



USER'S MANUAL



Chromium on HMI device



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1. Introduction

1.1 About the User's manual

1.1.1 Intended users of the User's manual

This is the user's manual for Chromium installation on your HMI device.

The manual is for the user who installs or configures your HMI device. The manual includes an introduction to the Chromium, installation, settings, and system options.

1.1.2 Technical support

Technical documentation

Download free without registration all of the product technical documentation from the DEIF website.

<http://www.deif.com/documentation>

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<https://www.deif.com/training>

Additional service

DEIF offers **service** with design, commissioning, operating and optimisation.

<https://www.deif.com/support/local-office>

1.1.3 Symbols for notes



More information

This highlights where to find more information.

NOTE * This highlights a referenced note.



Select and hold

This highlights selecting and holding the screen area for a number of seconds.

1.2 Legal information

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2. About Chromium

2.1 Introduction

Chromium is a HTML 5 web browser for your HMI device.

It is based on the open-source web browser project started by Google. Chromium can be installed on HMI devices based on the Linux platform. The application is installed as a full screen standalone application.

2.2 Download

For a download of the Chromium web browser for your HMI device, please contact DEIF support.

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3. Install Chromium

3.1 Before you begin

You install Chromium with either:

- USB drive.
- Remotely with a secure file transfer protocol (SFTP) application.

For either type of installation, you need access to the System settings from the Runtime loader screen.

For USB installation

The USB drive must be formatted with one of the following formats:

- FAT16 or FAT32
- Linux Ext2, Ext3 or Ext4

For Remote installation

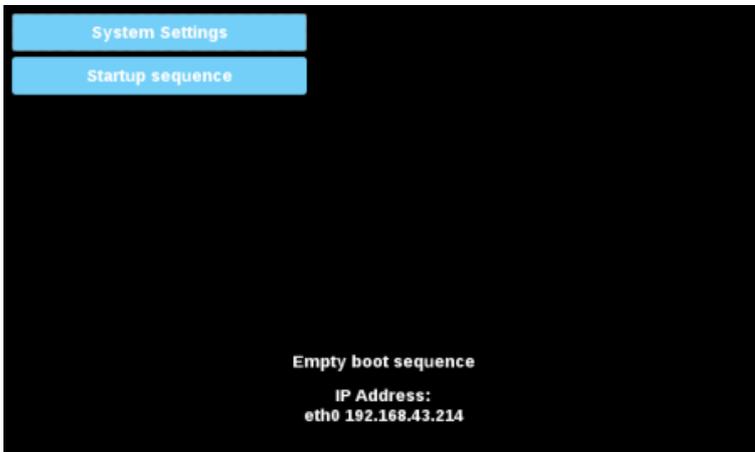
For Remote installation you require:

- An SFTP application
 - To transfer the Chromium file over to the HMI device.
 - For example: **Filezilla**, **WinSCP**
- VNC client application
 - To connect remotely and transfer the Chromium file over to the HMI device and run the installation remotely.
 - For example: **Tight VNC**

3.2 How to access System settings

3.2.1 HMI device without runtime application

New HMI devices, delivered from the factory, have no runtime application installed. When you first power up the new HMI device, it shows the Runtime Loader screen by default.

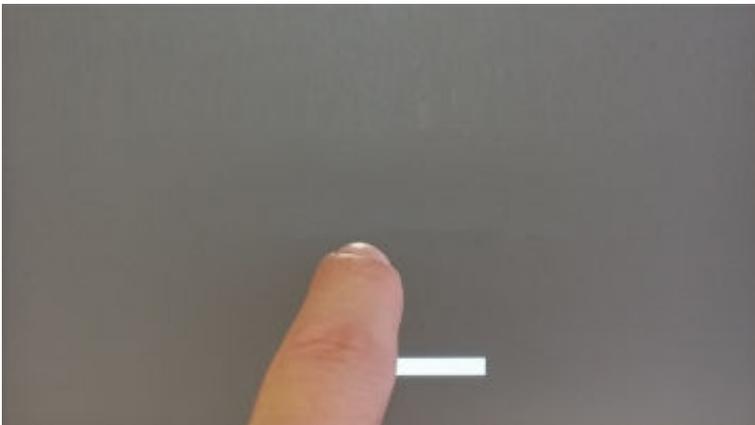


From this screen you can access the System settings or Startup sequence.

