



Touch 7 User & Installation Manual

v1.0



Copyright

This document is copyright 2020 under the Creative Commons agreement. Rights are granted to research and reproduce elements of this document for non-commercial purposes on the condition that Power Products is credited as the source. Electronic re-distribution of the document in any format is restricted, to maintain quality and version control.

Important

Power Products strives to ensure all information is correct at the time of printing. However, the company reserves the right to change without notice any features and specifications of either its products or associated documentation.

Translations: In the event that there is a difference between a translation of this manual and the English version, the English version should be considered the official version.

It is the owner's sole responsibility to install and operate the device in a manner that will not cause accidents, personal injury or property damage.

Table of Contents

1	GENERAL INFORMATION	5
1.1	Use of this manual	5
1.2	Liability	5
1.3	Warranty	5
1.4	Identification Label	5
2	OVERVIEW	6
2.1	Description	6
2.2	Features	6
2.3	Overview	6
2.4	Supplied Parts	7
2.5	Network Configuration	8
2.5.1	Access Point	8
2.5.2	Client Mode (Wireless)	8
2.5.3	Client Mode (Wired)	9
2.6	System Example	10
3	INSTALLATION	11
3.1	Things You Need	11
3.2	Mounting Location	11
3.3	Mounting Instructions	12
3.4	Display Removal	13
3.5	Connections	14
1.	Connect DC Power	15
2.	Connect Ethernet to Router (Optional)	15
3.	Connect NMEA 2000 Network	15
4	OPERATION	16
4.1	First Power Up	16
4.2	Updating Software	17
4.2.1	Checking Current Software Version	17
4.2.2	Updating Software via USB Flash Drive	17
4.3	Setting Up Wireless Server	18
4.4	Calibrating Touch Screen	20
5	SPECIFICATIONS	21
5.1	Technical Specifications	21
5.2	Dimensions	21
5.3	NMEA2000 Plug Pinout	22
6	ORDERING INFORMATION	22
7	EC DECLARATION OF CONFORMITY	23

Table of Figures

Figure 1. Touch 7 Front.....	6
Figure 2. Touch 7 Connections	7
Figure 3. Supplied Parts.....	7
Figure 4. Access Point Example	8
Figure 5. Client Mode Wireless Example.....	8
Figure 6. Client Mode Wired Example	9
Figure 7. System Example	10
Figure 8. Mounting Exploded View	12
Figure 9. Mounting Steps.....	12
Figure 10. Removal Steps.....	13
Figure 11. Connections	14
Figure 12. DC Connector Pinout.....	15
Figure 13. Dimensions	21

1 GENERAL INFORMATION

1.1 Use of this manual

This manual serves as a guideline for the safe and effective operation of the following Touch 7 model:

Description	Part number
CZONE TOUCH 7	80-911-0200-00

1.2 Liability

Power Products can accept no liability for:

- Consequential damage resulting from the use of the Touch 7.
- Possible errors in the included manual and the consequences of these.
- Use that is inconsistent with the purpose of the product.

Disclaimer: Our products are subject to continual development and improvement. Therefore, additions or modifications to the products may cause changes to the technical data and functional specifications. No rights can be derived from this document. Please consult our most current Terms & Conditions of Sale.

1.3 Warranty

The CZone product warranty covers the Touch 7 for the first two years after the purchase date, on the condition that the product is installed and used according to the instructions in this manual. Installation or use that do not comply with these instructions may result in under performance, damage or failure of the product and may void this warranty. The warranty is limited to the cost of repair and/or replacement of the product. Costs of labor or shipping are not covered by this warranty.

1.4 Identification Label



Important information required for service or maintenance can be derived from the identification label. The identification label is located on the back of the Touch 7.

CAUTION

Never remove the identification label. This will void the warranty.

2 OVERVIEW

2.1 Description

Introducing the newest member of the CZone display family the Touch 7. With an excellent 7" IPS LCD panel it can be viewed from any angle. The Touch 7 features all new electronics with the fastest processor ever in a CZone Touch display and built in connectivity for tablet pairing. Installation is easy with front mount installation, shallow mounting depths and a wide voltage range. The Touch 7 also uses the highly customizable and easy to use CZone 2.0 User Interface.

2.2 Features

- New 7" display with modern, low profile glass design
- Optically bonded IPS LCD provides excellent viewing angles
- 24 bit colour for better colour accuracy and contrast
- High resolution 1024 x 600 pixel for sharp and clear images
- 500 nit brightness dimmable for night time viewing
- New dual core processor provides lightning fast performance
- Easy front mount installation and screwless rear access
- Shallow 35mm mounting depth including cables
- Built in Wi-Fi and ethernet for tablet connectivity
- Wide 8-32V DC voltage range
- Consistent and familiar CZone 2.0 User Interface, customizable for any OEM

