



# CONTROLX

DUAL - WAN  
HOTSPOT GATEWAY

QUICK START GUIDE  
CTRX - 110



**READ CAREFULLY  
BEFORE USING THE DEVICE**

## Package Contents

1. Waver® ControlX Hotspot Gateway
2. 2x IEC Power Cords
3. Rack Ears + Screw kit
4. Quick Start Guide

## Requirements

- OS: Windows 10 or newer, Linux, Mac OS X or Android
- Web Browser: Chrome (Recommended), Mozilla Firefox or Apple Safari
- Broadband Internet Connection (Ethernet)

**Thank you  
for choosing our product!**

Your satisfaction is our top priority.

**Propose a feature that will be useful to be added on Waver ControlX in the upcoming software updates at [features@wavertech.eu](mailto:features@wavertech.eu)**

- Read this manual thoroughly before using Waver ControlX Hotspot Gateway
- To ensure proper use of the device, make sure to read “Safety Information” page
- After reading, keep it in a readily accessible place for future reference

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# Package Contents



Waver® ControlX Hotspot Gateway



2x IEC Power cords



Quick Start Guide

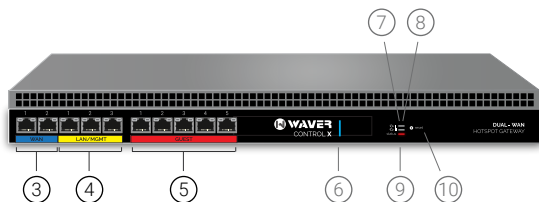


Rack Ears + Screw kit

# Safety Information

- Do not cover side ventilation holes
- This product must be operated far from any heater or heating vent
- Avoid direct irradiation of any strong light (such as sunlight)
- Operating Temperature: - 30 - 60°C
- Operating Humidity: 10-90 % RH, Non-condensing
- Do not disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the warranty
- Avoid water, moisture and wet locations

# Hardware Overview



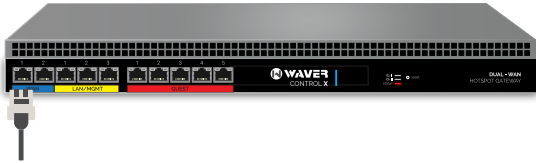
- |                          |                  |
|--------------------------|------------------|
| 1. Power 1 Socket (PSU1) | 6. Power LED     |
| 2. Power 2 Socket (PSU2) | 7. PSU1 LED      |
| 3. 2x WAN GbE Ports      | 8. PSU2 LED      |
| 4. 3x LAN/MGMT GbE Ports | 9. Status LED    |
| 5. 5x Guest GbE Ports    | 10. Reset Button |



# Hardware Installation

To install Waver ControlX, perform the following steps:

1. Connect Ethernet cable from your provider's router to WAN1 Port of Waver ControlX.



2. Connect both IEC plugs to "Power 1" and "Power 2" sockets. *You can use also a single socket, however we recommend using both for redundancy.*



Boot process will start as soon as you will connect the AC power. After a while (approx 2 mins) the STATUS led will blink three times and will remain on. The device now is ready to use.



The unit can be installed in a flat surface, or using the Rack Ears in a standard Rack.



## IMPORTANT

### **NEVER DISCONNECT POWER**

- a. During the boot process (it takes about 2 minutes for a complete boot up)
- b. During Reboot process
- c. During Factory Reset process
- d. During Firmware update process

- Disconnecting power during the above processes, can corrupt flash image and can make the device unbootable.

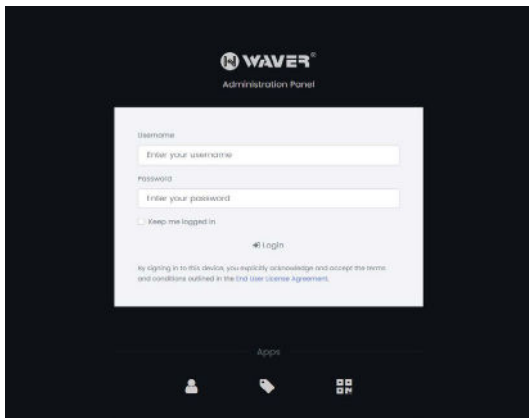
- To turn off the device, make sure boot process has finished (STATUS led is constantly ON).

