



# CS1

## Endpoint Network Streamer

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ENGLISH



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Owner's Manual

# IMPORTANT SAFETY INSTRUCTIONS

- **Read instructions** - All the safety and operating instructions should be read before the product is operated.
- **Retain instructions** - The safety and operating instructions should be retained for future reference.
- **Heed Warnings** - All warnings on the product and in the operating instructions should be adhered to.
- **Follow Instructions** - All operating and use instructions should be followed.
- **Cleaning** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- **Attachments** - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- **Water and Moisture** - Do not use this product near water-for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- **Accessories** - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
-  **Cart** - A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
- **Ventilation** - Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- **Power Sources** - This product should be operated only from the type of power source indicated on the marking label and connected to a MAINS socket outlet with a protective earthing connection. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.
- **Power-Cord Protection** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- **Mains Plug** - Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- **Outdoor Antenna Grounding** - If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
- **Lightning** - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- **Power Lines** - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- **Overloading** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- **Flame Sources** - No naked flame sources, such as lighted candles, should be placed on the product.
- **Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- **Headphones** - Excessive sound pressure from earphones and headphones can cause hearing loss.
- **Damage Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power-supply cord or plug is damaged.
  - If liquid has been spilled, or objects have fallen into the product.
  - If the product has been exposed to rain or water.
  - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - If the product has been dropped or damaged in any way.
  - When the product exhibits a distinct change in performance-this indicates a need for service.
- **Replacement Parts** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- **Battery Disposal** - When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.
- **Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- **Wall or Ceiling Mounting** - The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

## WARNING



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.



**WARNING : SHOCK HAZARD - DO NOT OPEN**  
**ATTENTION : RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRI**

## CAUTION REGARDING PLACEMENT

To maintain proper ventilation, be sure to leave a space around the unit (from the largest outer dimensions including projections) than is equal to, or greater than shown below.

Left and Right Panels: 10 cm

Rear Panel: 10 cm

Top Panel: 10 cm

## CAUTION

- Changes or modifications to this equipment not expressly approved by NAD Electronics for compliance could void the user's authority to operate this equipment.
- This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). 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.
- Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
- To prevent electric shock, match wide blade of plug to wide slot, fully insert.
- Marking and rating plate can be found at the rear panel of the apparatus.
- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.
- Mains plug is used as disconnect device and it should remain readily operable during intended use. In order to disconnect the apparatus from the mains completely, the mains plug should be disconnected from the mains socket outlet completely.
- An appliance with a protective earth terminal should be connected to a mains outlet with a protective earth connection.

## MPE REMINDER

To satisfy FCC/IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

## IF IN DOUBT CONSULT A COMPETENT ELECTRICIAN.



This product is manufactured to comply with the radio interference requirements of EEC DIRECTIVE 2004/108/EC.

## NOTES ON ENVIRONMENTAL PROTECTION



At the end of its useful life, this product must not be disposed of with regular household waste but must be returned to a collection point for the recycling of electrical and electronic equipment. The symbol on the product, user's manual and packaging point this out.



The materials can be reused in accordance with their markings.

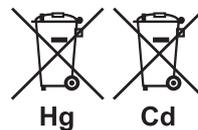
Through re-use, recycling of raw materials, or other forms of recycling of old products, you are making an important contribution to the protection of our environment.

Your local administrative office can advise you of the responsible waste disposal point.

## INFORMATION ABOUT COLLECTION AND DISPOSAL OF WASTE BATTERIES (DIRECTIVE 2006/66/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF EUROPEAN UNION) (FOR EUROPEAN CUSTOMERS ONLY)



Batteries bearing any of these symbols indicate that they should be treated as "separate collection" and not as municipal waste. It is encouraged that necessary measures are implemented to maximize the separate collection of waste batteries and to minimize the disposal of batteries as mixed municipal waste.



End-users are exhorted not to dispose waste batteries as unsorted municipal waste. In order to achieve a high level of recycling waste batteries, discard waste batteries separately and properly through an accessible collection

point in your vicinity. For more information about collection and recycling of waste batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

By ensuring compliance and conformance to proper disposal of waste batteries, potential hazardous effects on human health is prevented and the negative impact of batteries and waste batteries on the environment is minimized, thus contributing to the protection, preservation and quality improvement of the environment.

