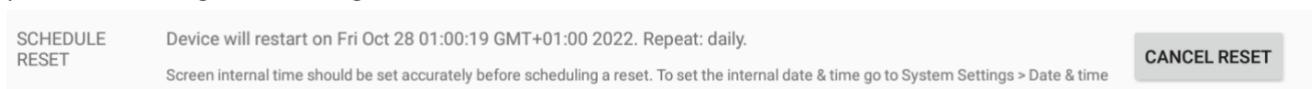
Press the button “SELECT DATE AND TIME” to set the starting date and the time for the restart



On the time, make sure you also select the AM/PM accordingly



Once programmed, Link Touch will keep performing the auto reboot as requested until “CANCEL RESET” is pressed to change this setting



Note: for this function to perform correctly, make sure also that your Link Touch clock is set on the settings



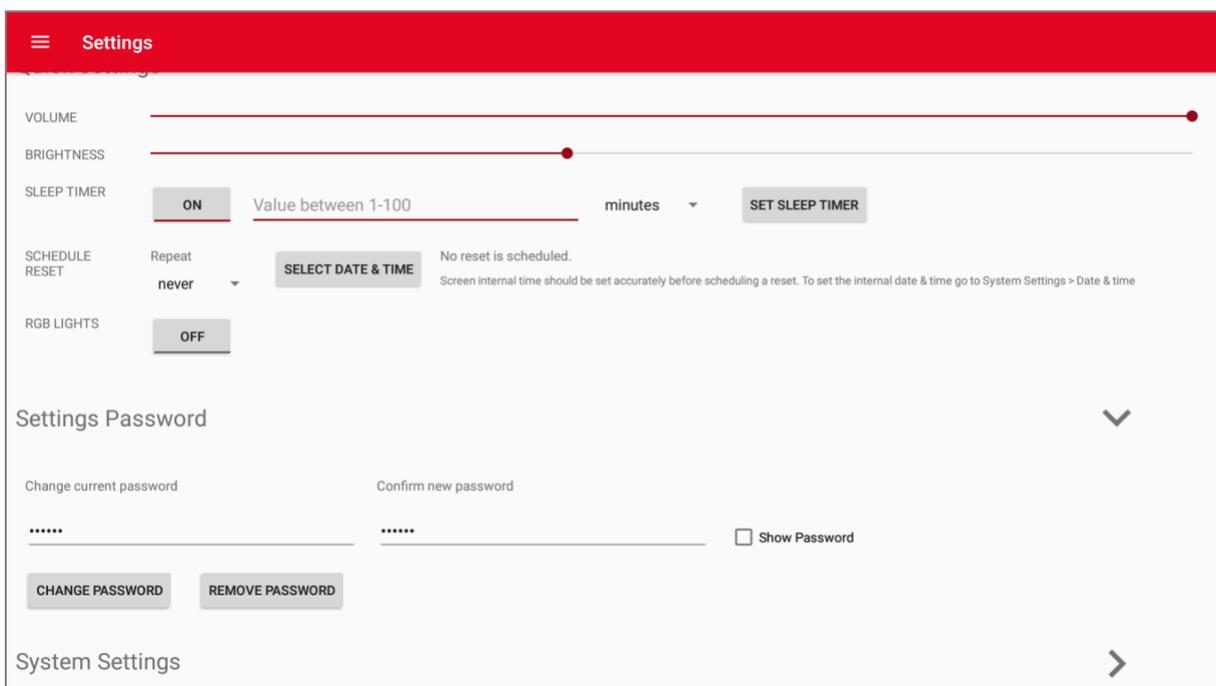
Settings Password

The settings password can be modified.

NOTE: do not forget your password. Losing the password will require the screen to reset to factory default using the batch file on our support website. The procedure to factory default the screen using the batch files is described later in this manual.

Changing password requires to input the new password twice, on “Set settings password” and on “Confirm new password”. Use the “Show Password” flag if you want to verify what you have written on these fields. Then press “Set new password” to confirm.