## Device Management

Managing the device is simple and convenient — utilize any web browser to manage it. The user-friendly web interface is accessible through both LAN Ports and the WAN Ports, providing flexibility and ease of use.

# Web Management tools

## 1. Device Administration (Admin Panel)

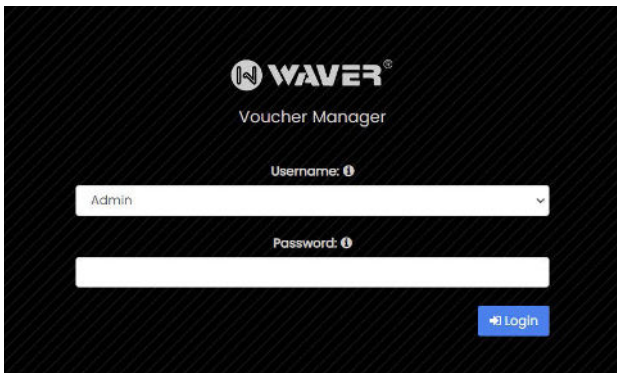


Admin Panel is a centralized control hub designed for managing and configuring various settings and features of the system. It provides an organized and user-friendly environment for administrators to access and control different aspects of the device. Get started with our product using the web-based administration panel, a technical powerhouse for deploying, configuring, and monitoring your Guest WiFi network. This interface seamlessly integrates network configuration, an advanced captive portal editor, automated marketing campaigns, and in-depth guest WiFi Analytics.

**Default LAN access:**  
**http://192.168.10.1**

**Default Username: admin**  
**Default Password: waver**

## 2. Voucher manager (App)



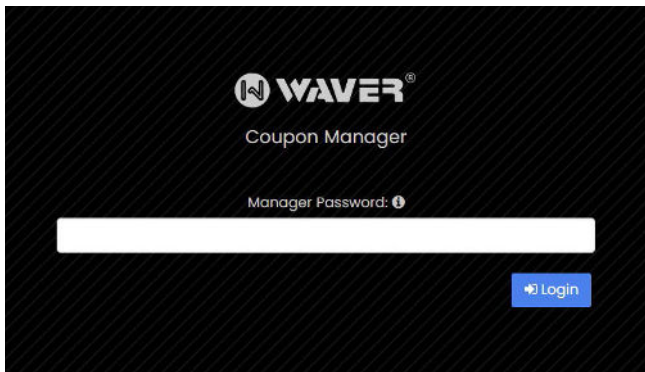
The Voucher Manager is a sophisticated tool designed for seamless management of voucher credentials within the Captive Portal access system. Tailored for voucher authentication and payment portal functionalities, this robust App offers a range of customizable features. From creating printable tickets to shaping the appearance of the Payment Portal, setting pricing, and defining limits for payment plans, the Voucher Manager provides advanced functionality for a streamlined and personalized management experience.

**Default LAN access:**  
**<http://192.168.10.1/vouchers/>**

**App Admin Password**  
**Default Password: waver**

**App Manager Password**  
**Default Password: password**

### 3. Coupon Manager (App)

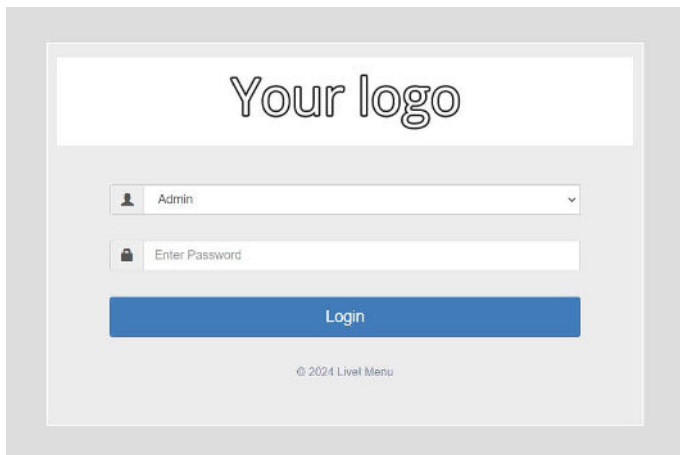


The Coupon Code Manager is an efficient and mobile-friendly tool designed for the seamless redemption of coupon codes. This versatile system empowers employees to effortlessly check the validity of coupon codes and redeem those that are currently active.