3.2.2 HMI device with runtime application

For a HMI device that already has a runtime application, you need to access the Runtime loader screen by using the tap-tap procedure. Tap-tap allows a user to access the system settings by tapping the screen several times, immediately after the HMI is powered on.

1. Power on the HMI device and use the tap-tap procedure the touch screen immediately.



2. A **Tap-tap detected** message is shown on the screen, wait for 5 seconds (without touching the screen) to enter System Settings.



3. Wait for 5 more seconds (without touching the screen) to enter Default Mode.



4. The Runtime loader screen is now shown:



From this screen you can access the System settings or Startup sequence.

3.3 Installation

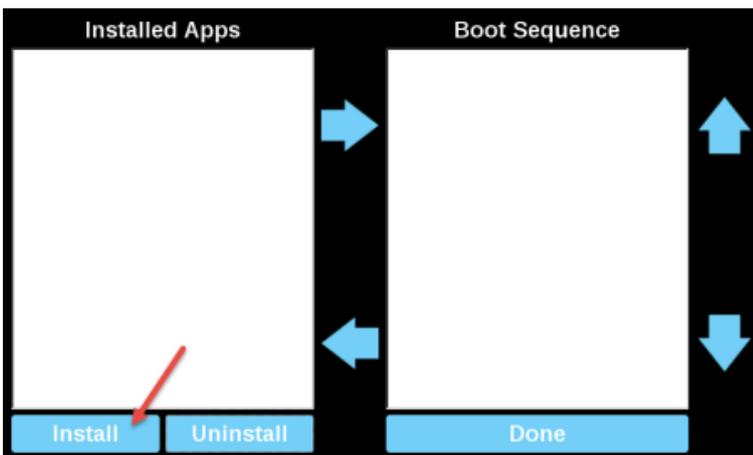
3.3.1 Installation from USB drive

To install the Chromium application with a USB drive, follow these steps:

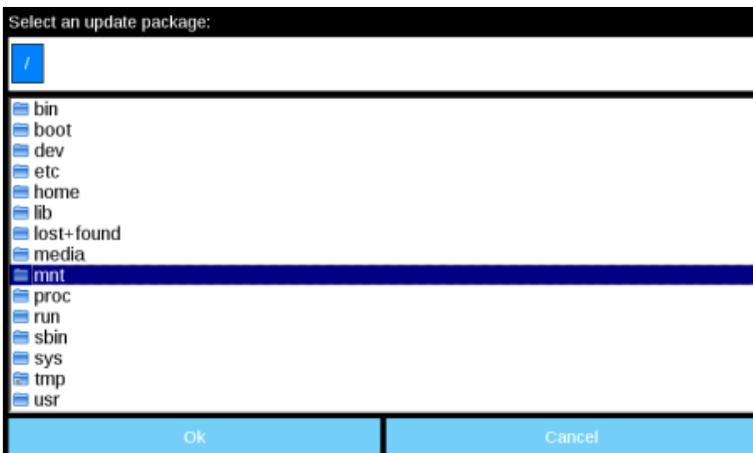
1. Copy the application file to a USB drive.
 - Example application file: **chromium-un6x-52-0.13.zip**
2. From the Runtime Loader screen:



3. Select Startup sequence.
4. Select Install:



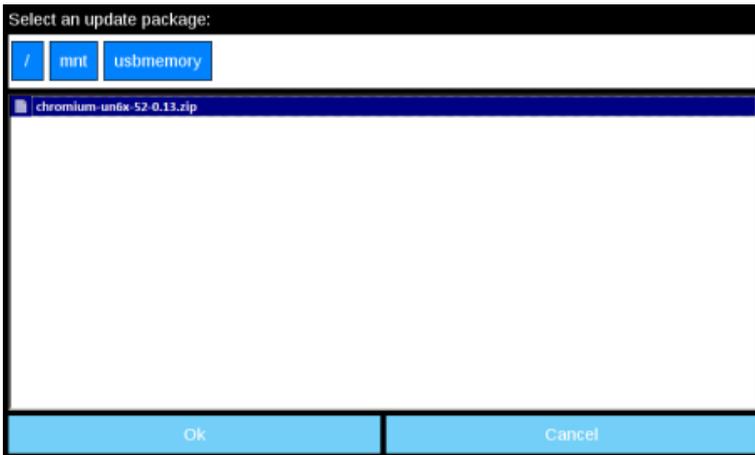
5. Double click on **mnt** to access the folder.