# INTRODUCTION

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Congratulations on your new NAD CS1

The NAD CS1 is an advanced Endpoint Network Streamer which will allow you to stream music from many different music services up to very high audio quality 24 bit, 192kHz music streams.

As an Endpoint, the NAD CS1 does not come with a dedicated App or software to operate. Instead, it works with many Apps of several highly regarded music services such as Spotify Connect, Tidal Connect and TuneIn. Apple's Airplay 2 and Google's Chromecast are also supported to stream any audio played from the controlling phone or tablet. NAD CS1 also supports Bluetooth connection.

### WHAT'S IN THE BOX

Packed with your CS1 you will find

- AC Adaptor with 4 sets of interchangeable plugs
- USB C to USB A cable connector
- Quick Setup Guide

#### SAVE THE PACKAGING

Please save the box and the packaging that came with the CS1. Should you move or need to transport your CS1, this is the safest container to use. We've seen too many otherwise perfect components damaged in transit for lack of a proper shipping carton. So please, save that box!

### QUICK SETUP GUIDE

This simple guide will help you get started with your CS1.

Your CS1 can be connected to your home network via Wired or Wireless connection.

#### IMPORTANT!

- *For wired and wireless connection to be established, ensure that a broadband router that supports Ethernet and/or Wi-Fi standards is setup and available.*
- *Tablets, smartphones and other applicable devices that support iOS (Apple) or Android operating system can be used as mobile device controller. These devices are not supplied with your CS1.*
- *Mobile Apps are handled by the respective Application Store of the Mobile devices.*

### WIRED CONNECTION

Using an Ethernet cable (not supplied), connect one end to CS1's LAN port and the other end directly to your Home network or router.

### WIRELESS CONNECTION

Configure wireless network connection using the smartphone or tablet that applies to you. Connect CS1 to your wireless network using any of the following three methods.

- 1 Wireless Accessory Configuration (WAC) using iOS device
- 2 Google Home App using iOS device
- 3 Google Home App using Android device

#### CONDITIONS

- CS1 must be at hot spot mode (LED Power Indicator alternately flashing red and green). CS1 default setting is at hot spot mode.
- Install Google Home by downloading the App from your respective devices' App Stores.



#### IMPORTANT!

*The following procedures and details may change over time without notice. Always check the NAD CS1 product page for the latest updates.*

#### 1 WIRELESS ACCESSORY CONFIGURATION (WAC) USING IOS DEVICE

Wireless Accessory Configuration (WAC) setup mode is supported by iOS application. At WAC setup mode, network name and password are not required for the CS1 to be connected to your network.

- a Select **Settings** menu of your iOS device.
- b Go to **Wi-Fi** and select the network you would like to use with your CS1.

- c Under **SETUP NEW AIRPLAY SPEAKER**, select your CS1 speaker indicated by **NAD-CS1xxxx** where **xxxx** corresponds to the last 4 digits of the Machine Access Control (MAC) address of your CS1. The complete MAC address can be found at the bottom section of your CS1.
- d When **AirPlay Setup** screen comes up, select **Next**. Note that you can also customize the name of your CS1 by entering desired name in the line item **Speaker Name**.
- e Airplay Setup will proceed automatically. Follow or monitor screen prompts until setup is completed. Select **Done** to exit setup mode.