2.3 Overview

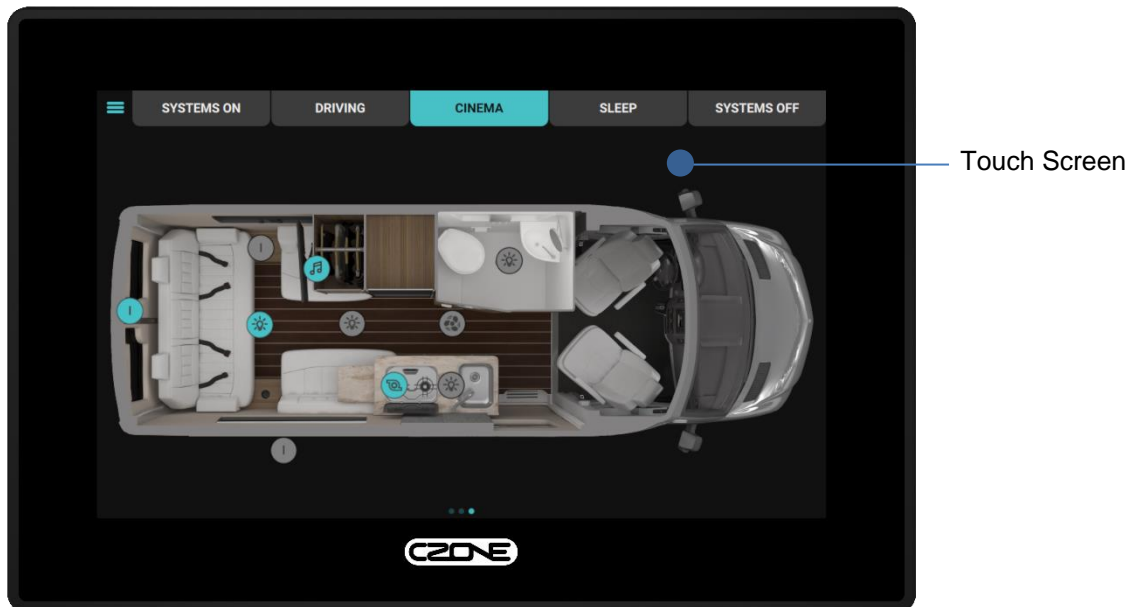


Figure 1. Touch 7 Front

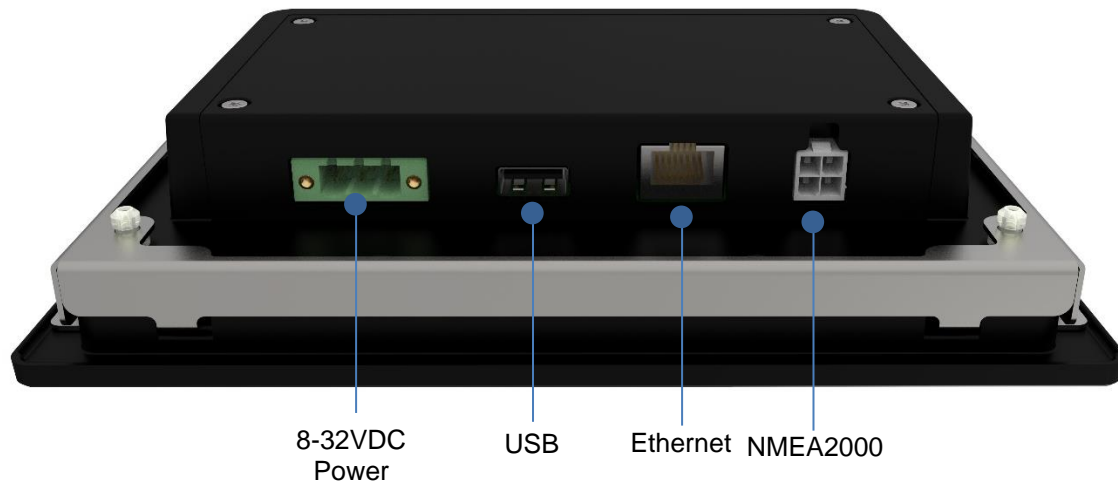


Figure 2. Touch 7 Connections

2.4 Supplied Parts



Figure 3. Supplied Parts

1. Display
2. Mounting bracket
3. Mounting screws x 4
4. NMEA2000 Drop Cable
5. DC Power Connector

2.5 Network Configuration

The Touch 7 has internal WiFi that can be used for controlling the CZone system wirelessly from an iPad and for writing favorites packages wirelessly from a PC. There are 3 different configurations depending on the availability of other Wireless Networks on the vessel or vehicle. The configuration type is set on the display, but it is important to decide which network type to use before installation. See below for a description of each:

2.5.1 Access Point

Use access point if the Touch 7 is the only wireless device onboard the vessel or you want to keep the wireless devices separate with the iPad and PC communicating directly to the Touch 7.



Figure 4. Access Point Example

2.5.2 Client Mode (Wireless)

Use client mode if you plan to use another Wireless Network onboard the vessel as the access point, with the Touch 7 connected to this network via WiFi. This simplifies the system as you will not need to keep changing between Wireless networks when using the CZone App.



Figure 5. Client Mode Wireless Example

2.5.3 Client Mode (Wired)

Use client mode wired if you plan to use another Wireless Network onboard the vessel as the access point, with the Touch 7 connected to this via the Ethernet port. This simplifies the system as you will not need to keep changing between Wireless networks when using the CZone App.

Note the WiFi will be disabled on the Touch 7 in this mode.

