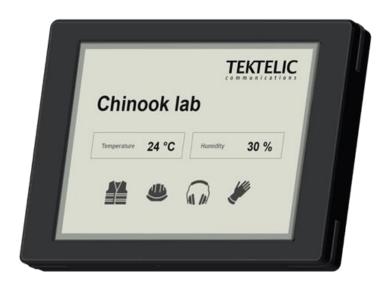
# MEMO CUSTOM DISPLAY TABLET



# **USER GUIDE**

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# **1** Product Description

#### **1.1 Overview**

MEMO is a LoRaWAN enabled interactive signboard. The Digital Sign features 6" E Ink screen with capacitive touch, Front light, RGB LED indicators, an Accelerometer and a Battery monitor. Table 1 presents the Custom Display Tablet models.

Product Code	Description	RF Region	Tx Band (MHz)	Rx Band (MHz)
T0006086	MODULE, DIGITAL SIGNAGE, BATTERY POWERED, NA	US915	923-928	902-915
T0006093	MODULE, DIGITAL SIGNAGE, EXTERNALLY POWERED, NA	US915	923-928	902-915
T0006749	MODULE, DIGITAL SIGNAGE, BATTERY POWERED, EU	EU868	863-870	863-870
T0006750	MODULE, DIGITAL SIGNAGE, EXTERNALLY POWERED, EU	EU868	863-870	863-870

#### Table 1: Custom Display Tablet Models

The main features of the Custom Display Tablet (Tablet) are as follows:

- **6" E Ink screen**: 1024(H) x 758(V) pixels with 16 levels of gray.
- Touch screen: Capacitive touch screen.
- **Front light**: Uniform front lighting for low light environment.
- LED: Configurable RGB LEDs Indicate the room status that is are visible from a distance.
- LoRa: Air interface capable of long range at low power.
- **Battery Powered (option):** Powered by 4xAA, up to 1-year battery life.
- Externally Powered (option): 5V DC or PoE (48V) powering option.
- **Easy Installation:** a removable wall mount plate simplifies the installation and alignment of the Tablet.
- **Safety Screw:** Hidden screw on the top that requires a special tool to unlock ensuring the devices safety.
- **Hidden Cables:** If powering the device externally there are grooves to hide the cables leaving a clean finish.

- Landscape or Portrait mode<sup>1</sup>: The device can be mounted in horizontal or vertical orientation.
- **Battery Monitor:** Monitors the battery level and provides a low battery warning for timely replacement.
- **Deep Sleep mode:** Accelerometer allows the device to save power when the Tablet is not in use and wake up when a Double tap is detected on the screen.

Figure 1-1 illustrates the Custom Display Tablet.





Figure 1-1: Custom Display Tablet

#### **1.2 Specifications**

The Custom Display Tablet specifications are listed in Table 2.

#### **Table 2: Custom Display Tablet Specifications**

Attribute	Specification
Use Environment	Indoor only
Enclosure	Plastic, IP30

<sup>1</sup> Portrait mode is not supported in current version of firmware

Operating Temperature	5°C to 40°C
Storage Temperature	-25°C to 70°C
Operating Relative Humidity	5% to 95%, condensing
Size	4.5 (L) x 6 (W) x 1(H) inch
Weight	340g(0.75lb) with batteries
	280g(0.62lb) without batteries
Display	Size: 6-inch E Ink screen (3:4)
	Resolution: 1024(H) x 758(V) pixels
	Color: 16 levels of gray (monochrome)
	Front light
Touch screen	Capacitive touch screen
	± 5 mm accuracy
Power Source	Externally powered Option:
	-DC 5V
	-PoE 48VDC (IEEE 802.3af Mode A or B or 4-pair Mode)
	Battery powered option:
	-4x AA Lithium Batteries
	-Front light and RGB LEDs not supported
Power Consumption	3 W maximum
Battery Lifetime	1-year battery life for typical use case <sup>2</sup>
Network technology/Frequency band	LoRaWAN in several variants: US915, EU868
Air Interface	LoRa
Maximum Tx Power	15 dBm
LED	4 uniformly illuminated LED bars (RGB)
	Green: Available
	Red: Occupied
Ethernet	PoE RJ45
USB Micro B	USB2.0 Debug port
Temperature Measurement Accuracy	< ±5°C

#### **1.3** Physical Interfaces

Figure 1-2 and Figure 1-3 illustrates the customer accessible interfaces of the Tablet. All models share the same layout; however, some functions are not available in some models. The externally powered model shown in Figure 1-2 has RGB LEDs on the corners while the battery powered version shown in Figure 1-3 cannot use the LEDs.