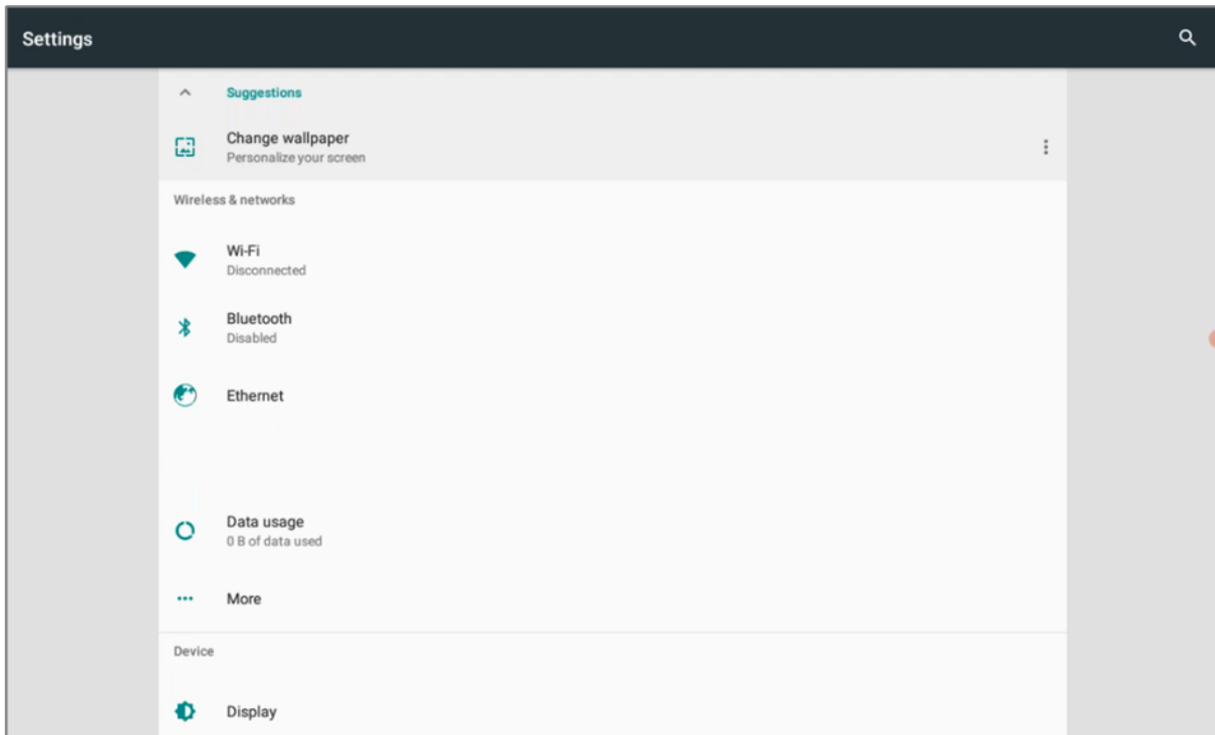
If a password is set, you can also remove it allowing anyone to edit panels and settings, using the “Remove password” button that will be available.