## 2 GOOGLE HOME USING IOS DEVICE

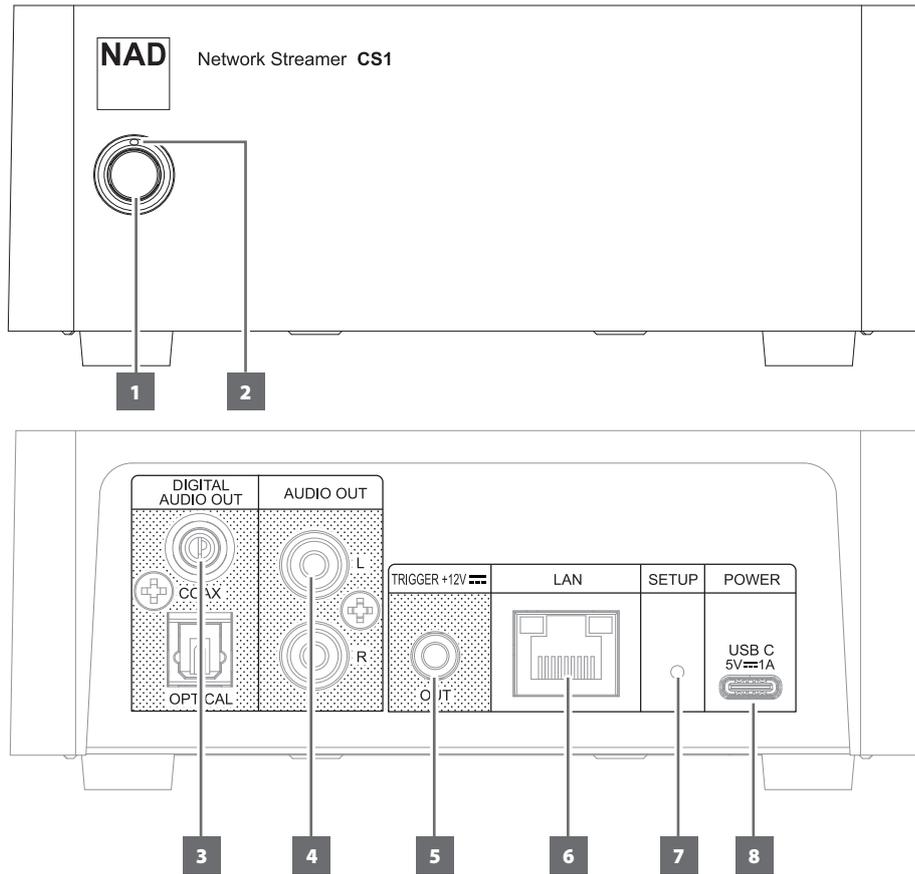
- a Open Google Home App using your iOS device.
- b Select **Set up NAD CS1 devices** or similar.
- c Choose a home where your NAD CS1 will be assigned and then select **Next**.
- d Nearby devices found will be shown. Choose or confirm the device you would like to setup.
- e Choose **NAD-CS1xxxx** where **xxxx** corresponds to the last 4 digits of the Machine Access Control (MAC) address of your CS1. Select **Next**.
- f Select **Yes** if you heard the sound as your NAD CS1 gets connected. Follow screen prompts.
- g Choose a location for your NAD CS1 – this will help name your CS1. You may also select **Add a custom room name** to enter preferred name for your CS1. Select **Next**.
- h Connect to Wi-Fi. Choose the Wi-Fi network you would like to use with your CS1. Enter the Wi-Fi password.
- i Follow or execute instructions on the screen prompts until **Finish Tutorial** is selected. CS1 setup is now complete.

## 3 GOOGLE HOME USING ANDROID DEVICE

- a Open Google Home App using your Android device.
- b Select **+** icon on the upper left corner of the App.
- c Under **Add to home**, select **Set up device**.
- d Select **New device**.
- e Choose a home where your NAD CS1 will be assigned and then select **Next**.
- f Nearby devices found will be shown. Choose or confirm the device you would like to setup.
- g Choose **NAD-CS1xxxx** where **xxxx** corresponds to the last 4 digits of the Machine Access Control (MAC) address of your CS1. Select **Next**.
- h Select **Yes** if you heard the sound as your NAD CS1 gets connected. Follow screen prompts.
- i Choose a location for your NAD CS1 – this will help name your CS1. You may also select **Add a custom room name** to enter preferred name for your CS1. Select **Next**.
- j Connect to Wi-Fi. Choose the Wi-Fi network you would like to use with your CS1. Enter the Wi-Fi password or use saved password for the Wi-Fi network you selected.
- k Follow or execute instructions on the screen prompts until **xxx Speaker** is Ready is displayed and a Tutorial clip about Casting is selected or skipped. CS1 setup is now complete.