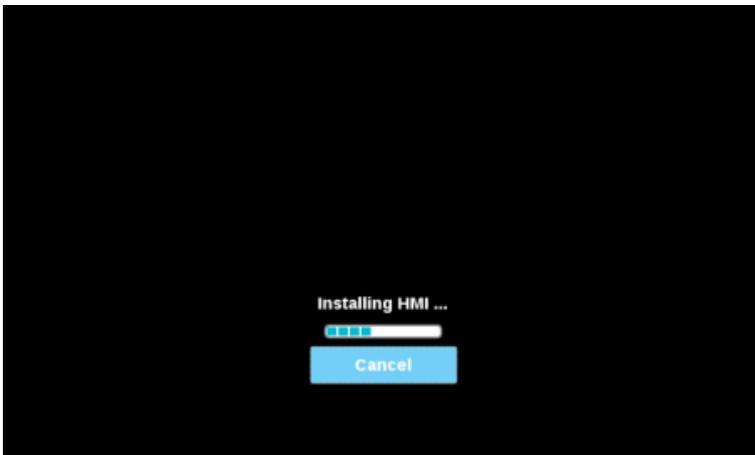
6. Double click on **usbmemory**:



7. Select the Chromium package and then select OK.



8. The installation of Chromium now begins:



9. At the end of the installation, your HMI device restarts to the Chromium application in full screen.

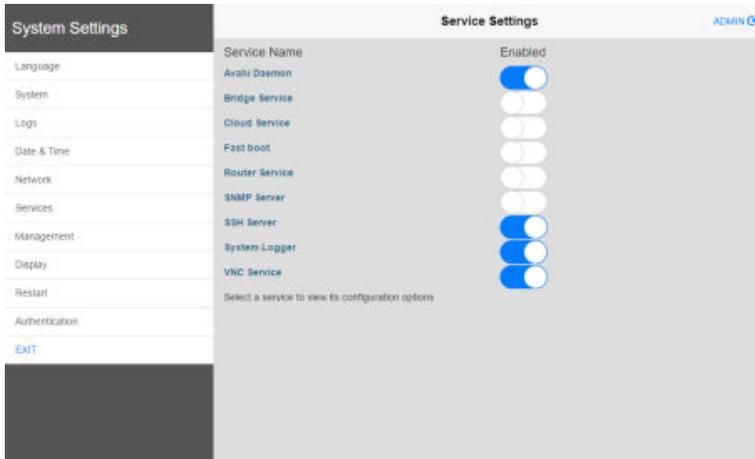
3.3.2 Installation from Remote access

To install the Chromium application remotely, follow these steps:

1. From the Runtime Loader screen:



2. Select System Settings:



3. Make sure both SSH Server and VNC Service are enabled.

4. If there are some applications already installed on the HMI device, use the System Settings to remove all:

- Management > Data > Clear

- Note that the HMI device will reboot.

