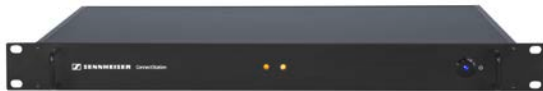# CinemaConnect
Innovative streaming technology for Cinema

FEATURES

- Low latency audio streaming in stereo
- Designed for hearing assistance, audio description or multiple language support
- Personal hearing assistant
- Digital inputs for Cinema Server connectivity
- BYOD: zero maintenance (no storage, servicing, charging, or staff training is required)

CinemaConnect - Sennheiser's WiFi based system for your cinema that enables low-latency transmission of audio content to mobile devices such as smartphones and tablets. With CinemaConnect, which consists of a ConnectStation, a real-time streaming server and the CinemaConnect app, you can easily provide audio description, assistive listening, transmission of multilingual audio content, alternative content, and much more to your cinema.

Sennheiser's CinemaConnect system embraces the bring-your-owndevice (BYOD) principle enabling users to use their own mobile devices on the CinemaConnect WiFi network. The system consists of a ConnectStation, a central unit for integrating different audio streams and transmitting them via the provided WiFi access points to the personal mobile devices.

ARCHITECT'S SPECIFICATION

A multi channel streaming system that allows transmission of audio description, assistive listening, multilingual audio content, and alternative content to your mobile devices using the CinemaConnect App, which is available for iOS and Android mobile devices.

The system shall be comprised of a ConnectStation (central unit) for analog and digital audio inputs/outputs, as well as an optional WLAN access point for transmitting the audio over the air to the mobile devices containing the CinemaConnect App. The ConnectStation can also be integrated into an existing WLAN network.

The central unit shall be equipped with four servo-balanced line inputs (1/4" TRS jack sockets, mono) for connecting audio sources. Input impedance shall be 10 kΩ. Input sensitivity shall be selectable with the following options: Low Gain, +4 dBu, or –10 dBV. Input level for 0 dBFS @ Low Gain shall be + 19 dBu, input level for 0 dBFS @ +4 dBu shall be +13 dBu and input level for 0 dBFS @ –10 dBV shall be +2 dBV. The maximum input sensitivity shall be +19 dBu.

The central unit shall have a frequency response of 5 to 21,500 Hz @ 44.1 kHz and –0.5 dB. Signal-to-noise ratio shall be 116 dBA. THD at –3 dBFS shall be less than –110 dB. The maximum sampling rate shall be 48 kHz and the maximum A/D resolution shall be 24 bit.

The central unit shall be equipped with a 9-pin Sub-D connector which shall provide SPDIF input to the system using the delivered RCA inputs. The input shall be used either as SPDIF or as AES. For AES a separate XLR connector shall be needed (not included in the delivery).

The central unit shall be equipped with a 15-pin Sub-D connector to provide audio breakout, which shall deliver connections for line in and out, MIDI in and out and phones. The system shall be supplied with an analog audio breakout using unbalanced RCA input and output, breakout for MIDI in and out and phones out. MIDI in and out as well as line out shall be inactive.

The central unit shall be equipped with an optical input and output to be used either as ADAT or SPDIF. When SPDIF is enabled, the SPDIF in the Sub-D connector cannot be used and the optical input can only be used as an AES input. The optical output shall be inactive.

The central unit shall be equipped with three RJ-45 ports: one for connecting the access point, one for directly connecting a laptop/computer for configuration purposes and one for accessing remote services and support over the Internet or for connecting to an existing network infrastructure.

The central unit shall operate on 100 to 240 V AC and 50/60 Hz. Power consumption shall be 60 W nominal. Operating temperature shall range from +5 °C to +45 °C (+41 °F to +113 °F), storage temperature shall range from –20 °C to +75 °C (–4 °F to +167 °F), operating humidity shall be 10 % to 90 % non-condensing at +25 °C (+77 °F), storage humidity shall be 5 % to 95 % non-condensing at +25 °C (+77 °F). The central unit shall be rack-mountable.

The CinemaConnect App shall allow the user to select any one of the four channels offered. The channels shall transmit in stereo and mono.