# IDENTIFICATION OF CONTROLS

## FRONT AND REAR VIEW



### 1 STANDBY BUTTON

PART	ACTION	RESULT
Standby button	Short press (less than 1 second)	Wake up from standby mode
	Press for 2-5 seconds and release	Switch to standby mode
	Press for more than 5 seconds	Hotspot mode

### 2 POWER INDICATOR

PART	LED COLOR	DESCRIPTION
Power Indicator	Short solid red	Initial powering up
	Flashing blue	Initializing
	Flashing red	Updating
	Flashing purple	No Wi-Fi connection
	Alternate flashing red and blue	Hotspot mode
	Flashing blue for 3 seconds	Switching to Bluetooth connection
	Flashing white for 3 seconds	Switching to Google Chromecast
	Flashing green for 3 seconds	Switching to Spotify Connect
	Flashing purple for 3 seconds	Switching to Tidal Connect
	Amber	Standby mode
	Solid green	Normal operation, Spotify
	Solid blue	Normal operation

#### STANDBY MODE

CS1 will go to standby mode if there is no user interface interaction and no active source for at least 15 minutes.

#### Spotify Connect

Use your phone, tablet or computer as a remote control for Spotify. Go to [www.spotify.com/connect](http://www.spotify.com/connect) to learn how.

**Note:** The Spotify software is subject to third party licences found here: [www.spotify.com/connect/third-party-licences](http://www.spotify.com/connect/third-party-licences)

### 3 OPTICAL/COAXIAL

- Connect to the compatible optical and coaxial digital input of preamplifiers, integrated amplifiers, receivers, and other applicable external devices that will drive corresponding speakers.

### 4 AUDIO OUT

- Connect to compatible analog audio input of preamplifiers, integrated amplifiers, receivers, and other applicable external devices that will drive corresponding speakers.

#### ABOUT VOLUME CONTROL

Some of the apps for mobile devices will allow adjusting volume through the Volume Up/Down buttons on the controlling phone or tablet for the NAD CS1 analog audio output.

Although this can be very convenient, in many cases there will also be a separate volume control on the amplifier or receiver the NAD CS1 is connected to. When using the mobile device's volume control, ensure the volume level of the amplifier or receiver the CS1 is connected to is not set too high.

In order to achieve the highest level of audio quality, it is recommended to set the volume control of the phone or tablet to maximum and then adjust the volume level on the amplifier or receiver the NAD CS1 is connected to.

### 5 +12V TRIGGER OUT

- The +12V TRIGGER OUT is used for controlling external equipment equipped with a +12V trigger input.
- Connect this +12V TRIGGER OUT to the other equipment's corresponding +12V DC input jack using a mono cable with 3.5mm male plug.
- This output will be 12V when the CS1 is ON and 0V when at standby mode.

### 6 ETHERNET/LOCAL AREA NETWORK (LAN) PORT

- LAN connection must be setup for wired connection to be established. Set up a Wired Ethernet broadband router with broadband internet connection. Your router or home network should have a built-in DHCP server to consummate the connection.
- Using a standard straight-through Ethernet cable (not supplied), connect one end of the Ethernet cable to the LAN port of your wired Ethernet broadband router and the other end to CS1's LAN port.

#### NOTES

- *NAD is not responsible for any malfunction of the CS1 and/or the internet connection due to communication errors or malfunctions associated with your broadband internet connection or other connected equipment. Contact your Internet Service Provider (ISP) for assistance or the service bureau of your other equipment.*
- *Contact your ISP for policies, charges, content restrictions, service limitations, bandwidth, repair, and other related issues pertinent to internet connectivity.*

### 7 SETUP

- The Setup button is used to restore your CS1 to its factory default settings. It is not recommended to factory reset your CS1 unless necessary.
- Initiate factory reset when everything else fails and the unit may not be able to recover.
- The Setup button is also used to enable and establish Bluetooth connection.

#### RESTORING CS1 TO FACTORY DEFAULT SETTINGS

- At operating mode, press and hold rear panel's SETUP button for at least 10 seconds or until the front panel blue Power Indicator turns off. Release hold of the SETUP button.
- Wait for the CS1 to automatically power up again.
- Power Indicator will turn red and then alternate flashing of red and green (hot spot mode). The CS1 is now restored to its factory default settings.