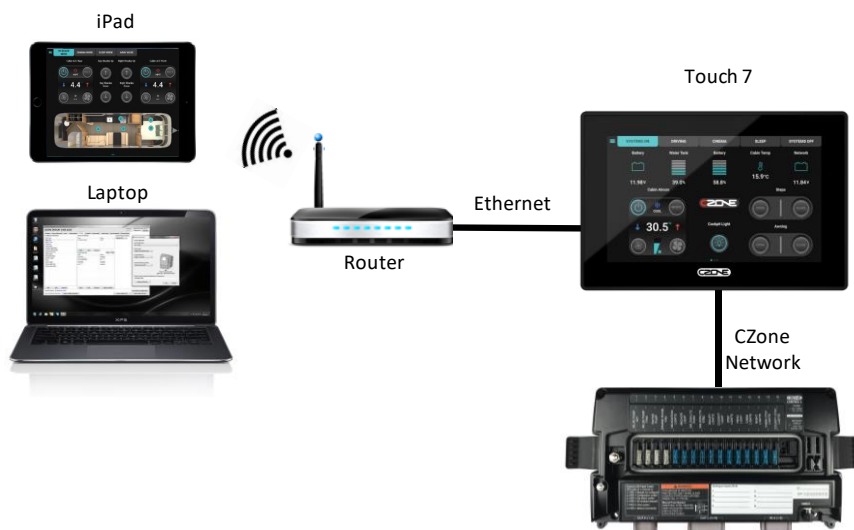


Figure 6. Client Mode Wired Example

2.6 System Example

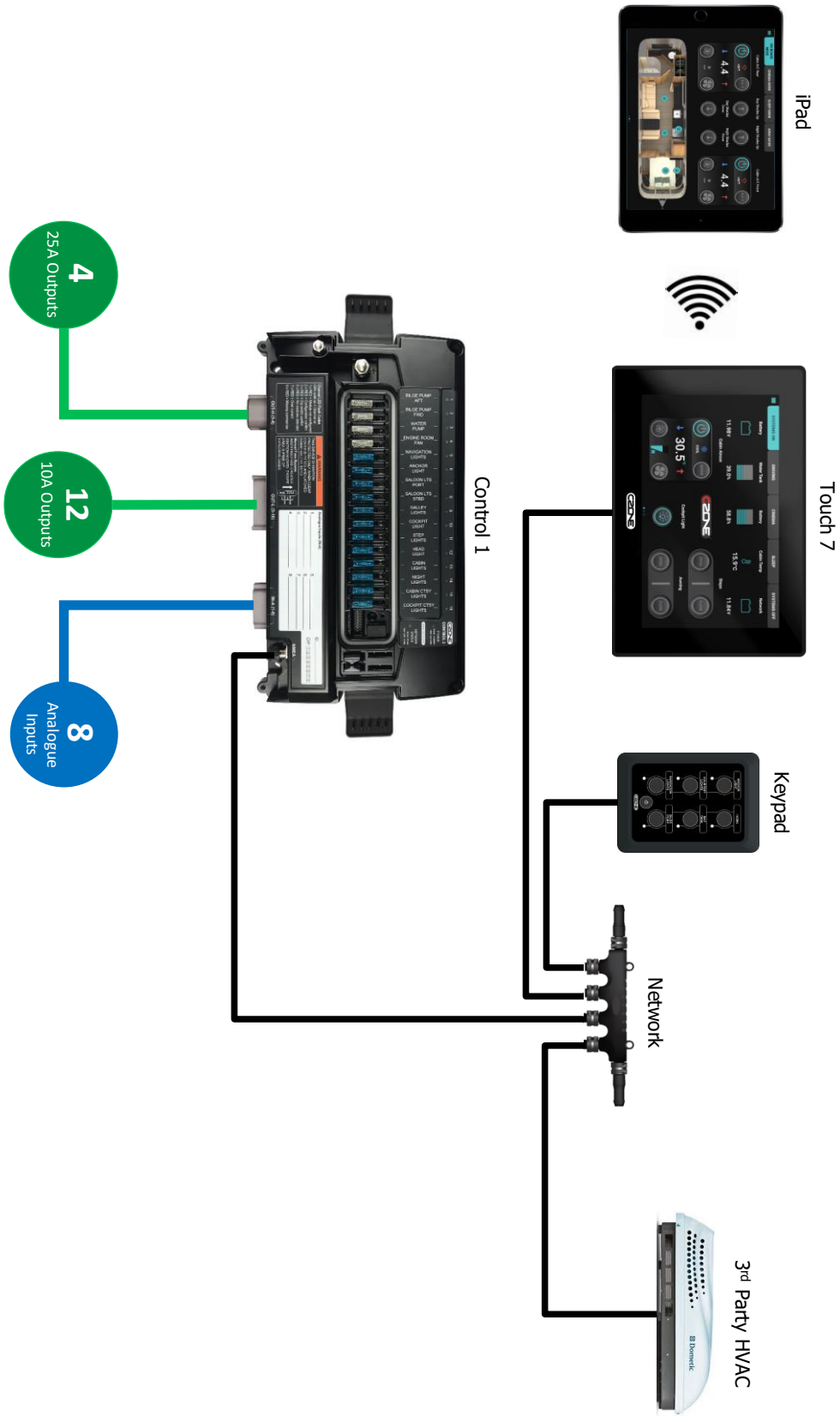


Figure 7. System Example

3 INSTALLATION

3.1 Things You Need

- Touch 7 Display
- Mounting bracket (supplied)
- 4 x self tapping mounting screws (supplied)
- DC Power connector (supplied)
- NMEA2000 drop cable (supplied) and t-connector
- 3A fuse
- Screw driver and drill bits
- Electrical Tools

3.2 Mounting Location

When selecting a location for your product it is important to consider the following factors:

- Ensure mounting compartment is of suitable size with adequate airflow
- Ensure display is mounted in a location where it will not be subjected to excessive vibration
- Ensure display is mounted in a location where the operator can easily use controls and clearly see the screen
- Ensure display is mounted in a location that allows proper routing, support and connection of cables
- Ensure there is sufficient clearance on each side of display to access release tabs for removal
- Ensure cables have adequate strain relief to prevent stress on connectors
- Select a location that is far enough away from devices that may cause interference, such as motors, generators and radio transmitters/receivers.
- The display has a high-contrast screen, and is viewable in sunlight, but for best results install the unit out of direct sunlight.

Warning! Inadequate ventilation may cause the unit to overheat. The unit is designed to operate in temperatures from -20° C to +70° C (-4° F to +158° F)

3.3 Mounting Instructions

Follow the below steps for mounting the Touch 7 to the chosen mounting surface

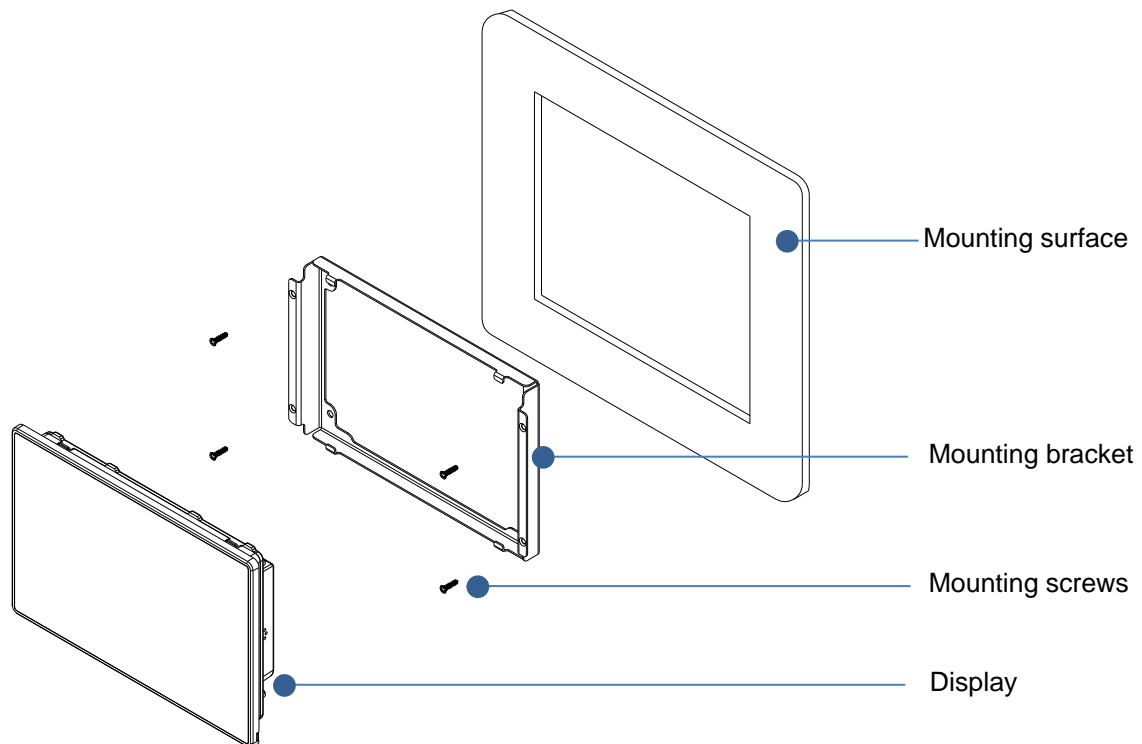


Figure 8. Mounting Exploded View

1. Using the supplied mounting template as a guide, cut the hole in the mounting surface
2. Insert mounting bracket and screw to wall using 4 x supplied self-tapping screws
3. Secure display to mounting bracket by sliding the unit down on the 2 mounting bracket hooks.
Note: the bottom edge of unit should be touching the mounting surface for the display to properly seat on hooks.
4. Once the bottom of unit is properly seated and flush with the mounting surface, carefully push the top of the display until clipped securely in place