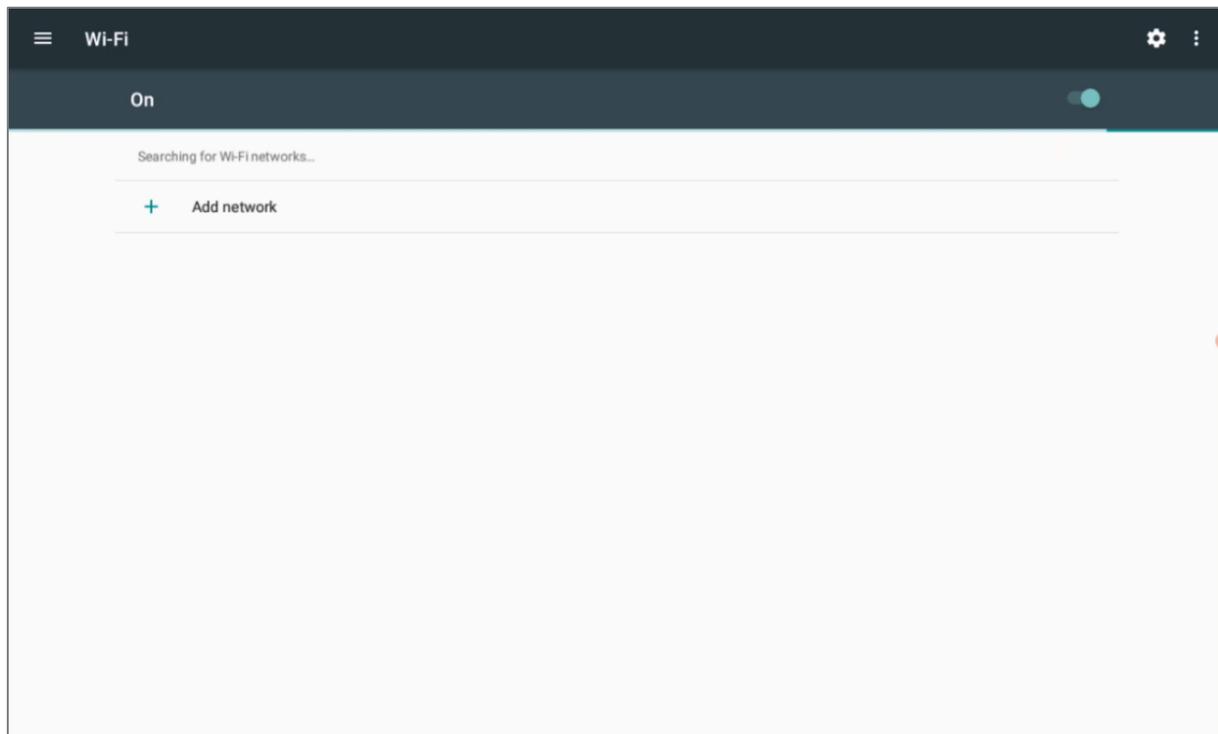


System settings

System settings opens the native Android Settings menu. Note that the Link Touch app removes some options from the settings to avoid corrupting the Link Touch.



WiFi settings allows to discover and add connectivity to a WiFi network.





Ethernet port can be configured. By default, it works on DHCP, but a static IP address can be used



Note 1: when setting your IP address static and confirming, the fields here will show still all zeroes if the cable is not connected. This can be useful, as it can be used to confirm you are connected to the right port and the cable works fine.

Note 2: when setting up the static IP, a pop up window opens with some greyed out suggestions for IP, gateway, subnet and DNS. These are just suggestions, so you still need to set each individual part. The “Confirm” button will only appear only once all the parts have been correctly inserted.

Display brightness, display rotation and factory reset settings are available.

Check the factory reset chapter on this manual for more information.

To exit the settings, swipe up to show the buttons menu at the bottom of the screen and tap the “back” button until you get back to the main Link Touch app section





Update Application

The easiest way to update Link Touch Surface Mount is via USB C using a computer.

All you need is a computer running Windows and a USB type A to type C extension lead (typically used to connect a mobile phone to your computer). It is vitally important for the cable to be data enabled, as some cables only provide power but do not have the data transmission wires inside (charging only cables would not work).

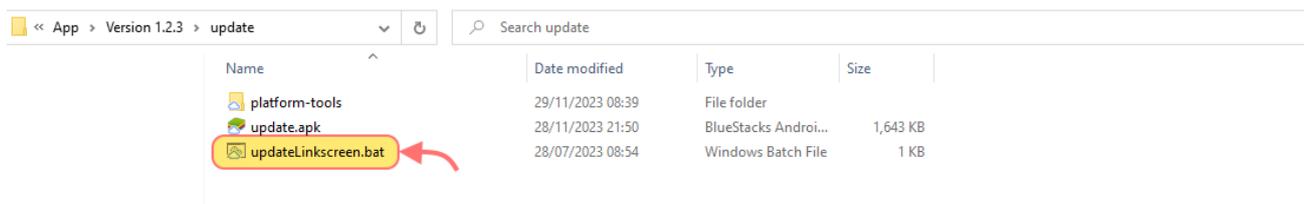
The update works using a batch (.bat) file that loads the updated APK onto your device.

Go to our support website http://support.innon.com/Link%20Touch%20SM/Firmware_updates/ and download the desired updated version of the Link Touch app.

Unzip the whole content in a folder.

Make sure the Link Touch Surface Mount device is connected to your PC via USB.