The optional access point shall feature an auto-sensing/auto-MDX Ethernet port (RJ-45). The access point shall operate in the following frequency bands: 2.4 to 2.484 GHz, 5.15 to 5.25 GHz, 5.25 to 5.35 GHz, 5.47 to 5.725 GHz and 5.725 to 5.85 GHz.

The access point shall operate on 12 V DC power supplied by an external power supply. Power consumption at the DC input shall be typical 3.5 W (idle: 1.5 W; peak: 8 W). Operating temperature of the access point shall range from +0 °C to +50 °C (+32 °F to +122 °F), operating humidity shall be 10 % to 95 % non-condensing.

CinemaConnect
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Housing dimensions (W x D x H) shall be as follows: central unit: 483 x 240 x 44 mm (19" x 9.5" x 1.7"), access point: 158 x 158 x 40 mm (6.2" x 6.2" x 1.57"). Approximate weights

shall be as follows: central unit: 2.9 kg (6.39 lbs.), access point: 350 g (0.77 lbs.).

The system shall be the Sennheiser CinemaConnect.

SPECIFICATIONS

max. no of connected streaming clients	100 (Firmware 4.1.1 or higher)

ConnectStation CS1-C

Dimensions (W x H x D)	48.3 x 24.0 x 4.4 cm (19.0" x 9.5" x 1.7")
Weight	2.9 kg (6.39 lbs)
Power supply	100 - 240 V AC, 50/60 Hz, max. 600 mA
Power	60 W nominal
Operating temperature range	+5 °C to +45 °C (+41 °F to +113 °F)
Storage temperature range	-20 °C to +75 °C (-4 °F to +167 °F)
Operating humidity range	10 % to 90 % @ 25 °C non-condensing
Storage humidity range	5 % to 95 % @ 25 °C non-condensing

ANALOG IN

Resolution AD	24 bit	
Sample rate	48 kHz	
Signal-to-noise ratio (SNR)	113 dB RMS unweighted 116 dbA @ 44.1 kHz	
THD	< -110 dB, < 0.00032 %	
THD+N	< -104 dB, < 0.00063 %	
Crosstalk	> 110 dB	
Frequency response AD @ 44.1 kHz, -0.5 dB	5 Hz to 21.5 kHz	
Input	4 x ¼" TRS jack, servo balanced	
Input impedance	10 kΩ	
Input sensitivity	Low gain, +4 dBu, -10 dBV	
Input level for 0 dBFS	@ low gain	+19 dBu
	@ +4 dBu	+13 dBu
	@ -10 dBV	+2 dBV

AUDIO BREAKOUT

15-pin analog breakout cable

Resolution AD	24 bit
Signal-to-noise ratio (SNR)	109 dB RMS unweighted 111 dbA @ 44.1 kHz
THD @ -3 dBFS	-101 dB, < 0.001 %
THD+N @ -3 dBFS	-99 dB, < 0.0015 %
Crosstalk	108 dB

Frequency response AD @ 44.1 kHz, -0.5 dB	5 Hz to 21.5 kHz	
Input line	phono unbalanced	
Input impedance	10 kΩ	
Input sensitivity	Low gain, +4 dBu, -10 dBV	
Input level for 0 dBFS	@ low gain	+19 dBu
	@ +4 dBu	+13 dBu
	@ -10 dBV	+2 dBV

SPDIF/AES

9-pin digital breakout cable with two RCA connectors as coaxial SPDIF I/O

Inputs	1x RCA (XLR), transformer balanced, galvanically isolated, according to AES3-1992
Outputs	not in use
High-sensitivity input stage (< 0.3 Vpp)	
SPDIF compatible	IEC 60958
Lock range	27 to 200 kHz
Jitter	< 0.025 UI (4.4 ns @ 44.1 kHz)
Jitter when synced to input signal	< 1 ns
Jitter suppression	> 30 dB (2.4 kHz)
Type	**AES3-1992**
Connection	XLR balanced (not included in delivery)
Impedance	110 Ω
Level	0.2 V up to 5 Vss
Type	**IEC 60958**
Connection	RCA
Impedance	75 Ω
Level	0.2 V up to 5 Vss