5. Open an SFTP application and connect and log on to your HMI device.

6. Upload the package file for the Chromium application to the HMI device into a folder location.

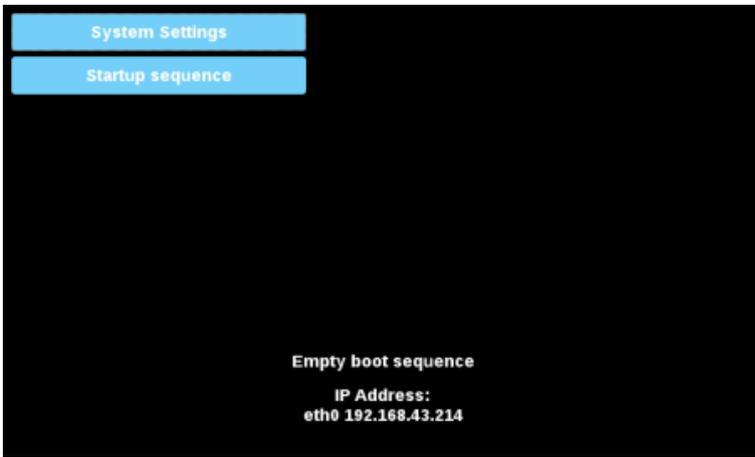
- For example use **/home/admin** folder:

The screenshot shows an SFTP file browser window with the remote site set to "/home/admin". The table below lists the files and folders in the directory:

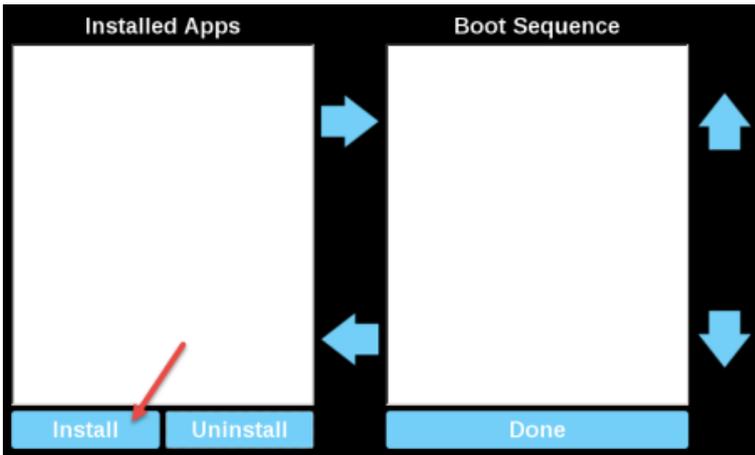
Filename	Filesize	Filetype	Last modified	Permissions	Owner/Group
..					
.bashrc	505	BASHRC File	15/03/2017 20:52:30	-rwxr-xr-x	admin admin
.profile	152	PROFILE File	15/03/2017 20:52:30	-rwxr-xr-x	admin admin
chromium-un6x-52-0.13.zip	55,217,049	zip Archive	13/06/2017 14:04:05	-rw-r--r--	admin admin