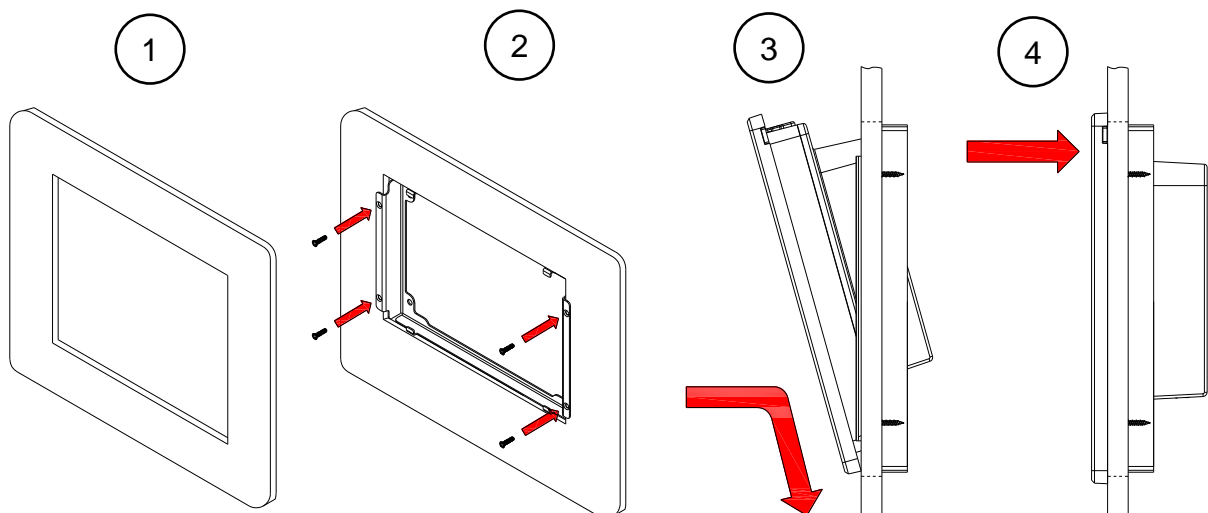


Figure 9. Mounting Steps

3.4 Display Removal

Follow the below steps to remove the Touch 7 from mounting bracket once installed

1. Locate the 2 release tabs at the top sides of display
2. Using an appropriately sized flat head screwdriver or similar, carefully push one of the release tabs in about 5mm until it unclips from bracket.
3. Repeat the same process on the other side of display until the top is completely unclipped.
4. Carefully pull the display up and away from bracket (ensure all connectors are removed first if the unit is already wired).