ADAT/SPDIF

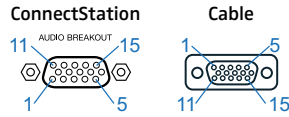|	
Input	TOSLINK
Output	not in use
Standard	8 channels, 24 bit, up to 48 kHz
Sample split (S/MUX)	4 channels, 24 bit, 96 kHz
Lock range	31.5 to 50 kHz
Jitter when synced to input signal	< 1 ns
Jitter suppression	> 30 dB (2.4 kHz)

CinemaConnect
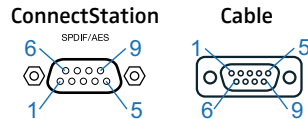## Innovative streaming technology for Cinema

PIN ASSIGNMENT

AUDIO BREAKOUT

ConnectStation   Cable

11 AUDIO BREAKOUT 15   1   5

1   5   11   15

15-pin Sub-D connector pinout

1	Line In Left -	6	Line In Left +	11	Line In Right -
2	Line In Right +	7	Line Out Left -	12	Line Out Left +
3	Line Out Right +	8	Line Out Right -	13	Phones Left
4	MIDI Out (5)	9	GND/Shell	14	Phones Right
5	MIDI In (4)	10	MIDI In (5)	15	MIDI Out (4)

SPDIF/AES

ConnectStation   Cable

6 SPDIF/AES 9   1   5

1   5   6   9

9-pin Sub-D connector pinout

1	GND	4	AES Out +	7	SPDIF In -
2	SPDIF Out +	5	AES In +	8	AES Out -
3	SPDIF In +	6	SPDIF Out -	9	AES In -

SPECIFICATIONS

WiFi Access Point (Extract)

Dimensions (W x D x H)	15.8 x 15.8 x 4 cm (6.2" x 6.2" x 1.57")
Weight	350 g (0.77 lbs)
Operating temperature range	0 °C to 50 °C (+32 °F to +122 °F)
Operating humidity range	10 % to 95 % non-condensing
Power supply	DC input: 12 V DC, 1.0 A
Power consumption at DC input	• Idle: 1.5 W • Typical: 3.5 W • Peak: 8 W
Ethernet ports	1 auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45
RF power output	(aggregated) maximum power varies by country • 26 dBm for 2.4 GHz • 24 dBm for 5 GHz
Frequency bands	• IEEE 802.11b/g/n: 2.4 - 2.484 GHz • IEEE 802.11a/n: 5.15 - 5.25 GHz; 5.25 - 5.35 GHz 5.47 - 5.725 GHz 5.725 - 5.85 GHz

Operating channels	• US/Canada: 1-11 • Europe (ETSI X30): 1-13 • Japan X41: 1-13 • 5 GHz channels: country-dependent
Certifications	US, Europe, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Mexico, New Zealand, Peru, Philippones, Saudi Arabia, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam • WEEE/RoHS compliance • EN-60601-1-2 (Medical) • Wi-Fi Alliance • EN50121-1 Railway EMC • EN50121-4 Railway Immunity • IEC 61373 Railway Shock & Vibration
Lock options	Hidden latching mechanism • Kensington Lock Hole • T-bar Torx • Bracket (902-0108-0000) Torx screw & padlock

CinemaConnect
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DELIVERY INCLUDES