<sup>&</sup>lt;sup>2</sup> Active 10 hour/ week day (280 Rx packets, 15 Tx packets at 15dBm, 15 screen updates), in Deep sleep otherwise

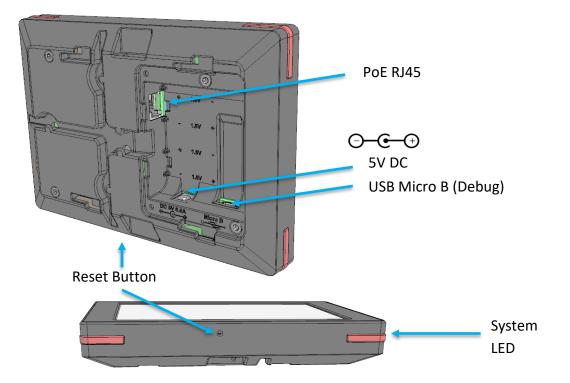
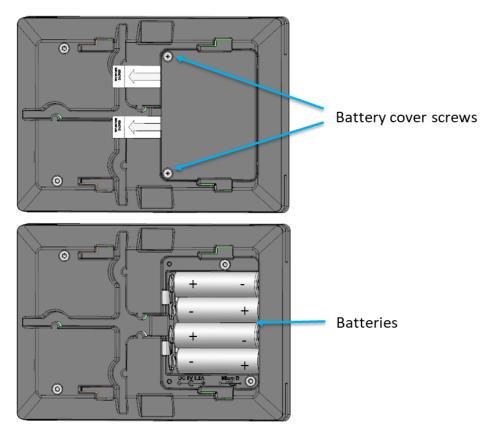


Figure 1-2: The Tablet (external) interface layout.





T0006377\_UG Confidential

## **2** Operating Instructions

#### 2.1 Included Product and Installation Material

The following items are shipped with each Tablet:

- Memo Customised Display Tablet
- 5V AC-DC power adapter (optional)
- Four AA batteries (optional)
- Wall mount plate
- Security/Lock screw (T6)
- Product Manual

**NOTE:** to ensure safe installation and maintenance please read <u>Safety Precautions</u>.

#### 2.2 Equipment Required for Installation

The following tools are required to install Memo:

- 1) Screwdriver
- 2) 4x M4 Screws (Choose screw type based on mounting surface)
- 3) Spirit level
- 4) T6 Torx driver for the security/lock screw

#### 2.3 Unpacking and Inspection

The following should be considered during the unpacking of a new Memo:

- Inspect the shipping carton and report any significant damage to TEKTELIC.
- Unpacking should be conducted in a clean and dry location.
- Do not discard the shipping box or inserts as they will be required if a unit is returned for repair.

#### 2.4 Commissioning

Each tablet has a set of commissioning information that must be entered into the network server for the sensor to be able to join the network and begin normal operation once activated. For instructions on how to do this please refer to the Network Server Quick Start Guide you get in the box with the device (also available online in the <u>Knowledge Base</u>).

#### 2.5 Power Up/Down Procedure

- Battery powered version of Tablet is shipped with the batteries installed along with pull tabs that prevent the Tablet from turning on during shipment.
- Once the Tablet is configured on the Application, turn on the Tablet by removing the battery pull tabs or providing external power depending on the model.

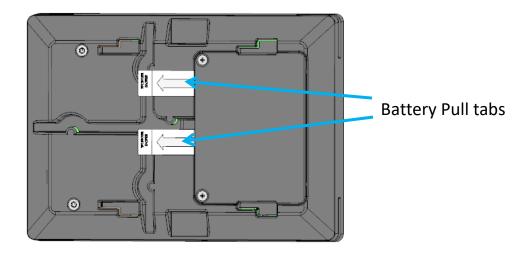


Figure 2-1: The Tablet (Battery) interface layout.

- To turn off the Tablet the batteries or external power must be removed. The unit must remain un-powered for 1 minute to completely reset.
- The reset switch of the Tablet is accessible through a pin hole in the bottom side of the Tablet as shown in Figure 1-2.