**Default LAN access:**  
**<http://192.168.10.1/coupons/>**

**App Manager Password**  
**Default Password: password**

## 4. Live! Menu (App)



The Live! Menu App provides a customized solution for restaurants, cafes, and various businesses looking to offer a digital alternative to traditional menus. This feature rich QR menu enhances the presentation of products or services, delivering a dynamic and user-friendly digital experience. Employing an intuitive web interface, businesses can effortlessly design and distribute fully branded digital menus over Guest WiFi. Additionally, the app facilitates real-time order reception, contributing to streamlined operations for enhanced efficiency.

### **Default LAN access:**

**<http://192.168.10.1/order/admin/>**

### **App Admin Password**

**Default Password: waver**

### **App Manager Password**

**Default Password: password**



# Firmware Update & Reset

## **AUTOMATIC UPDATE PROCEDURE:**

- 1 - Login to the Administration Panel
- 2 - Navigate to the SYSTEM - Maintenance page and initiate the update process by clicking on the 'Update' button (if a new version is available).

## **MANUAL UPDATE PROCEDURE:**

- 1 - Download device's firmware from our website
- 2 - Login to the Administration Panel
- 3 - Go to SYSTEM - Maintenance page
- 4 - Upload the downloaded .bin firmware file
- 5 - Press the reboot button and confirm when you will be prompted to reboot the device
- 6 - Wait a few minutes until the boot procedure finishes

## **FACTORY RESET:**

WARNING! This will delete all stored user data and restore all settings to factory defaults.

### **Method 1.** Using Software

Use the "Reset to factory" feature in Administration Panel - SYSTEM - Maintenance page

### **Method 2.** Using reset button in front of device

Using a tool, hold and press the reset button. After 2 seconds, the STATUS led will start blinking. Keep pressing the button for 10 seconds and release. The status led will continue to blink after release. The factory reset procedure has started.

# Multilingual Instructions

EN. Instruction manual:

Connect the power adapter to turn on the device. Open 192.168.10.1 in your web browser, to configure it. More information on <https://www.wavertech.eu/downloads>

BG. Инструкция:

Свържете адаптера на захранване, за да включите устройството. Отворете 192.168.10.1 в уеб браузър, за да настроите продукта. Повече информация в <https://www.wavertech.eu/downloads>

CZ. Navod k použití:

Připojte napájecí adapter k zapnutí přístroje. Otevřete 192.168.10.1 ve webovém prohlížeči pro konfiguraci produktu. Více informací najdete v <https://www.wavertech.eu/downloads>

DK. Instruktionsbog:

Tilslut stromadapteren for at tænde for enheden. Åbn 192.168.10.1 i en webbrowser til at konfigurere produktet. Mere information i <https://www.wavertech.eu/downloads>

FR. Mode d'emploi:

Connectez l'adaptateur d'alimentation pour allumer l'appareil. Ouvrez 192.168.10.1 dans un navigateur Web pour configurer le produit. Plus d'informations dans <https://www.wavertech.eu/downloads>

DE. Bedienungsanleitung:

Verbinden Sie das Netzteil, um das Gerät einzuschalten. Öffnen Sie 192.168.10.1 in einem Web-Browser, um das Produkt zu konfigurieren.

Weitere Informationen im <https://www.wavertech.eu/downloads>

EE. Kasutusjuhend:

Ühendage toiteadapter seadme sisselülitamiseks. Avatud 192.168.10.1 in veebilehitseja seadistada toodet. Rohkem teavet <https://www.wavertech.eu/downloads>

ES. Manual de instrucciones:

Conecte el adaptador de alimentación para encender la unidad. Abra 192.168.10.1 en un navegador web para configurar el producto. Mas informacion en <https://www.wavertech.eu/downloads>

IT. Manuale di istruzioni:

Collegare l'adattatore di alimentazione per accendere l'unità. Aprire 192.168.10.1 in un browser Web per configurare il prodotto. Maggiori informazioni in <https://www.wavertech.eu/downloads>