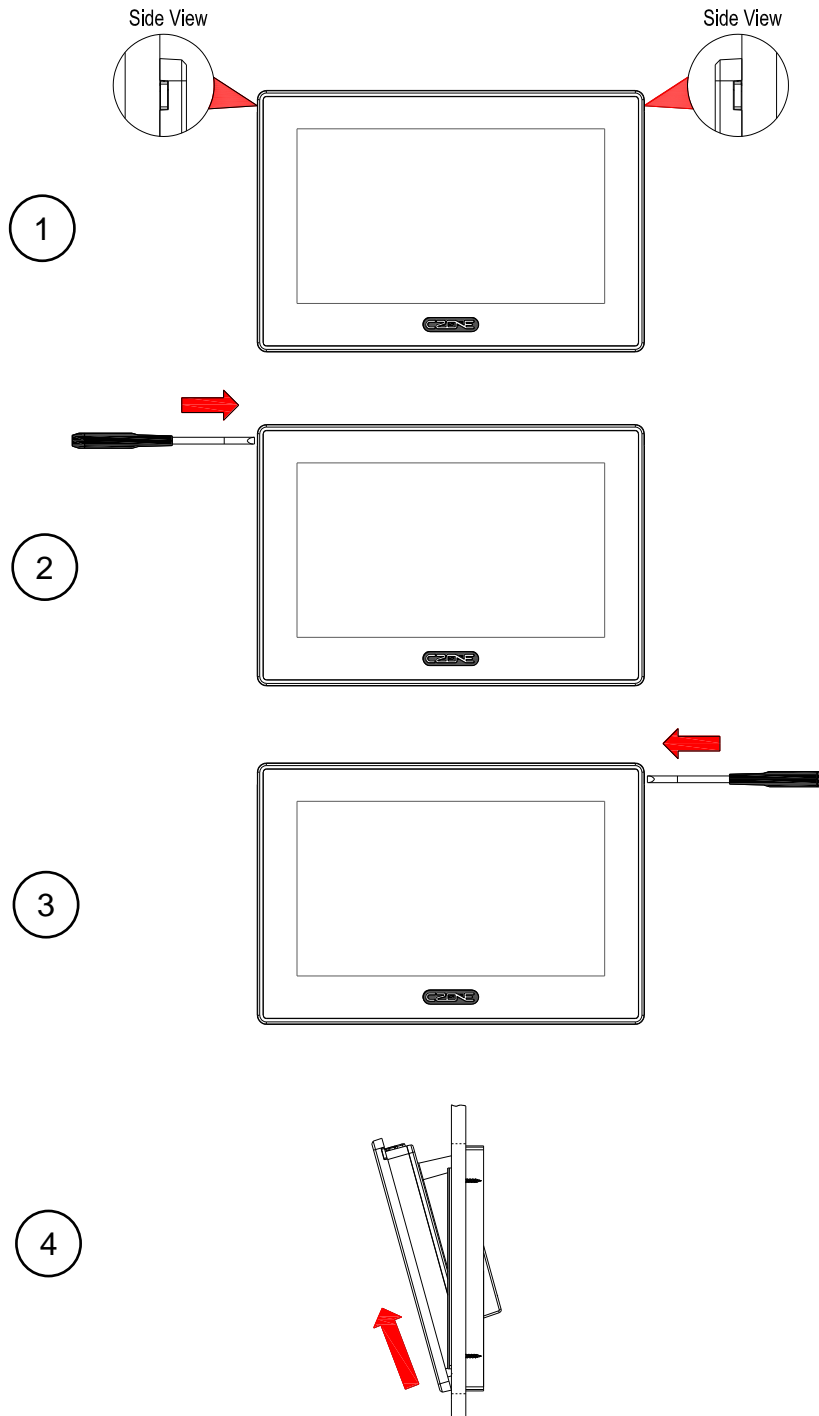


Figure 10. Removal Steps

3.5 Connections

Warning! Before starting the installation, be sure to turn electrical power off. If power is left on or turned on during the installation, fire, electrical shock, or other serious injury may occur. Be sure that the voltage of the power supply is compatible with the unit.

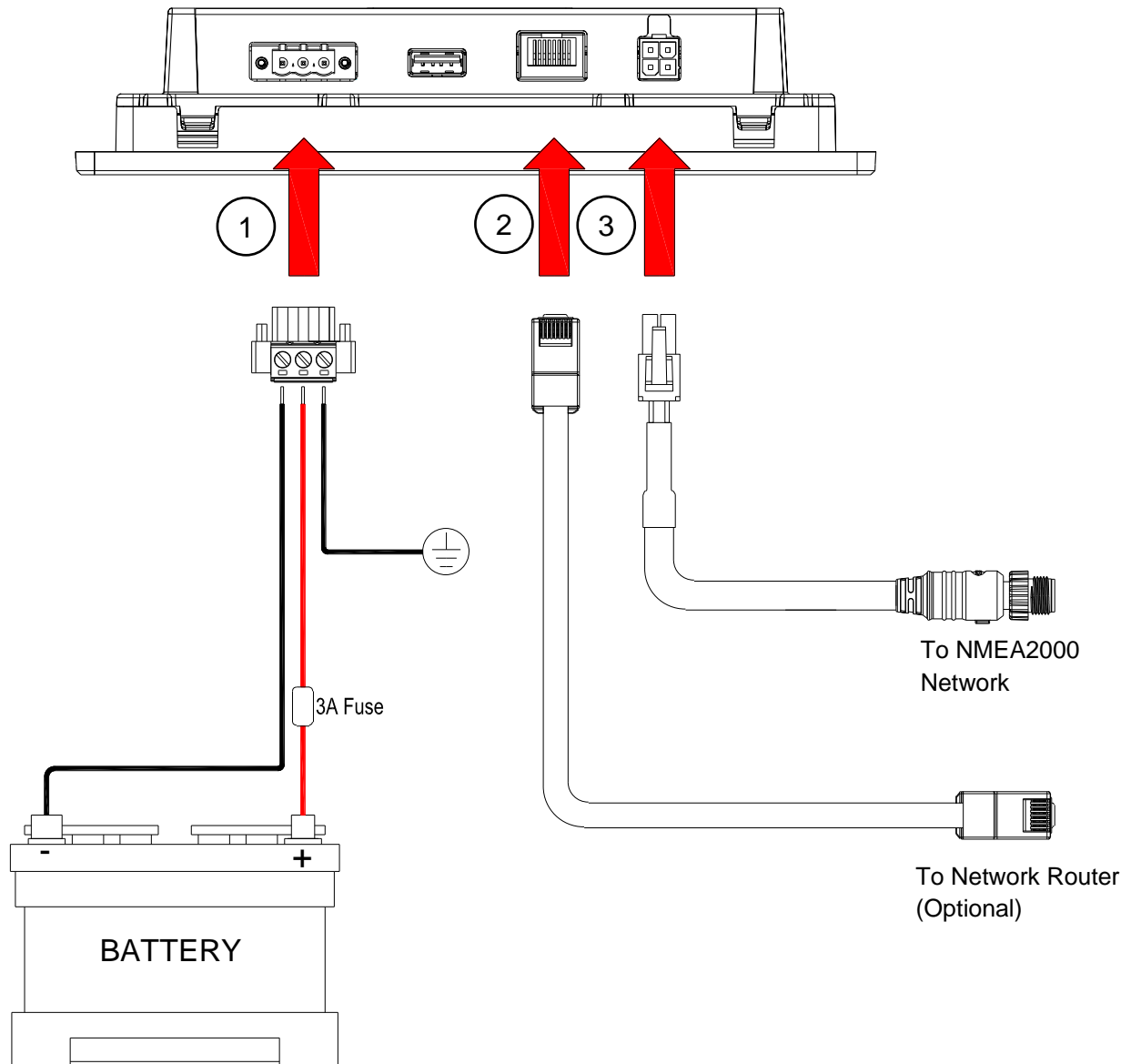


Figure 11. Connections

1. Connect DC Power

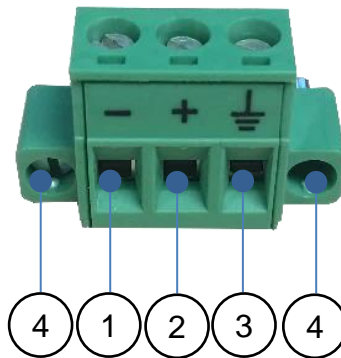


Figure 12. DC Connector Pinout

1. **DC Negative Connection** - Connect appropriately sized negative wire from – position of power connector to battery negative terminal. Ensure conductor is secured by tightening screw.
2. **DC Positive Connection** - Connect appropriately sized positive wire from + position of power connector to battery positive terminal through a 3A fuse. Secure conductor in place by tightening screw.
3. **Shield Connection (Optional)** – Connect shield to the vessel or vehicles chassis/ground ONLY if touch screen interference is observed.
Note: Frequencies emitted from some electrical equipment can cause interference with the display's touch screen. If issues are experienced with touchscreen performance firstly try recalibrating the screen via the displays Settings page. If the performance does not improve then the shield cable should be connected to chassis/ground.
4. Ensure power supply to Touch 7 is disconnected or switched off initially, then insert connector in to Touch 7 power socket and lock connector in place by tightening locking screws.