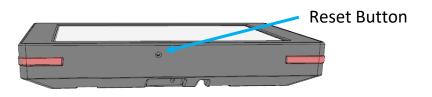


Figure 2-2: Reset Button

#### 2.6 Default Configuration

The default configuration on the Tablet is:

- Report the battery voltage every 1 (one) hour.
- For Class A mode operation query room status every 10 minutes.

#### 2.7 Reconfiguration

Memo supports a range of Over-the-Air (OTA) configuration options. Specific technical details are available in the <u>Technical Reference Manual</u>. All configuration commands need to be sent OTA during a Tablet's downlink windows.

#### 2.8 LED Behavior

#### Room Status LED (on externally powered variant)

All 4 LED bars turn green when the room is available for booking and turns red when room is occupied.

#### System LED

The System LED shares the light pipe with the right bottom corner RGB LED. During the boot and join procedure:

- The System LED will blink continuously during normal boot up and join procedure.
- Once the Tablet receives the first status downlink from the BNA the System LED turns off and the bottom RGB LED reflects the status of the room.

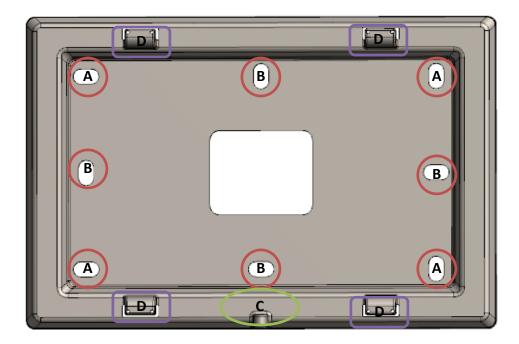
#### 2.9 Mounting

Memo features a removable mounting plate that simplifies the installation and leveling of the Tablet. Once the mount plate is installed the Tablet slides onto the four hooks on the plate. Tablet can be mounted in Landscape or Portrait mode.

NOTE: The mounting surface must be capable of holding > 15 kg [33 lbs].

#### Mounting the wall plate

- Thread the Ethernet and/or Power cables through the rectangular opening in the wall plate. Ensure that the lock screw feature marked as "C" in **Error! Reference source not found.** is facing away from the mounting surface.
- Secure the mount plate on the mounting surface using 4 x M4 screws in locations A or B as shown in the **Error! Reference source not found.**.
  - Double sided adhesive tape could be used when mounting on glass
- The slots provided on mount plate allows for adjustment to level the mount plate.
- Using a spirit level, ensure that the mounting plate is plumb and tight all the screws.





#### **Connect cables**

- With the externally powered version, connect the necessary cables to the Tablet (Ethernet, 5V DC and Debug USB port are accessible under the battery cover).
- No cables are required on the battery powered version.
- Cables can be routed through the channels on the back of the Tablet.

#### Install the Tablet

- Take a note of the MAC-ID/ EUI shown on the label on the back of the Tablet.
- To install the Tablet, first align the hooks on the mounting plate to the slots on the back of the Tablet (See features marked as "D" in **Error! Reference source not found.** and Figure 2-44), then push the Tablet onto the plate. Slide the Tablet to fix the Tablet in place.

# 3 It is recommended to proceed with the commissioning steps detailed in Operating Instructions

#### 3.1 Included Product and Installation Material

The following items are shipped with each Tablet:

- Memo Customised Display Tablet
- 5V AC-DC power adapter (optional)
- Four AA batteries (optional)
- Wall mount plate
- Security/Lock screw (T6)
- Product Manual

#### **3.2 Equipment Required for Installation**

The following tools are required to install Memo:

- 5) Screwdriver
- 6) 4x M4 Screws (Choose screw type based on mounting surface)
- 7) Spirit level
- 8) T6 Torx driver for the security/lock screw

#### **3.3 Unpacking and Inspection**

The following should be considered during the unpacking of a new Memo:

- Inspect the shipping carton and report any significant damage to TEKTELIC.
- Unpacking should be conducted in a clean and dry location.
- Do not discard the shipping box or inserts as they will be required if a unit is returned for repair.
- Commissioning before completing the final step of securing the Tablet with the lock screw.