LV. Lietošanas instrukcija:

Pievienojiet Strāvas adapteri, lai ieslēgtu ierīci. Atvērt 192.168.10.1 ar interneta pārlūku, lai konfigurētu produktu. Plašāka informācija <https://www.wavertech.eu/downloads>

LT. Naudojimosi instrukcija:

Prijunkite maitinimo adapterį įjunkite įrenginį. Į interneto naršyklę 192.168.10.1 Atidarykite galite konfigūruoti gaminį. Daugiau informacijos rasite <https://www.wavertech.eu/downloads>

HU. Hasznalati utasitas:

Csatlakoztassa a halozati adaptert a keszulek bekapcsolasahoz. Megnyitasa 192.168.10.1 egy webbongeszoben beallitani a termeket. Tobb informacio <https://www.wavertech.eu/downloads>

NL. Handleiding:

Sluit voedingsadapter aan op het apparaat in te schakelen. Open 192.168.10.1 in een webbrower om het product te configureren. Meer informatie in <https://www.wavertech.eu/downloads>

PL. Instrukcja obsługi:

Podłącz adapter zasilania, aby włączyć urządzenie. Otworz 192.168.10.1 w przeglądarce internetowej, aby skonfigurować urządzenie. Więcej informacji w <https://www.wavertech.eu/downloads>

PT. Manual de instrucoes:

Conecte o adaptador de alimentacao para ligar o aparelho. Abra 192.168.10.1 em um navegador da web para configurar o produto. Mais informacoes em <https://www.wavertech.eu/downloads>

RO. Instrucțiuni de utilizare:

Conectați adaptorul de alimentare pentru a porni aparatul. Deschide 192.168.10.1 intr-un browser web pentru a configura produsul. Mai multe informații in <https://www.wavertech.eu/downloads>

SK. Navod na použitie:

Pripojte napajaci adapter k zapnutiu pristroja. Otvorte 192.168.10.1 vo webovom prehliadači pre konfiguráciu produktu. Viac informácií najdete v <https://www.wavertech.eu/downloads>

SI. Navodila:

Priključite napajalnik za vklop naprave. Odprite 192.168.10.1 v spletnem brskalniku nastaviti izdelek. Več informacij v <https://www.wavertech.eu/downloads>

FI. Käyttöohje:

Kytke virtalahde paalle laitteen. Avaa 192.168.10.1 in selaimen maarittaa tuotteen. Lisaa tietoa <https://www.wavertech.eu/downloads>

SE. Instruktionsmanual:

Anslut natadaptern for att slä pa enheten. Öppna 192.168.10.1 i en webblasare for att konfigurera produkten. Mer information på <https://www.wavertech.eu/downloads>

NO. Bruksanvisningen:

Koble strømadapteren for å slå på enheten. Åpne 192.168.10.1 i en nettleser for å konfigurere produktet. Mer informasjon på <https://www.wavertech.eu/downloads>

GR. Εγχειρίδιο οδηγιών:

Συνδέστε τον προσαρμογέα τροφοδοσίας για να ενεργοποιήσετε την συσκευή. Ανοίξτε 192.168.10.1 σε ένα πρόγραμμα περιήγησης στο Web για να διαμορφώσετε το προϊόν. Περισσότερες πληροφορίες στο <https://www.wavertech.eu/downloads>

# Limited Warranty & Returns

WAVERTECH LTD. ("WAVERTECH") warrants that the product(s) provided hereunder (the "Product(s)") will be free from defects in material and workmanship for a period of twenty four (24) months. The warranty duration begins from the date of purchase by the customer from WAVERTECH or its authorized representatives. The warranty applies only under normal use and operation of the product.

WAVERTECH solely reserves the right to repair or replace the defective product. The removal and installation cost is not covered by this warranty. Any repair or replacement does not extend the duration of the warranty period.

The above limited warranty does not cover any cases of/ or defects that arise due to:

- Not original products, which are not given a WAVERTECH Serial Number, or original signs, trademarks etc.
- Alterations, modifications or additions to the product unless those made by WAVERTECH, or WAVERTECH's authorized representatives, or as authorized by WAVERTECH in writing.
- Any kind of physical modifications of the product, including painting or rebranding.
- Damages due to wrong or defective cabling.
- Misuse, abuse, negligence, irregularly physical, electromagnetic or electrical stress, including lightning strikes, or accident.
- Malfunction or damage due to use of firmware not supplied/ provided/ supported by WAVERTECH.
- Products not being received by WAVERTECH within 30 days of issuance of the RMA.