Run the file “updateLinkscreen.bat” and allow the screen to update



DO NOT REMOVE POWER WHILE THE UPDATE PROCESS IS RUNNING



Navigation: Panels

Add a panel

The panels menu allows to add as many devices and configurations as required.

If a password has been configured, you will need to “Enable Edit Mode” before you can add or edit any panel.



Once you are in edit mode (or have no password configured), you can use the “+” button on the bottom right to add your new panels





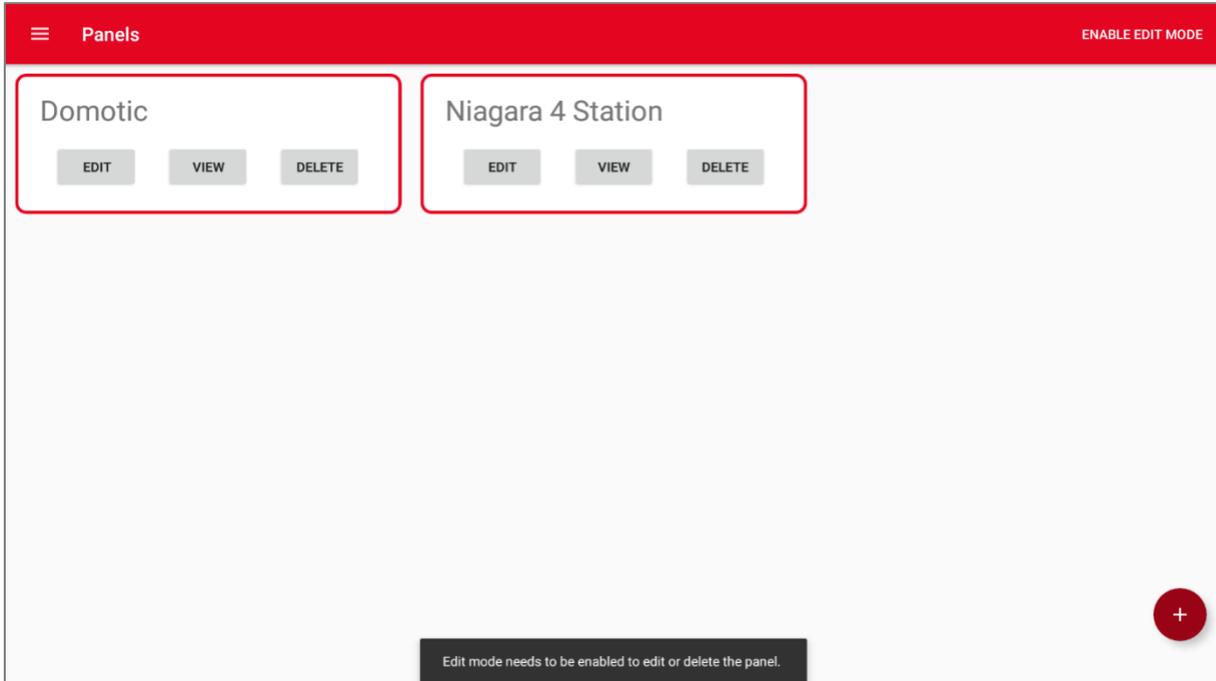
For each panel you can configure multiple things:

- Panel Name. The name of the panel that is going to be displayed in the previous page to allow the user to identify what you are connecting to
- Panel URL. First, selecting whether you are using an http or https connection, and then the IP address of the device you are connecting to (add the port number after the IP separated by “:” if the port used is different from 80 for http and 443 for https)
- Login Type. The preferred login type varies between
 - Manual login, where the screen will just take you to the address you have selected on the Panel URL section
 - Basic Auth, where the screen will get to the selected Panel URL and attempt a login with the username and password provided, using a Basic Authentication Scheme
 - Niagara 4, where the screen will use the username and password to attempt a standard Niagara 4 authentication
 - Niagara AX, where the screen will use the username and password to attempt a standard Niagara AX authentication
- Panel Username and Panel Password, which are not visible if the previous option selected was “manual login”, are the credentials that are going to be used by Link Touch to log in to the selected device
- Default view, used if you would like this panel to be loaded automatically when the screen reboots by default (only 1 panel should have this option enabled)
- Keypad (version 1.1.2 and above) where you can default the keyboard used for this panel to be a numpad only keyboard instead of a full alphanumeric one
- View panel as desktop, to view the desktop version of a page instead of the mobile one
- Link Touch automatic scaling, to enable automatic “fit ratio” scaling performed by Link Touch. It is recommended to leave this disabled with Niagara 4 pages as they usually are defaulted to automatically scale without using this option on the screen
- Pinch zoom gesture, to allow users to use the pinch gesture to zoom in and out on a viewed page