#### Secure the Tablet using the lock screw

• With the battery powered version, ensure that the battery shipment tabs are pulled out before securing the Tablet.

• A T6 Torx screw is provided for the security lock. Tighten the lock screw using hand to secure the Tablet.

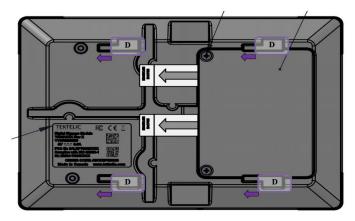


Figure 2-4: Tablet back side

#### **3.4 Battery Replacement**

The following tools are required to install the Custom Display Tablet:

- 1) A Philips Screwdriver (#2)
- 2) 4x AA batteries (LiFES2 Energizer, part number: L91)

Steps for replacing the batteries are as follows:

- Removed the battery cover by removing two philips screws shown in Figure 1-3
- Remove all the old batteries from the device.
- To turn off the device take out the batteries.
- Replace with all new batteries of the recommended type.
- Install the battery cover and philips screws to secure the batteries.

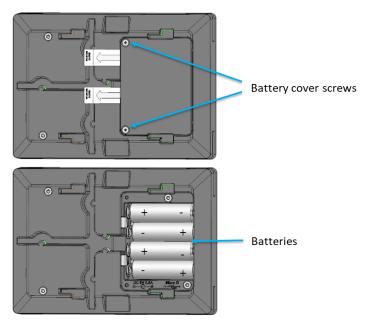


Figure 2-5: Tablet back side

# **4** Configurations

#### 4.1 Customization

You can adjust the Tablet's GUI, styles, text, images, fonts, and touch controller firmware. This is mainly done through YAML configuration files. Detailed information on how to do it you can find in <u>MEMO TRM</u> document.

Before starting up the Tablet, all configuration, image, font, and touch controller firmware files need to be uploaded (explained in section 2.1). After uploading new files, it's necessary to reboot the Tablet using the Reset Button (refer to Figure 1-2). Further details on configuration and handling of image, font, and touch controller firmware files are discussed in the following sections.

**NOTE:** Do not use symbols "#", "!" and "@" which are special symbols in YAML for values! This may cause to unrecognizable configuration file or its part. You may use "!" and "@" symbols for string values inside double quotes.

#### 4.2 Screen Element Configuration File

To configure screen elements, it is required to use elements.yml (this name is mandatory) configuration file. Screen element configuration file is based on YAML language. The structure of this file is:

```
Elements:

-

<screen element 1 configurations>

-

<screen element 2 configurations>

...
```

<screen element 1 configurations>, <screen element 2 configurations> and <screen element N
configurations> – sets of configurations for screen elements 1, 2 and N respectively.

This document starts with "---". "Elements:" is on the next line.

The configurations of the screen elements are placed after "Elements:" line.

The configurations of every screen element start with "-" on separated line.

Mandatory fields for all screen element configurations are:

• id - unique identifier of the screen element. There are predefined identifiers of the

screen elements in Tablet. Possible values of id field are (any other value will be ignored by Tablet): lab\_productName, lab\_fwVer, lab\_bootloadVer, lab\_apploadVer, lab\_iteFwVer, lab\_loraStatus, img\_logoBlack, pnl\_bottom for init\_scr (see section 4.9 for details about identifiers of screens) and for rest of screens it is used such format of id <type symbol>\_custScr<number of the screen>\_<number of the element with this type on the screen> (for example lab\_custScr1\_1, img\_custScr3\_2), where:

- <type symbol> first 3 letters show the type of element (lab for labels, but button, pnl panel, img image).
- $\circ$  <number of the screen> shows the number of custom screen (from 1 to 4).
- <number of the element with this type on the screen> shows the number of current screen element with current type on current screen (from 1 to 10 for labels, 1 6 for buttons, 1 5 for panels and 1 5 for images).
- If there are more than one set of configurations for screen element with the same value of id field then Tablet will use configurations from the last set of configurations with such value in id field.
- **type** type of screen element. Possible values of *type* field are (any other value will be ignored by Tablet):
  - o label text label (the value of screen element id includes "lab" at the begin).
  - $\circ$  button screen button (the value of screen element id includes "but" at the begin).
  - panel rectangular area of the screen (the value of screen element id includes "pnl" at the begin).
  - image image from Tablet disk drive (the value of screen element id includes "img" at the begin).
- x horizontal coordinate of the left bottom corner of the screen element (coordinates start from the left top edge of the screen). The value of this field is limited by the resolution of the screen (value should be in 0 1024 range).
- y vertical coordinate of the left bottom corner of the screen element (coordinates start from the left top edge of the screen). The value of this field is limited by the resolution of the screen (value should be in 0 768 range).
- *visible* screen element visibility state. Possible values for this field are:
  - 0 screen element should be invisible.
  - $\circ$  1 screen element should be visible.