The above limited warranty covers cases that:

- The product has been installed and used according to the written instructions.
- The Ethernet is connected with cable of CAT5 (or above), outdoor installations are connected with shielded - grounded Ethernet and indoor installations follow the required indoor cabling instructions.

## **Returns of defective products**

During the warranty period defective products are accepted for repair or replacement only if they are accompanied by a Return Materials Authorization (RMA) number from WAVESTECH, details on the RMA process are available at: <https://www.wavertech.eu/support> under the Returns Policy section. Products shipped to WAVESTECH without a RMA number will not be processed and will be returned or subject to disposal.

## **Disclaimer of Warranty**

EXCEPT FOR THE WARRANTIES EXPRESSLY PROVIDED ABOVE AND TO THE EXTENT LAWFULLY PERMITTED, WAVESTECH DOES NOT WARRANT FOR ANY INCIDENTAL, CONSEQUENTIAL, DIRECT OR INDIRECT DAMAGES, INCLUDING WITHOUT RESTRICTION DAMAGES OR LOSSES RESULTING FROM USE OR MALFUNCTION OF WAVESTECH PRODUCTS, COMPROMISE OR CORRUPTION OF DATA, LOSS OF BUSINESS OR PROFITS, REPARATION COSTS. THE ABOVE LIMITATION CLAUSE MAY NOT APPLY ONLY IN LEGAL ORDERS, WHERE IT IS PROHIBITED BY THE LAW.

Any and all other warranties are explicitly excluded.

This warranty is governed and interpreted according to the legal order of the country of purchase of the WAVESTECH product.

# Declaration of Conformity (CE)

[EN] English

Hereby, WAVERTECH declares that the product WAVER CONTROLX CTRX-110 is in compliance with the essential requirements and other relevant provisions of Directive 2014/30/EU.

[BG] Bulgarian

С настоящето, WAVERTECH декларира, че WAVER CONTROLX CTRX-110 е в съответствие със съществените изисквания и другите приложими разпоредби на Директива 2014/30/EU.

[CZ] Czech

WAVERTECH tímto prohlašuje, že WAVER CONTROLX CTRX-110 splňuje základní požadavky a všechna příslušná ustanovení Směrnice 2014/30/EU.

[DK] Danish

Undertegnede WAVERTECH erklærer herved, at følgende udstyr WAVER CONTROLX CTRX-110 overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/30/EU.

[DE] German

Hiermit erklart WAVERTECH dass sich das Gerat WAVER CONTROLX CTRX-110 in Ubereinstimmung mit den grundlegenden Anforderungen und den ubrigen einschlagigen Bestimmungen der Richtlinie 2014/30/EU befindet.

[EE] Estonian

Kaesolevaga kinnitab WAVERTECH seadme WAVER CONTROLX CTRX-110 vastavust direktiivi 2014/53/EU pohinouetele ja nimetatud direktiivist tulenevatele teistele asjakohastele satetele.

[GR] Greek

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ο ΚΑΤΑΣΚΕΥΑΣΤΗΣ WAVERTECH ΔΗΛΩΝΕΙ ΟΤΙ ΤΟ ΠΡΟΙΟΝ WAVER CONTROLX CTRX-110 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/30/EU.

[ES] Spanish

Por la presente, WAVEERTECH declara que este WAYER CONTROLX CTRX-110 cumple con los requisitos esenciales y otras exigencias relevantes de la Directiva 2014/30/EU.

[IT] Italian

Con la presente WAVEERTECH dichiara che questo WAYER CONTROLX CTRX-110 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/30/EU.

[LV] Latvian

Ar šo WAVEERTECH deklarē, ka WAYER CONTROLX CTRX-110 atbilst Direktīvas 2014/30/EU būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

[LT] Lithuanian

Šiuo WAVEERTECH deklaruoją, kad šis WAYER CONTROLX CTRX-110 atitinka esminius reikalavimus ir kitas 2014/30/EU Direktyvos nuostatas.