2. Connect Ethernet to Router (Optional)

Run an ethernet cable from the Ethernet port on the Touch 7 to an ethernet port on the router, only if the Touch 7 will be configured in Client Mode Wired. Refer to 2.5 for definitions of the supported network configurations.

3. Connect NMEA 2000 Network

Run supplied NMEA2000 1M Drop cable from NMEA2000 port on Touch 7 to NMEA2000 backbone.

4 OPERATION

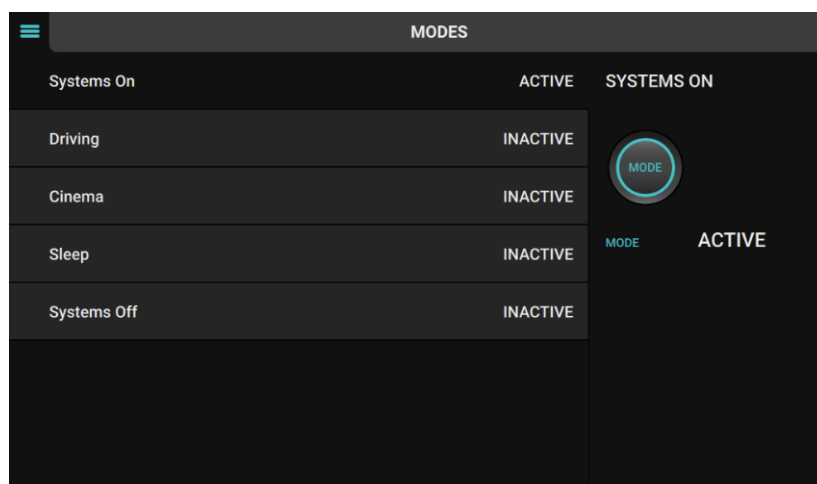
4.1 First Power Up

If connecting Touch 7 to an existing CZone network, ensure the display has been added to the CZone configuration and assigned a dipswitch. Every CZone device on a network requires a unique dipswitch to operate correctly, and the Touch 7 has a virtual dipswitch. Refer to the CZone Configuration Tool manual for this process.

1. Turn on the circuit breaker or switch supplying power to the Touch 7.
2. The CZone splash screen will appear for about 1 minute then the display will attempt to claim a configuration from the network.
3. When configuration has been successfully claimed you will be prompted to enter the display dipswitch. Select the dipswitch from the list of configured devices or set the dipswitch manually by checking the correct boxes.



4. After dipswitch has been entered successfully the Control or Modes page (if configured) will appear.



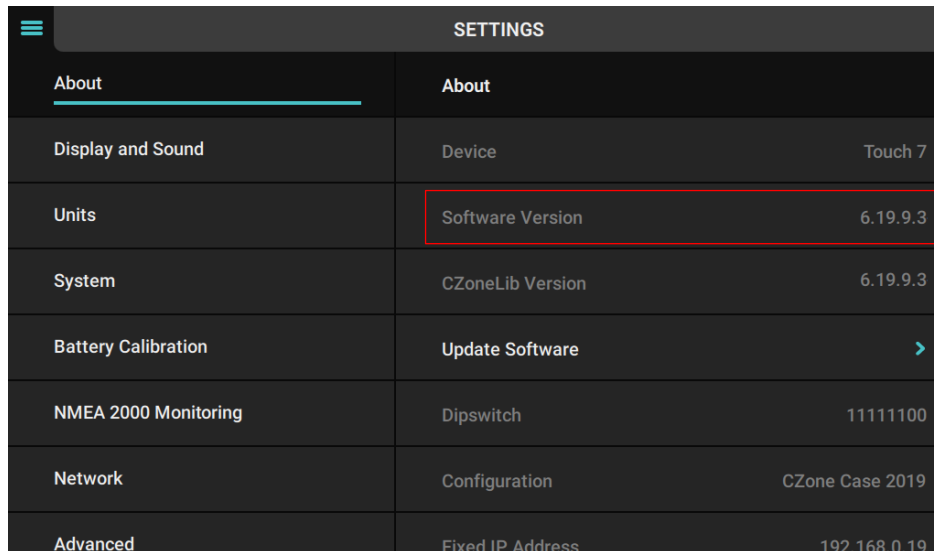
5. The Touch 7 is now ready for use.

Note: Refer to CZone 2.0 User Interface Manual for detailed operation instructions.

4.2 Updating Software

To keep the Touch 7 up to date with the latest software refer to <https://downloads.czone.net/>. It is recommended to update the entire CZone system when updating the Touch 7 to ensure the system operates correctly. The Touch 7 can be updated via the USB port, see process below:

4.2.1 Checking Current Software Version



SETTINGS	
About	About
Display and Sound	Device Touch 7
Units	Software Version 6.19.9.3
System	CZoneLib Version 6.19.9.3
Battery Calibration	Update Software >
NMEA 2000 Monitoring	Dipswitch 11111100
Network	Configuration CZone Case 2019
Advanced	Fixed IP Address 192.168.0.19

To check the current software version on the Touch 7, go to Settings > About.

The current software version is listed at the top of the page. To install a newer version, follow the below steps

4.2.2 Updating Software via USB Flash Drive

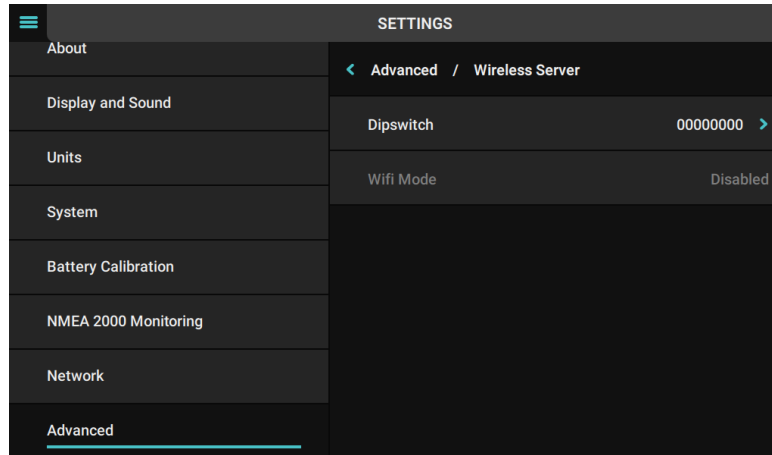
1. Copy the Touch 7 firmware file (extension .swu, previously downloaded from the CZone portal) on the root directory of a USB Flash Drive.
2. Insert the USB Flash Drive un the USB Port of the Touch 7.
3. Press the 'Update Software' button on the Settings > About page and press 'Yes' when prompted.
4. The display will start installing the new software, this process may take a few minutes.
5. When complete the display will boot up to the main screen. Go to Settings > About to confirm the new Software Version.