#### IMPORTANT

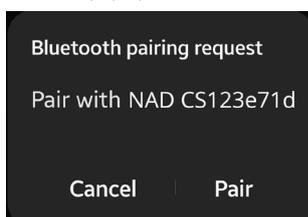
*Restoring CS1 to factory default settings will delete all applicable configured or saved settings.*

#### BLUETOOTH CONNECTION

There are two methods to establish Bluetooth connection – Bluetooth Pairing and NFC.

#### BLUETOOTH PAIRING

- Press and hold rear panel SETUP button for 2 seconds and release. Power indicator will flash twice indicating that Bluetooth pairing is enabled.
- Using your iOS, Android or compatible device, go to Settings, Bluetooth and then scan for Bluetooth devices.
- Select the unique device ID of your CS1 (for example, NAD CS123e71d) among the available devices.
- Upon selection of "NAD CS123e71d", a Bluetooth prompt similar to below will pop up

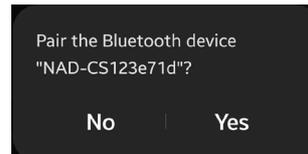


- Select "Pair" to complete Bluetooth pairing. Your Bluetooth device and your CS1 are now paired.

Playback music from your Bluetooth device and the CS1 Power indicator will briefly flash blue to indicate the source is now switched to Bluetooth.

#### NFC (NEAR FIELD COMMUNICATION)

- Turn ON the NFC function of your iOS or Android device.
- Place your iOS or Android device on the top of CS1 and a Bluetooth prompt similar to below will pop up



- Select "Yes" to complete Bluetooth pairing. Your Bluetooth device and your CS1 are now paired.

Playback music from your Bluetooth device and the CS1 Power indicator will briefly flash blue to indicate the source is now switched to Bluetooth.

### 8 USB C 5V DC IN

- Connect corresponding end of the supplied AC Adaptor to CS1's USB C 5V DC IN and then connect the AC Adaptor plug to a mains power source.
- Before connecting the AC Adaptor plug to the mains power source, ensure first that the other end of the AC Adaptor connected to CS1's USB C 5V DC IN socket is firmly connected.
- Always disconnect the AC Adaptor plug from the mains power source first, before disconnecting from CS1's USB C 5V DC IN socket.

# REFERENCE

## SPECIFICATIONS

### AUDIO

THD + N (20 Hz – 20 kHz)	<0.03% 20-20 kHz -1dBFS output
Signal-to-Noise ratio	>94 dB ref. 2V
Frequency response	20-20 kHz +/-0.3dB; 50 kHz -3dB
Native sampling rate	Up to 192 kHz
Bit depth	16-24
Supported audio file format	LPCM, MP3, AAC/AAC+, AC3, Ogg Vorbis, HE-AAC, WMA decode capability
Supported 3rd party service provider	Spotify Connect, Tidal Connect MQA, Apple AirPlay 2, Google Chromecast, Roon
DAC	TI PCM5254
Processor	ARM® Cortex™ -A53, Quad-Core, 1.5GHz per core

### CONNECTIONS

Power	AC adapter Input: 100-240V AC 0.3A Output: 5V DC 1A
Network connectivity	Ethernet RJ45 100 Mbps Wi-Fi 5 (802.11ac 2.4GHz/5 GHz)
Bluetooth	Bluetooth 5.2 BT Profiles: A2DP 1.2, AVRCP 1.3, SPP, HFP, HSP, HOGP
NFC	NFC for easy Bluetooth connection
12V Trigger Out	3.5mm Mini-jack x 1
Analog Out	RCA x 1
Coaxial Out	RCA 75 ohms
Optical Out	TOSLINK x 1
USB IN	USB C for AC adapter

### DIMENSION AND WEIGHT

Gross dimensions (W x H x D) *	140 x 140 x 55 mm
Unit weight	735 g
Shipping weight	1.2 kg

\* - Gross dimension includes feet and other extended front and rear panel terminals.

Specifications are subject to change without notice. For updated documentation and features, please check out [www.NADelectronics.com](http://www.NADelectronics.com) for the latest information about CS1.





[www.NADelectronics.com](http://www.NADelectronics.com)

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