7. Open a VNC client application to access the HMI device remotely.

8. From the Runtime Loader screen, select Startup sequence:

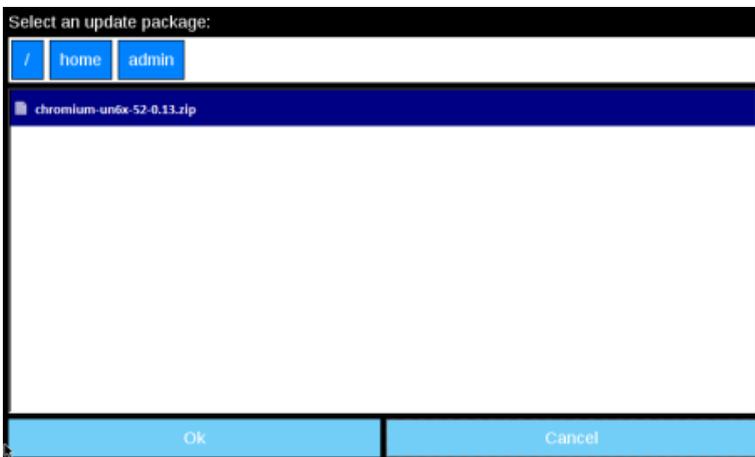


9. Select Install:



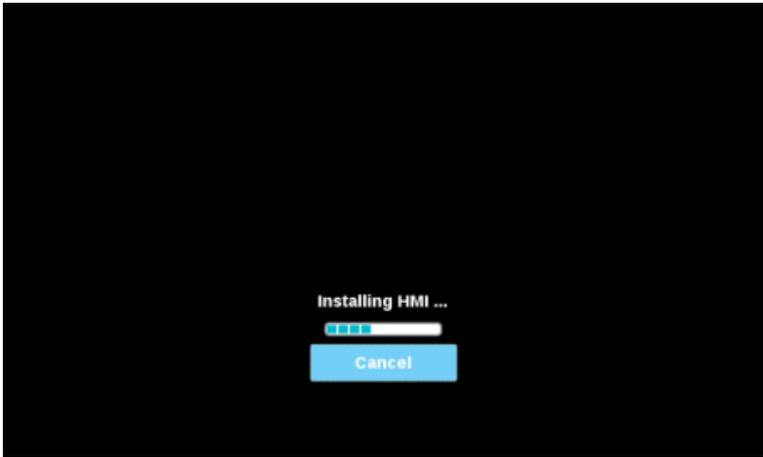
10. Locate the Chromium installation package:

- For example in `/home/admin` folder:



11. Select the Chromium package and then select OK.

12. Installation of Chromium now begins:



-
13. At the end of the installation, your HMI device restarts to the Chromium application in full screen.
 14. Use the SFTP connection to log back on to the HMI device and remove the package previously uploaded.

4. Chromium settings

4.1 Chromium settings

When you first start up of your HMI device after installing Chromium, the Settings page is shown as the default home page.

A **Username** and **Password** are required to enter the Settings page.

Username

Password

Username and password are the same as the HMI device.

The defaults are:

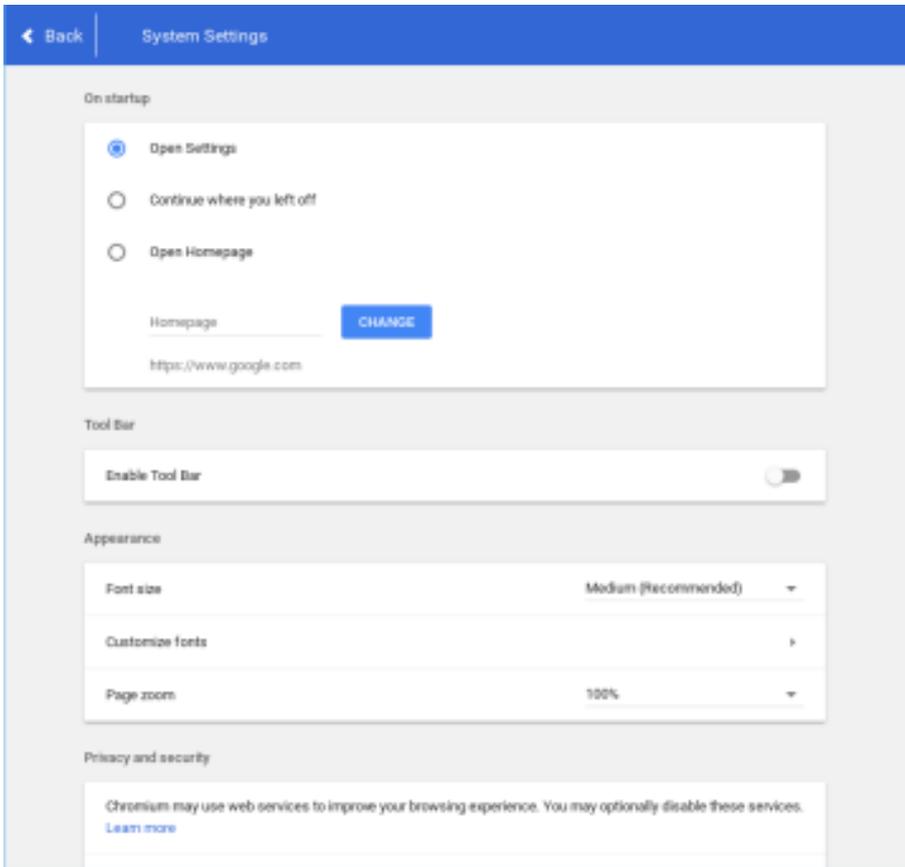
- Username: **admin**
- Password: **admin**