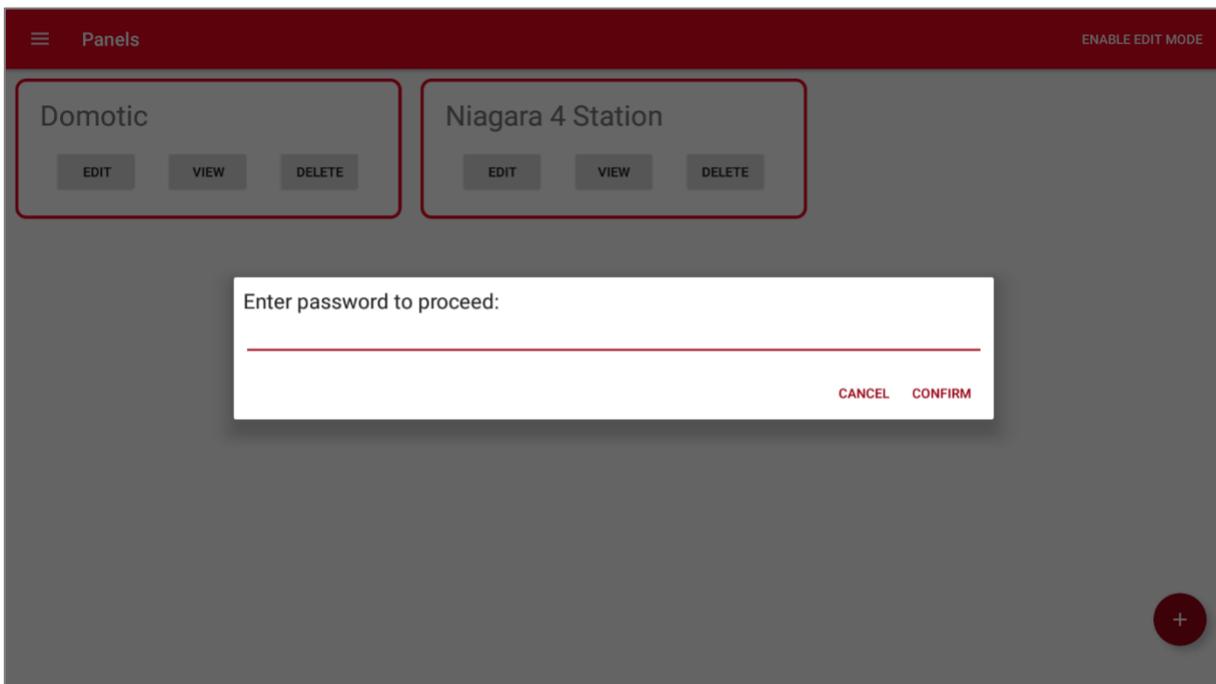


Panels view and edit

Once you have a few panels configured, you will be able to view them using the “view” button. “Edit” and “Delete” will also be visible for each panel. If a setting password is configured (default **link1234**), you will need to enter the “Edit Mode” by typing the password to use them (see example below, the message at the bottom of the screen will be displayed if you try touching them)



Touch the “Enable Edit Mode” on the top right corner of the screen and insert the setting password.