Optional fields for the label are:

- width the width of the label in pixels. This field is optional. If this field is not set then width of the label will set automatically equal to the width of content (text).
- style\_id identifier of styles that are set in style configuration file styles.yml (see section 4.5 for details). Possible values of style\_id field are (any other value will be ignored by Tablet) values of the id fields from style configuration file.

font – the name of the font file that is the source of font. The length of the name of the file has to be not more than 8 symbols and the length of the file extension has to be not more than 3 symbols. This file has to be in binary format (see section 4.13 for details). Tablet uses default font in case if this field is not set or Tablet could not upload the font that is set in this field.

**NOTE:** Default font is equal to 20 height size. It is support Basic Latin, Latin-1 Supplement, Cyrillic, Arabic, Arabic Presentation Forms-A and Arabic Presentation Forms-B symbols.

- text\_id identifier of the text that is viewed by label. Those identifiers are related to id field in text.yml file (see section 4.3 for details).
- calc\_id identifier of the calculations the result of which is viewed by label. If calc\_id and text\_id both are present in configurations of the same label then text\_id is as more priority field is used and calc\_id field is ignored. Possible values of calc\_id field are (other value will be ignored by Tablet):
  - regStr\_calc firmware version with regional belongings string.
  - bootloadVer\_calc bootloader version string.
  - apploadVer\_calc application loader version string.
  - iteVer\_calc ITE firmware version string.
  - $\circ~$  loraStatus\_calc the state of the connection to LoRa network string.
  - tsFwVer\_calc touch screen firmware version string.

Optional fields for the panel are:

- style\_id identifier of styles that are set in style configuration file styles.yml (see 4.5 for details). Possible values of style\_id field are the same as for labels.
- width the width of the panel in pixels.
- height the height of the panel in pixels.

Optional field for the image is:

• image – the name of the image file that is the source of image. The length of the name of the file has to be not more than 8 symbols and the length of the file extension has to be not more than 3 symbols. This file has to be in binary format (see section 4.11 for details).

Optional fields for the buttons are:

• style\_id – identifier of styles that are set in style configuration file styles.yml (see 4.5 for details) for button. Possible values of style\_id field are the same as for labels.

- label\_style identifier of styles that are set in style configuration file styles.yml (see 4.5 for details) for label that is viewed inside of button. Possible values of style\_id field are the same as for labels.
- font the name of the font file that is the source of font for label viewed inside of the button. The length of the name of the file has to be not more than 8 symbols and the length of the file extension has to be not more than 3 symbols. This file has to be in binary format (see section 4.13 for details). Tablet uses default font in case if this field is not set or Tablet could not upload the font that is set in this field.

#### 4.3 Example Screen Element Configuration File

Screen element configuration file example is:

```
---
   Elements:
   # Product Name label
   id: lab productName
   type: label style id: blackLab stl
   font: chivo40.bin x: 0
                               y:
   135 width: 1024
   visible: 1
   text_id: meetingRoomDisplayTablet_txt
 # Company logo black image
   id: img logoBlacktype: image
   x: 681
   v: 50
   image: LOGO_B.binvisible: 1
 # Bottom panel
   id: pnl_bottomtype: panel
   style id: btnPanel stlx: 0
   y: 586
   width: 1024
   height: 179
   visible: 1
 # Update product name button
   id: btn_custScr1_1
Customised Display Tablet User Guide
TEKTELIC Communications Inc.
```

type: button style\_id:bookNowBtn\_stl label\_style: whiteLab\_stlfont: chivo40.bin x: 5 y: 588 width:1014 height: 164 text\_id: bookNow\_txt visible: 1

All these screen elements may be identified by them id field value (lab\_productName, img\_logoBlack, pnl\_bottom, btn\_custScr1\_1). First 3 letters of the id value are additional information about screen element type (lab for labels, img for images, pnl for panels and btn for buttons).