NOTE These can be changed from the HMI System Settings

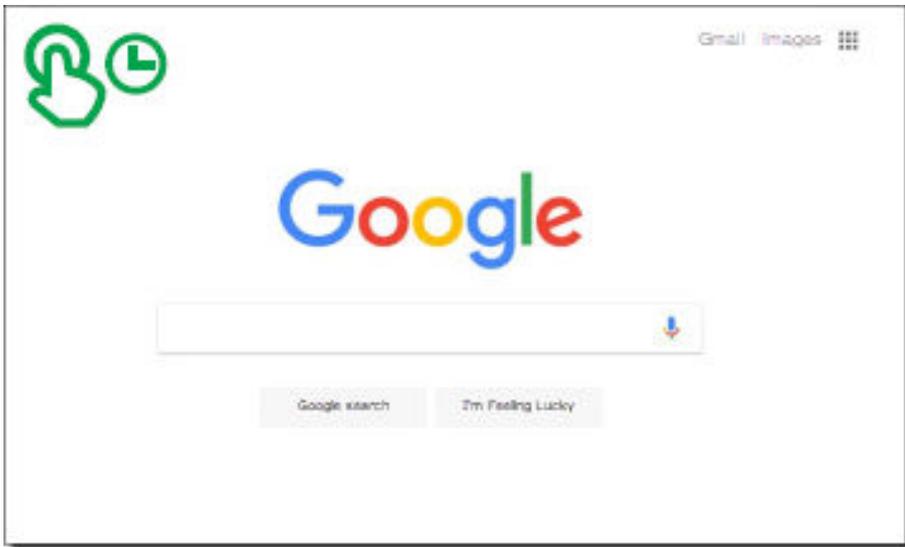
You access all of Chromium's parameters from the Settings. This includes where you can change the default home page that loads when the HMI starts.

NOTE The HMI device must be restarted to switch to the new default home page.

The Panel Setting command, available on the menu on the left side, opens the System Settings of the HMI device.



If the address bar is not shown, the Chromium settings page can be opened by pressing and holding  the top left of the display for few seconds, and selecting Enable tool bar from the Chromium setting menu.



Address bar

When enabled, the address bar can be opened or closed by using the tab in the middle of the top area of the display.



Available options:

- Page reload

- [Bookmark list](#)
- [URL address](#)
- [Add bookmark](#)
- [Settings page](#)

5. HMI system options

5.1 System Options

The system options can be defined at start-up using either the command line arguments or adding a settings file with the defined options to use.

Using command line arguments

```
/mnt/data/hmi/chromium/deploy/start.sh <options>
```

LaunchApplication	
Application Name	start.sh
Executable path	/mnt/data/hmi/chromium/deploy
arguments	--enable-toolbar-bookmarks
Single Instance	true
FlushRuntimeCache	false

Using settings file

Every command line option can also be set by creating the following file:

```
/mnt/data/hmi/chromium/deploy/settings
```

In this file, add the options one on each line.

Table 5.1 Available system options

Option	Description
--enable-exit-button	Enables the Exit button in the options page and the X icon on the toolbar when enabled. Completely closes Chromium.
--enable-window-exit-button	As above but only closes the window. In this case when starting again Chromium it will just open a new window, which is faster. Command line flags given the first time can not be modified later as it requires a full Chromium restart for this. A different URL may be specified instead.
--enable-toolbar	Enables the toolbar. The settings are saved so the toolbar will be enabled the next time even without this flag.
--disable-toolbar	Disables the toolbar. The settings are saved so the toolbar will be disabled the next time even without this flag.
--disable-toolbar-url	Removes the URL text area from the toolbar. When used the toolbar will no longer occupy the whole width of the screen and will be centered instead.
--enable-toolbar-bookmarks	Enables the bookmark list and Add bookmark buttons on the toolbar when enabled. The Add bookmark button will still be hidden if --disable-toolbar-url is used. It will not enable the toolbar if disabled.
--disable-toolbar-options	Removes the options button from the toolbar. It will not enable the toolbar if disabled.
--disable-options	As above but also disables the long press so that it is not possible to access the options page. On loading error the

Option	Description
--disable-toolbar-reload	browser will continue to retry and also in this case the options page is never opened. Removes the reload button from the toolbar