4.3 Setting Up Wireless Server

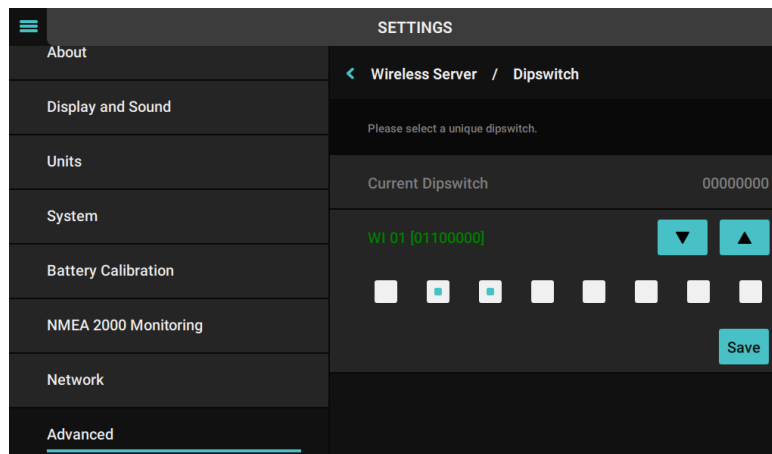
The Wireless Server, when enabled will show on the CZone network as a separate Wireless Interface. For the server to allow communication between the CZone system and an iPad it is important that the CZone configuration includes the two devices (Display Interface and Wireless Interface) each with a unique dipswitch.

Follow the below steps to enable the Wireless Server on the Touch 7, by default the WiFi will be disabled.

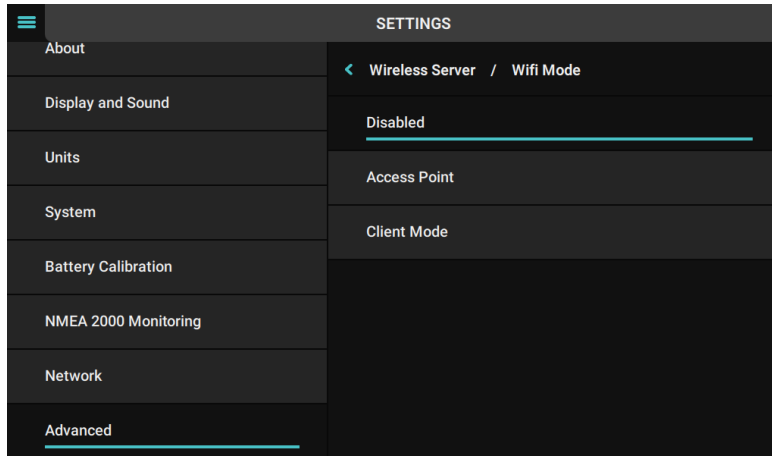
1. Go to Settings > Advanced > Wireless Server.



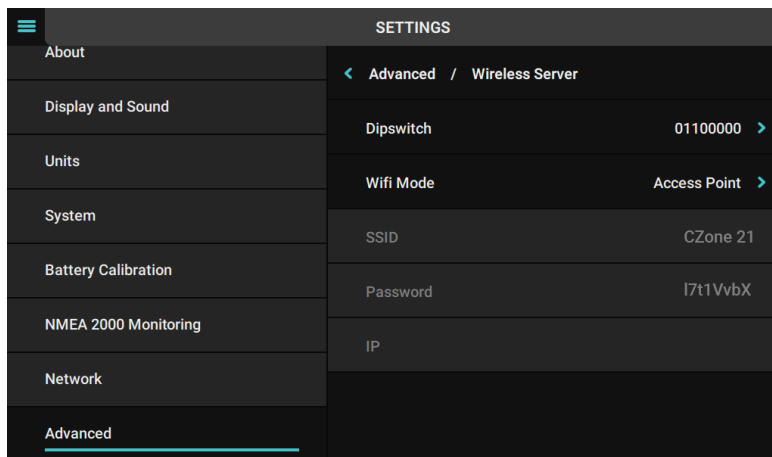
2. Enter the dipswitch as assigned in the CZone configuration, which should be different to the Touch 7 (Display Interface) dipswitch and press Save



- After Dipswitch is set, select the desired WiFi Mode. Refer to 2.5 for detail on each mode (note: select 'Disabled' to configure the device in Wired Client Mode. The WiFi will be disabled).



- If Access Point is enabled the WiFi SSID and password will be shown per below image. Use these credentials to connect iPad to the Touch 7 or laptop to the Touch 7 for sending favorites configuration files (.cfp) wirelessly from the Favorites Tool.



The Wireless Server is now configured.

4.4 Calibrating Touch Screen

Frequencies emitted from some electrical equipment can cause interference with the display's touch screen. If issues are experienced with touchscreen performance try recalibrating the screen following the below steps

1. On the Touch 7, go to the Settings > System > Screen Calibration page.
2. Press the 'Calibrate' button. The calibration process will take around 10 seconds.
3. When calibration has finished re-test the touch performance.

If the performance does not improve then it is recommended to run a cable from the shield position on the Touch 7 power connector to chassis/ground.

5 SPECIFICATIONS

5.1 Technical Specifications

Model	Touch 7
Article number	80-911-0200-00
Display Size	7.0 Inch
Resolution	1024 x 600 pixels
Brightness	550 cd/m ²
Colours	24-bit RGB
Touch Screen	Projected Capacitive
CPU	NXP/Freescale i.MX6DL Dual-Cortex A9
Operating Voltage	8-32V DC
Current Draw Operating	430mA @ 12V (backlight 100%)
Current Draw Standby	130mA @ 12V (backlight off)
Operating Temperature	-20°C to 70°C (-4°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Ingress Protection	None, IPX0
Interfaces	USB2.0, Ethernet, NMEA2000, WiFi
Weight (excluding mounting hardware)	695 grams (1.53 lbs)
DC Power Connector Part #	Phoenix 1777992 MSTB 2,5/ 3-STF-5,08
Certification	CE, FCC, RCM
Warranty Period	2 Years