All screen elements have their position in configurations that are presented by x and y fields (these fields are coordinates in pixels (starting from left top corner) of left bottom corner of the element).

Also, all these elements have visible field that value is 1 for all of them. This mean that all these elements should be visible on the screens that they belong to.

Most of these screen elements (except Company logo black image with id equal to img\_logoBlack) has style\_id field in their configurations. Update product name button with id that is equal to btn\_custScr1\_1 has also label\_style field in its configurations. These fields configurate the style of text, lines, different colors (of background, of text, of filling) etc. All styles are configured in style configuration file style.yml (see 4.5 for details).

Product name label (with lab\_productName as the value of id field) and Update product name button (with btn\_custScr1\_1 as the value of id field) have text\_id in their configuration. This field is related to id field in texts.yml file. The text that should be viewed by label and button in this case may be found by text\_id value (meetingRoomDisplayTablet\_txt and bookNow\_txt) in texts.yml file.

Also, these elements (Product name label (with lab\_productName as the value of id field) and Update product name button (with btn\_custScr1\_1 as the value of id field)) have font in their configurations to set the font files that are set fonts for texts in these elements.

Product name label (with lab\_productName as the value of id field) has width in its configurations. This optional field is width of the label. This field is useful for example if style of the label content text\_align option as center (see 4.5 for details) and it is necessary to place the text in the middle of the screen or panel.

Company logo black image (with img\_logoBlack as the value of id field) includes image field with value LOGO\_B.bin in its configurations. This mean that image should use LOGO\_B.bin file as source of picture. This file (LOGO\_B.bin) should be uploaded to the Tablet disk drive. If this file is not on the Tablet disk drive or this file is corrupted then "No data" text will be shown instead of picture in image field.

Company logo black image (with img\_logoBlack as the value of id field), Bottom panel (with pnl bottom as the value of id field) and Update product name button (with btn\_custScr1\_1 as the value of id field) have width and height in their configurations. These fields are dimensions of screen element and is mandatory for panels and buttons. Images do not require dimension fields width and height because they use their content dimensions.

### 5 Firmware Upgrade Feature

#### 5.1 Setup/Requirements

To complete a Firmware Upgrade on the Tablet, you require the following setup:

- Windows 10 Laptop/PC Required. Drivers for DS may be required to install on the laptop.
- Teraterm
- Micro USB Cable (see Figure 4-1)
- Custom Display Tablet (see Figure 4-2)



Figure 4-1 USB A to Micro-B Cable

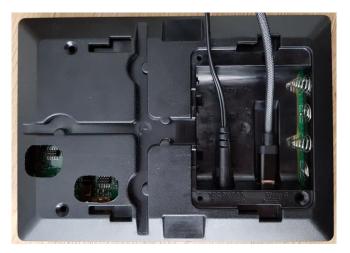


Figure 4-2 Digital Signage Board with power plug and USB cable connected

#### 5.2 Steps to Complete Firmware Upgrade

- 1. Power Up the Digital Signage.
- 2. Connect the USB cable to Digital Signage then to Laptop/PC.

3. Then launch the TeraTerm application, then select the serial and select the correct COM Port and select "OK". (See Figure 4-3)

Tera Term: New con	nection	×
⊖ TCP/ <u>I</u> P	Hos <u>t</u> ; 10.0.24	~
	✓ History	
	Service: O Telnet	TCP port#: 22
	) <u>S</u> SH	SSH version: SSH2 $\sim$
	⊖ 0ther	Proto <u>c</u> ol: UNSPEC ~
● Serial	Po <u>r</u> t: COM14: US	B Serial Device (COM14) 🗸 🗸
	OK Cancel	<u>H</u> elp

**Figure 4-3 Com Power Selection** 

4. Then click the "Setup" menu and then click the "Serial Port" then set the "Speed" to 115200. Then click "OK".

Tera Term: Serial port setup		×	
<u>P</u> ort:	СОМ14 ~	ОК	
Sp <u>e</u> ed:	<u>115200</u>		
<u>D</u> ata:	8 bit $\sim$	Cancel	
P <u>a</u> rity:	none ~	]	
<u>S</u> top bits:	1 bit v	<u>H</u> elp	
Elow control:	none ~	]	
Transmit delay 0 msec/ <u>c</u> har 0 msec/ <u>l</u> ine			

#### Figure 4-4 Serial Port and Speed Selection

5. Then "reset" the Digital Signage by pressing the reset button using a pin. Then TeraTerm serial console would display a "Ready for the firmware file" message along with continuous "C".