[HU] Hungarian

A WAVEERTECH ezzennel kijelenti, hogy a WAYER CONTROLX CTRX-110 típusu berendezés teljesíti az alapvető követelményeket és más 2014/30/EU irányelvben meghatározott vonatkozó rendelkezéseket.

[NL] Dutch

Hierbij verklaart WAVEERTECH dat het toestel I WAYER CONTROLX CTRX-110 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/30/EU.

[PL] Polish

Niniejszym WAVEERTECH deklaruje że WAYER CONTROLX CTRX-110 jest zgodny z zasadniczymi wymaganiami i innymi właściwymi postanowieniami Dyrektywy 2014/30/EU.

[PT] Portuguese

Eu, WAVEERTECH declaro que o WAYER CONTROLX CTRX-110 cumpre os requisitos essenciais e outras provisões relevantes da Directiva 2014/30/EU.

[RO] Romanian

Prin prezenta, WAVEERTECH declară că aparatul WAYER CONTROLX CTRX-110 este în conformitate cu cerințele esențiale și cu alte prevederi pertinente ale Directivei 2014/30/EU.

[SK] Slovak

WAVERTECH týmto vyhlasuje, že WAYER CONTROLX CTRX-110 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/30/EU.

[SI] Slovenian

WAVERTECH izjavlja, da je ta WAYER CONTROLX CTRX-110 v skladu z bistvenimi zahtevami in drugimi relevantnimi določili direktive 2014/30/EU.

[FI] Finish

WAVERTECH vakuuttaa taten etta WAYER CONTROLX CTRX-110 tyyppinen laite on direktiivin 2014/30/EY oleellisten vaatimusten ja sita koskevien direktiivin muiden ehtojen mukainen.

[SE] Swedish

Harmed intygar WAVERTECH att denna WAYER CONTROLX CTRX-110 ar i overensstammelse med de vasentliga egenskapskrav och ovriga relevant bestammelser som framgar av direktiv 2014/30/EU.

[NO] Norwegian

WAVERTECH Erklarer herved at WAYER CONTROLX CTRX-110 er i samsvar med de grunnleggende krav og ovrige relevante krav i direktiv 2014/30/EU.

## CE Marking

CE Marking on this product represents that this product is in compliance with all directives that are applicable to it.

Product can be used in the following EU Contries:

AT	BE	BG	CY	CZ	DE	DK	EE	EL
ES	FI	FR	HR	HU	IE	IT	LV	LT
LU	MT	NL	PL	PT	RO	SE	SI	SK

# Technical Specifications

## Model CTRX-110

Boards	1x Network board 1x System board (SBC)
CPU 1 - Network board	Annapurna Alpine AL21400 CPU 4xCortex A15 cores clocked at 1.4GHz each
CPU 2 - System board (SBC)	Broadcom BCM2711 CPU 4xCortex A72 cores 64-bit clocked at 1.5GHz each
10/100/1000 Ethernet ports	2x WAN Ports 3x LAN/MGMT Ports 5x GUEST Ports
Maximum supported WAN Throughput	2Gbps
Concurrent Active Guest users	Unlimited
LEDs	Power, Status, PSU1, PSU2, Ethernet Port Operation

Buttons	1x Reset button (Factory reset and TFTP Recovery)
Max power consumption	25 W
Power Supply units No.	2
Number of AC inputs	2
AC Input Range	100-240 Volts
Tested working ambient temperature	-30°C to 60°C
Dimensions	444 x 152 x 45 mm
Installation	Rack Mountable or Flat surface
Certifications	CE/RED, FCC, ROHS

## Industry Canada

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## **Interference Statement** Federal Communications Commission

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to 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.

## **Separate collection**

This product is designed for separate collection at an appropriate collection point. Do not dispose of as household waste.

## **For indoor use only**

This product is designed for indoor usage only. Outdoor usage is not recommended.



SCAN QR FOR MANUAL

# Support

[www.wavertech.eu/support](http://www.wavertech.eu/support)

Document date 06/02/2024



## **Quick Start Guide**

WAVER CONTROLX  
CTRX - 110

[www.wavertech.eu](http://www.wavertech.eu)