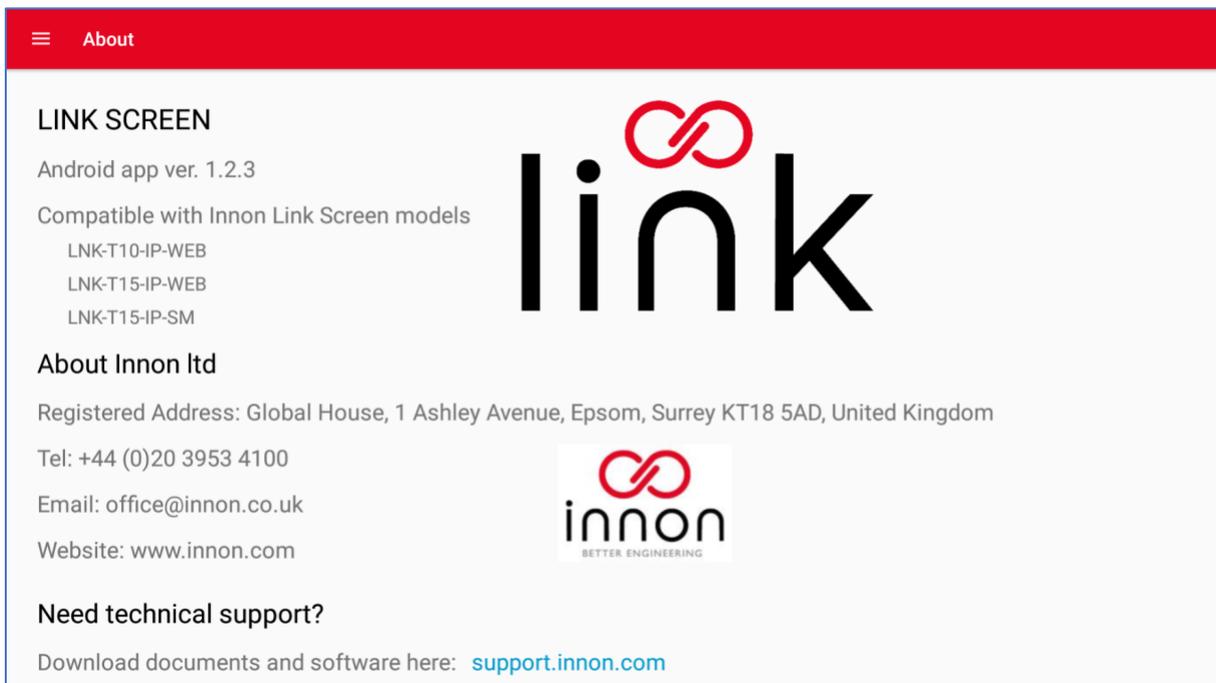


Navigation: About

The “About” screen provides information regarding the installed Link Touch application version, about Innon and our support useful links

Remember:

- <http://support.innon.com/> to download the latest versions of software and documents
- <https://know.innon.com/> to find useful knowledge base articles on how to use our products
- <https://learn.innon.com/> if you are a Tridium partner with us, to access video trainings for free on the use of Niagara and more