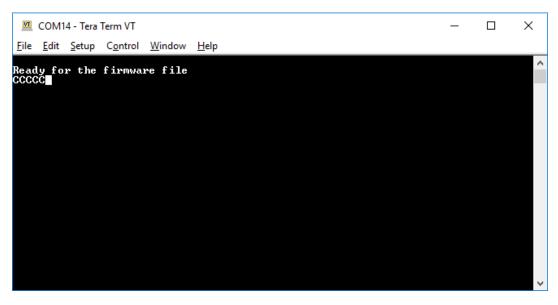


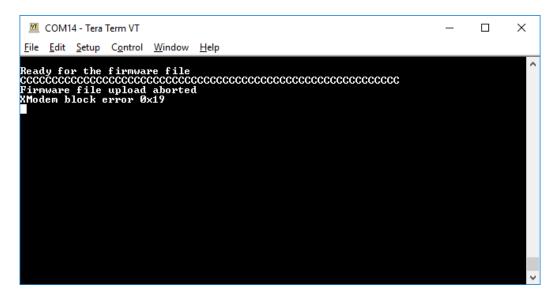
Figure 4-5 Ready for Firmware Note

6. Then go to "File->Transfer->XModem->Send". Then browse and select the FW file (.hex file). Then select "Open". Then Firmware Upgrade would start. The progress bar would be displayed.

M C	OM14 - Tera Term VI	Г				_	$\square$ $\times$	
<u>F</u> ile <u>E</u>	<u>E</u> dit <u>S</u> etup C <u>o</u> ntro	ol <u>W</u> indow	<u>H</u> elp					
Ready CCCCC	for the firm	ware file						
	Tera Term: XMODE	M Send		$\times$				
	Filename: Protocol: Packet#: Bytes transfi Elapsed time	×w	-signage.he× IODEM (CRC) 5424 694272 3 (24.49KB/s) 29.7%					
	[	Cancel						

#### Figure 4-6 Progress Bar

**NOTE:** Starting the FW Upgrade should happen within a minute. Otherwise, the USB operation would timeout and go to the actual image. These messages would be displayed when it is timed out.





7. After the successful Firmware Upgrade, the following message would be displayed in the serial console.

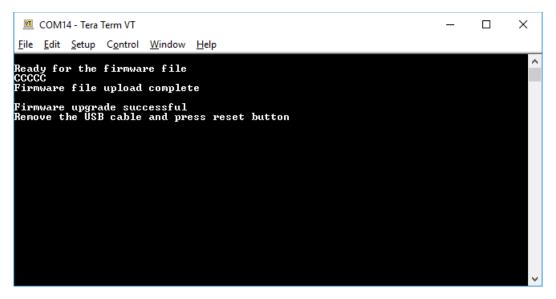


Figure 4-8 Firmware upgrade successful

8. Then as per the messages displayed in serial console, remove the USB cable and press the "reset" button on the DS and let the device power up.

## 6 Leap X Application

#### 6.1 Quick configuration with Leapx

The fields shown in figure 5-1 can be configured using LeapX application. Just write the name for each field and enable/disable the icons.

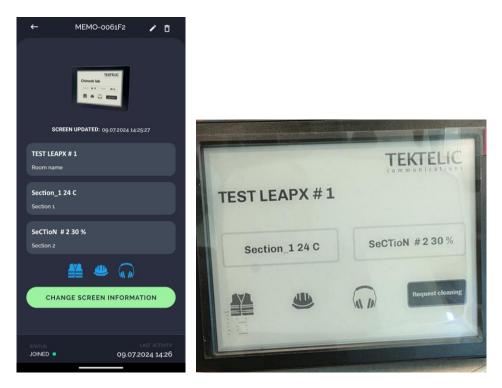
► MEMO-OD61F2   ROOM NAME   Chinook Lab   SECTION 1   Temperature 24 °C   SECTION 2   Humidity   30 %   Image: Comperative of the second se	4:29		* ♥⊿ 🕯 73%
Chinook Lab   SECTION 1   Temperature 24 °C   SECTION 2   Humidity 30 %	←	MEMO-0061F2	
SECTION 2 Humidity 30 %	Chinook Lab SECTION 1		
		30 %	
UPDATE SCREEN			
UPDATE SCREEN			
	l	JPDATE SCREEN	N N

**Figure 5-1 LeapX Screen information** 

Don't exceed the maximum number of characters.