CinemaConnect + WIFI EU/UK/US

- ConnectStation CS1-C
- power supply cable, length: 1.8 m
- WiFi Access Point
- PoE Power over Ethernet Injector EU/US/UK/AU for Access Point
- 15-pin D-Sub to 4x RCA analog, 2x MIDI, 1x phones
- 9-pin D-Sub to 2x RCA digital (SPDIF)
- Toslink-cable, 2 mm, length: 2 m
- 3x Ethernet Cable Cat5e, 1 m
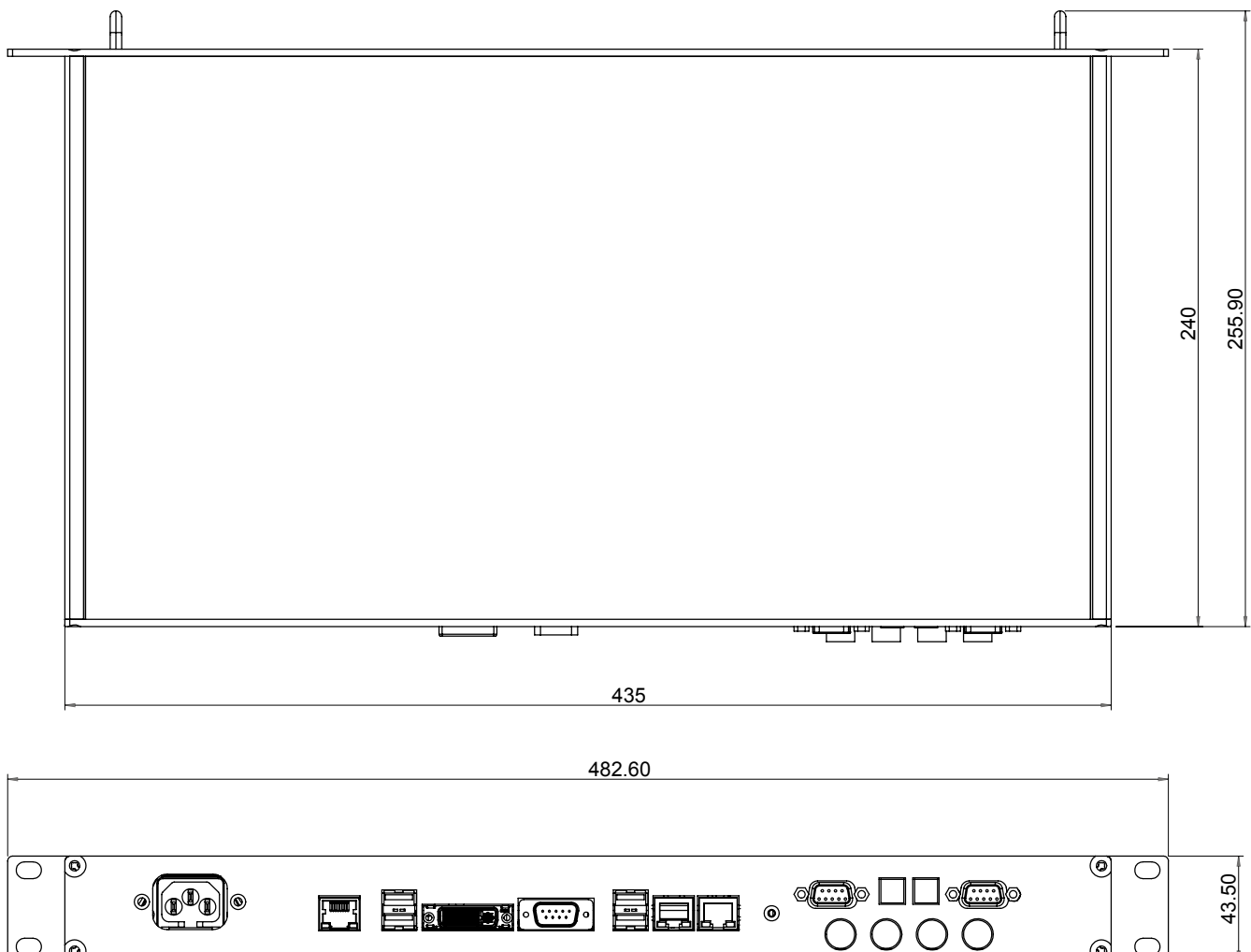- Quick Guide
- 2x Safety Guide

CinemaConnect EU/UK/US

- ConnectStation CS1-C
- power supply cable, length: 1.8 m
- 15-pin D-Sub to 4x RCA analog, 2x MIDI, 1x phones
- 9-pin D-Sub to 2x RCA digital (SPDIF)
- Toslink-cable, 2 mm, length: 2 m
- 3x Ethernet Cable Cat5e, 1 m
- Quick Guide
- 2x Safety Guide