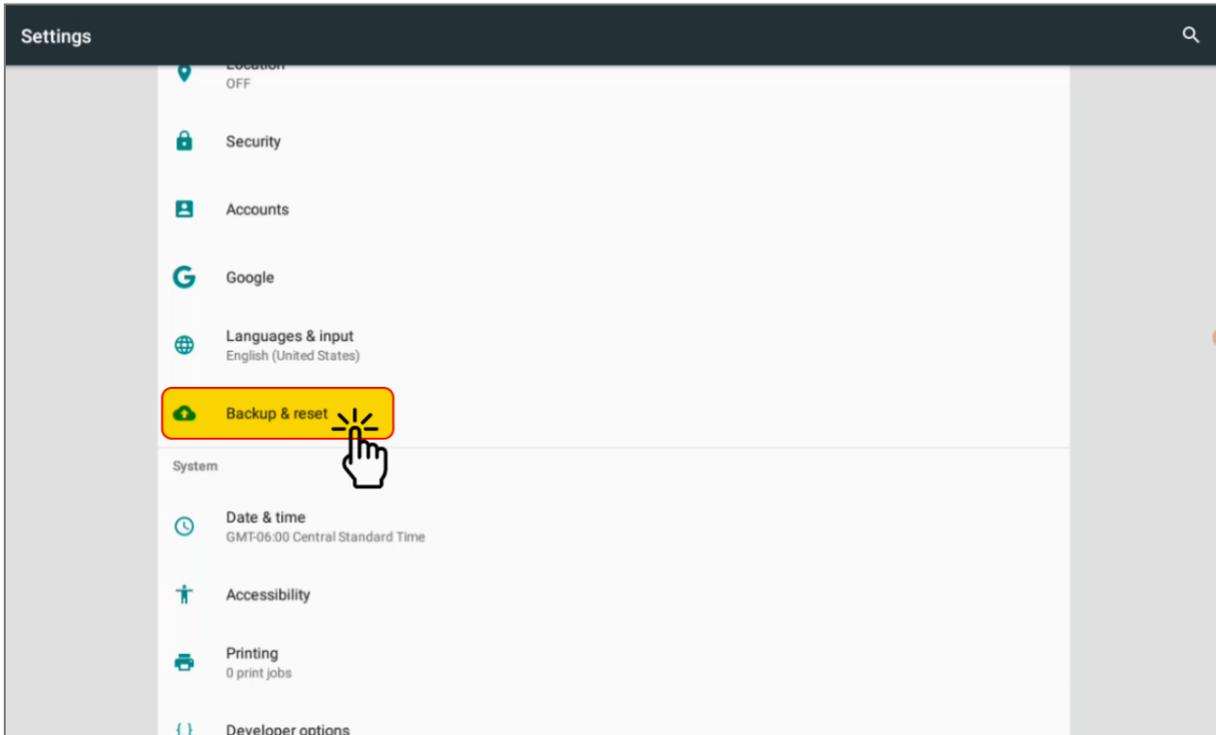


Factory reset.

Start the procedure using the “settings” menu

Enter the Link Touch menu and select “Settings – System Settings” to open the Android menu.

Scroll down on the Android settings until you find the “Backup & reset” option, and select it



From the options available, select “Factory data reset”

Follow the instructions on screen to proceed.



Start the procedure via USB-C and a PC (screen password lost)

The screen can be reset using a USB A to USB C cable, a PC and our batch file available on our support website. This becomes useful in case you forget or lose the Link Touch app password, and consequently lose access to all the screen settings.

The process requires you to have physical access to the screen and the connectors on the back, a USB A to USB C cable and a PC running Windows.

Steps.

Connect Link Touch to your PC using a USB cable type C (connected to the Link Touch connector highlighted below) to USB type A (connected to your PC running Windows).

Open our support website and find the firmware/factory reset folder

http://support.innon.com/Link%20Touch%20SM/Firmware_updates/Factory%20reset/

Download the “FactoryReset.zip” file and unzip it into a new folder on your PC.

With the device correctly connected via USB and the screen turned ON, double click the “FactoryReset.bat” file.

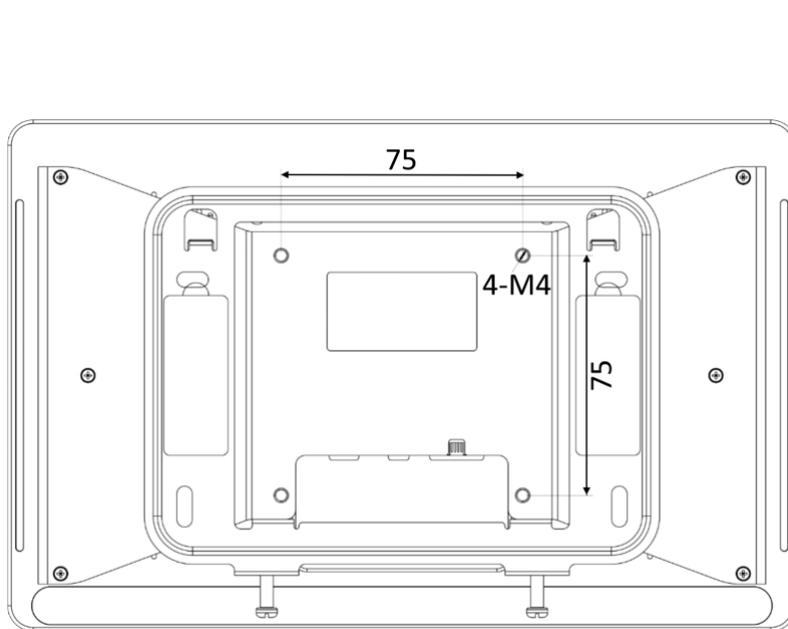
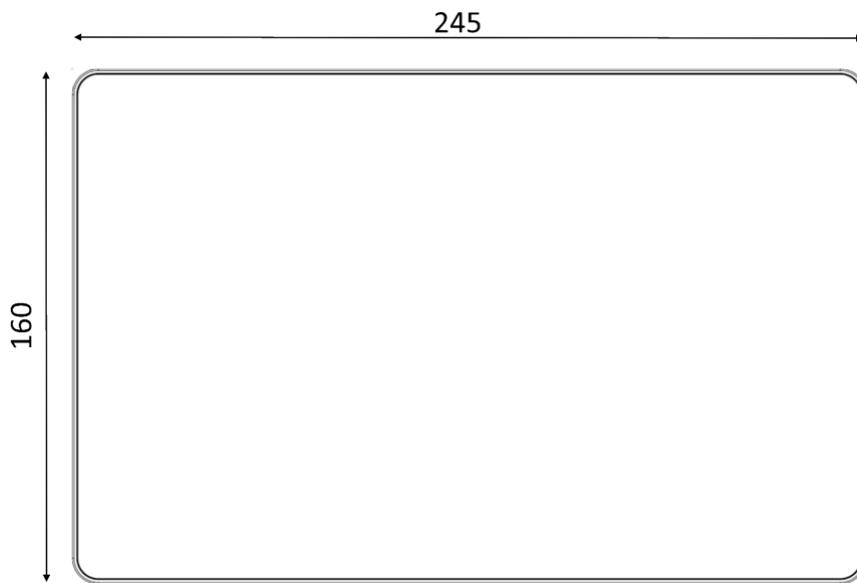
This will open a command prompt and will automatically run the installation process.