5.2 Dimensions

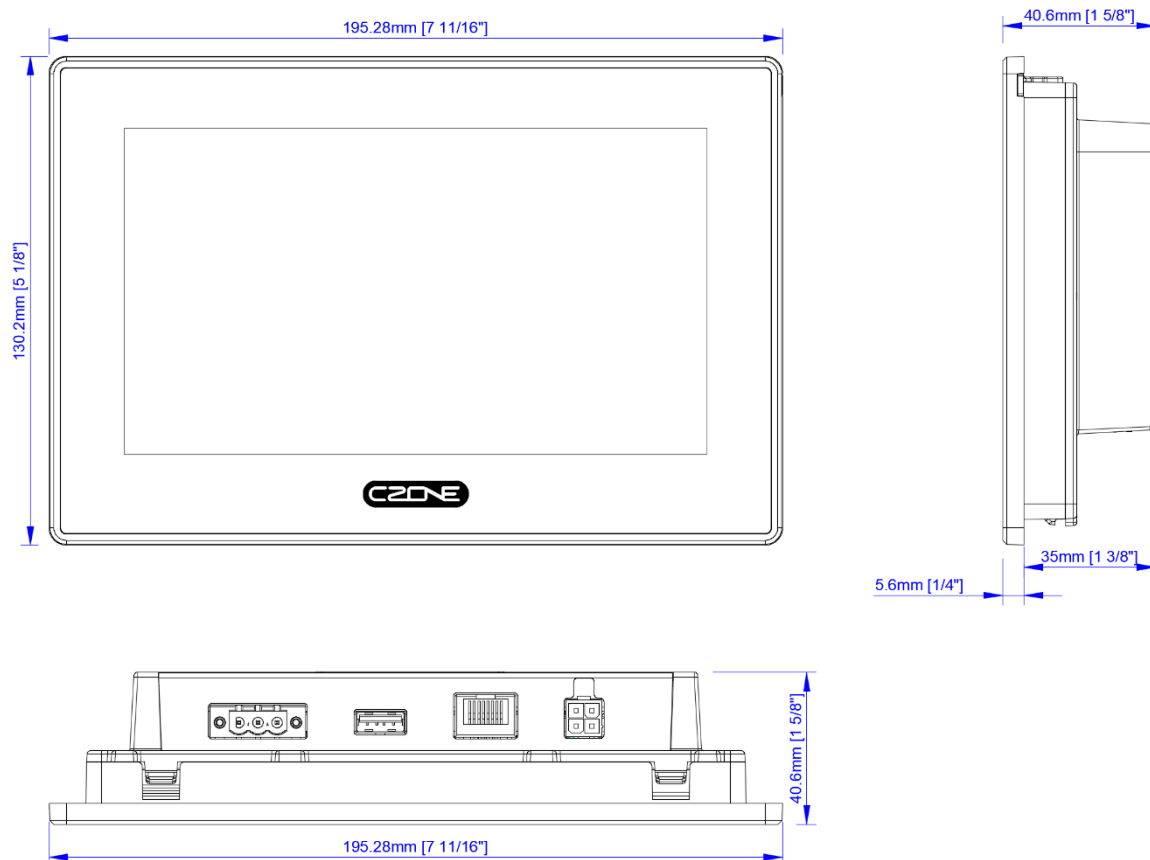


Figure 13. Dimensions

5.3 NMEA2000 Plug Pinout

Note: Image shows rear of connector where contacts are inserted.



TE Part #: 1586019-4

Pinout

1. CAN High(White)
2. CAN Low (Blue)
3. 12V - (Black)
4. 12V + (Red)

6 ORDERING INFORMATION

Touch 7 Part Numbers and Accessories

<u>Part Number</u>	<u>Description</u>
80-911-0200-00*	CZONE TOUCH 7 KIT
80-911-0201-00	CZONE TOUCH 7 MOUNTING BRACKET KIT SPARE
80-911-0202-00	CZONE TOUCH 7 1M NMEA 2000 DROP CABLE
80-911-0203-00	CZONE TOUCH 7 POWER CONNECTOR SPARE

*Includes mounting bracket, 1M NMEA2000 drop & power connector

7 EC DECLARATION OF CONFORMITY

EU declaration of conformity
 EU-conformiteitsverklaring
 EU-Konformitätserklärung
 Déclaration UE de conformité
 Declaración UE de conformidad
 Dichiarazione di conformità UE



Name and address of the manufacturer:	BEP Marine Ltd
Naam en adres van de fabrikant:	42 Apollo Drive, Rosedale
Name und Anschrift des Herstellers:	Auckland 0632
Nom et adresse du fabricant:	PO Box 101 739 NSMC
Nombre y dirección del fabricante :	New Zealand
Nome e indirizzo del fabbricante	

This declaration of conformity is issued under the sole responsibility of the manufacturer.
 Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.
 Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller
 La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.
 La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante.
 La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante

Object of the declaration:	Czone Touch-7 Display
Voorwerp van de verklaring:	
Gegenstand der Erklärung:	
Objet de la déclaration :	
Objeto de la declaración	
Oggetto della dichiarazione:	

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:
 Het hierboven beschreven voorwerp is in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie:
 Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union:
 L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable :
 El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización pertinente de la Unión:
 L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione:

- 2011/65/EU (RoHS directive)
- 2014/30/EU (Electromagnetic Compatibility Directive)
- 2014/53/EU (Radio Equipment Directive)

References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:
 Vermelding van de toegepaste relevante geharmoniseerde normen of van de overige technische specificaties waarop de conformiteitsverklaring betrekking heeft:
 Angabe der einschlägigen harmonisierten Normen, die zugrunde gelegt wurden, oder Angabe der anderen technischen Spezifikationen, in Bezug auf die die Konformität erklärt wird:

Références des normes harmonisées pertinentes appliquées ou des autres spécifications techniques par rapport auxquelles la conformité est déclarée:
 Referencias a las normas armonizadas pertinentes utilizadas, o referencias a las otras especificaciones técnicas respecto a las cuales se declara la conformidad:
 Riferimento alle pertinenti norme armonizzate utilizzate o riferimenti alle altre specifiche tecniche in relazione alle quali è dichiarata la conformità:

- EN 60945:2002 Maritime navigation and radiocommunication equipment and systems
- EN 300 328 V2.2.2 Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band
- IEC 62368-1 Audio/video, information and communication technology equipment - Part 1: Safety requirements

Auckland, New Zealand – 3rd April 2020
 BEP Marine LTD



Mark Griffith
 Engineering Leader