#### 6.2 LEAPX and tablet view



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# 7 Troubleshooting section

Question	Answer
How do I add my sensor to a Network Server?	Provisioning a sensor on a Network Server will vary based on your Network Server provider. An example of how to perform this on the TEKTELIC Network Server is available in your sensor's user manual. Most network server providers will require you to enter the DevEUI, AppEUI and AppKey of your device on their service.
What version of LoRaWAN do the sensors implement?	All TEKTELIC Sensor products run LoRaWAN 1.0.2
The serial numbers on my case are different from the serial numbers on the circuit board. Did my order get mixed up?	All TEKTELIC products have multiple serial numbers so we can track the devices at each stage of production. It is normal that you sensor board and sensor assembly have different numbers.
Where can I find the commissioning values for my sensors? (DEVEUI, APPEUI and APPKEY)	We keep the commissioning values for each sensor secure on our own server. We send the commissioning values for each sensor sent with a shipment but if this was misplaced, please send the serial number the revision and the Tcode of the sensor and we can get the information for you.
Why is my sensor sending more packets than the Network Server receives?	This occurs when the channel plan does not reflect the number of channels accepted by the gateway. By default, all sensors come up in 64 channel mode which results in lost packets if a gateway with less than 64 channels is used. If you have an 8-channel gateway for example, ensure this is configured in the device settings in the Network Server. In the TEKTELIC NS under the "advanced network settings" tab change the configuration of the "default channel mask" to reflect the number of channels used by the gateway used.

# 8 Safety Precautions and Compliance Statements

#### 8.1 Safety Precautions

The following safety precautions should be observed:

- The Tablet is for indoor use only. Do not connect Tablet to any outdoor cables.
- The Tablet has no internal field serviceable parts other than the batteries. Other than installing or replacing the batteries, the Tablet must only be opened by an approved TEKTELIC service center.
- All installation practices must be in accordance with the local and national electrical codes.
- Ensure that the Tablet is located to eliminate any physical hazard to people or property.
- The Tablet shall be powered from the supplied AC-DC power adaptor or through Power over Ethernet (PoE) or 4xAA batteries. Simultaneous application of power through more than one input may result in unexpected operation and shall be avoided.
- Keep batteries away from the reach of children.
- Do not mix old and new batteries.
- If the Tablet is not expected to be used for extended periods of time, the batteries should be removed before storage to avoid any leak.

#### 8.2 Compliance Statements

#### Federal Communications Commission:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

To comply with FCC exposure limits for general population / uncontrolled exposure, this device should be installed at 20 cm from all persons and must not be co-located or operating in conjunction with any other transmitter.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These

limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### Innovation, Science and Economic Development Canada:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This device should be installed and operated with minimum distance 0.2 m from human body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- a. L'appareil ne doit pas produire de brouillage.
- b. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil doit être installé et utilise à une distance minimale de 0.2 m du corps humain.

#### California Proposition 65:

**WARNING:** This product can expose you to chemicals including lead, nickel & carbon black, which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to <u>www.p65warnings.ca.gov</u>

#### **Revision History**

Version	Date	Editor	Comments
0.1	July 17, 2019	Emma Tholl	Initial Draft.
0.2	November 7, 2019	C Karperien	General updates and template updates
0.3	November 25, 2019	A Narayanan	Updated to include Tablet specific instructions.
0.4	December 5, 2019	C Karperien	General Updates and addition of Firmware Upgrade Feature
0.5	March 2, 2020	A. Narayanan	Updated Tcodes in Table 1 and Temperature specification in Table 2
0.6	April 20, 2020	C Karperien	Changes to Firmware Upgrade section
0.7	December 02, 2022	Ade Adegboye	Minor Formatting changes
2	July 17, 2024	Marharyta Yuzefovych	Updated to a user-friendly format