Please allow the time for the screen to run through the factory process, do not power OFF the device until the screen has completed it.



Technical data

Drawings





Specifications

Part number: **LNK-T10-IP-SM** (Original hardware part number DS7610 OEM)

Screen size	10.1 inch TFT LCD Touch Screen
Aspect ratio	16:10
Resolution	1280 x 800
Contrast	1000:1
Luminance	300 Cd/m ²
Active area	216.58 x 135.36 mm
Screen-to-body ratio	74.88%
CPU configuration	Quad core ARM Cortex A55
Internal memory	eMMC 16 GB
RAM	2 GB DRAM
OS	Android 11.0
WiFi	IEEE 802.11 b/g/n 2.4 GHz IEEE 802.11 a/n/ac 5 GHz
Bluetooth	Bluetooth 5.0
Touch type	Capacitive Touch Screen
I/O	USB 1x Type C OTG or Host Mode Ethernet 1x RJ45 10/100/1000 Mbps (PoE) Power jack connection 1x 3.5 x 1.35 mm barrel
Speaker	1.5 W
Proximity sensor	1 m distance (max)
Light sensor	5 brightness level adjustment
LED	RGB side LED indicators, stepless adjustment
Power supply	802.3af PoE 12V/1A DC jack connector 5V/2A USB type C port
Operating temperature and humidity	Temperature: -20°C to +50°C (-4°F to 122°F) Humidity: 0 to 95 %RH (non-condensing) below 25°C/77°F
Ingress Protection	IP30
Dimensions	245 (L) x 160 (H) x 18 (D) mm
Weight	0.65 kg (without bracket), 0.7 kg (with bracket)
Installation	Wall mounting, 3M tape mounting, VESA (75 x 75 mm optional)
Colour and material	Black, Metal

Notes on device parts not used by Link Touch	
NFC	13.56 MHz
LoRaWAN	Channel 1 Frequency CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4 Sensitivity -137dBm Output power 19dBm (470 MHz) /16dBm (868 MHz)/22dBm (915 MHz) Protocol V1.0.3 Class A/Class C
Expansion Storage (optional)	Internal micro SD Card slot (8GB/16GB/32GB/64GB/128GB)



Guidelines for Disposal

- The appliance (or the product) must be disposed of separately in accordance with the local waste disposal legislation in force.
- Do not dispose of the product as municipal waste; it must be disposed of through specialist waste disposal centres.
- Improper use or incorrect disposal of the product may have negative effects on human health and on the environment.
- In the event of illegal disposal of electrical and electronic waste, the penalties are specified by local waste disposal legislation.