Note: no WiFi access point included

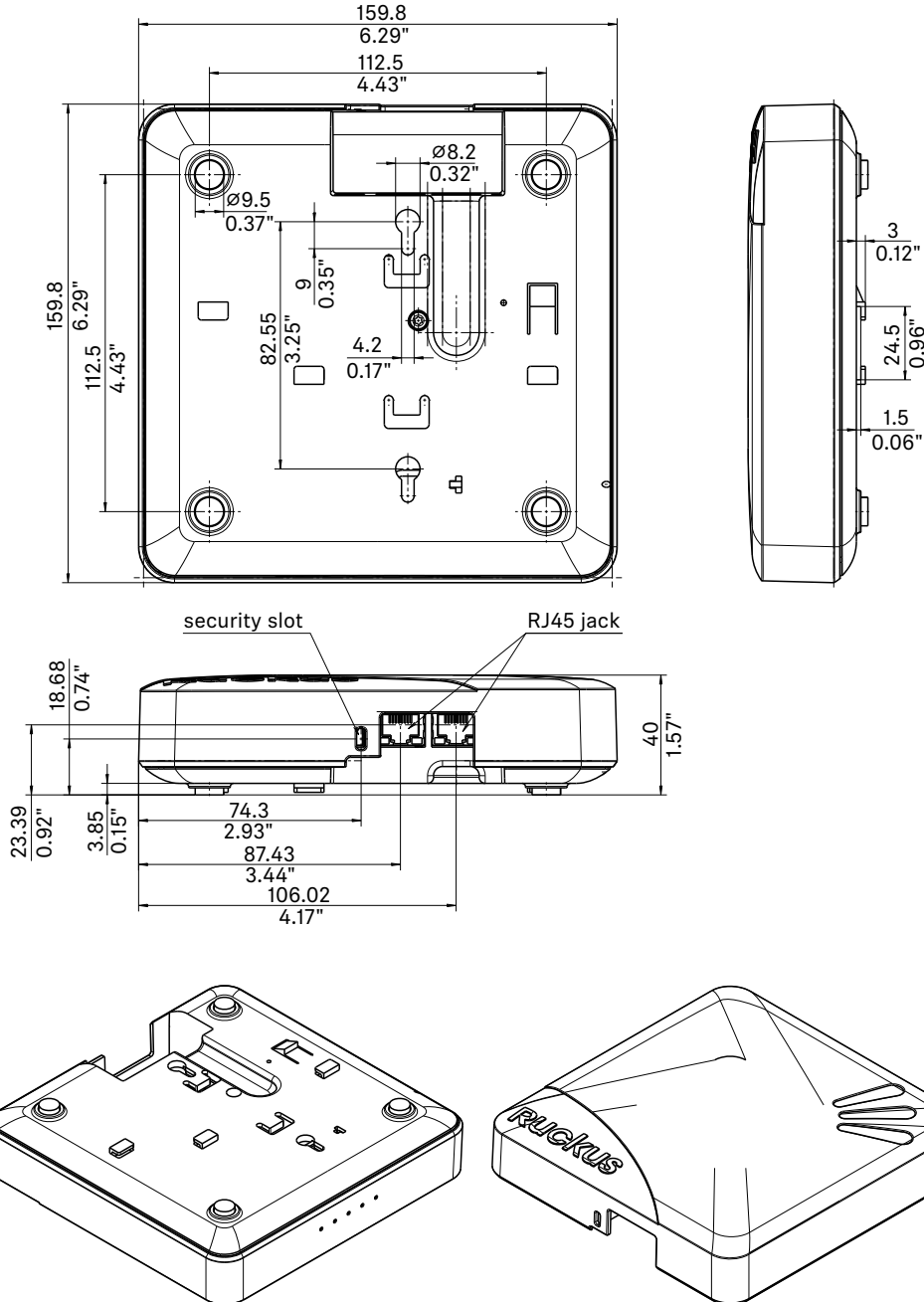## DIMENSIONS

ConnectStation CS1-C

CinemaConnect
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DIMENSIONS

WiFi Access Point

159.8
6.29"

112.5
4.43"

Ø8.2
0.32"

Ø9.5
0.37"

159.8
6.29"

112.5
4.43"

82.55
3.25"

9
0.35"

4.2
0.17"

3
0.12"

24.5
0.96"

1.5
0.06"

security slot

RJ45 jack

18.68
0.74"

40
1.57"

23.39
0.92"

3.85
0.15"

74.3
2.93"

87.43
3.44"

106.02
4.17"

PRODUCT VARIANTS

CinemaConnect + WIFI EU	Art. No. 506731	CinemaConnect EU	Art. No. 506885
CinemaConnect + WIFI UK	Art. No. 506732	CinemaConnect UK	Art. No. 506886
CinemaConnect + WIFI US	Art. No. 506736	CinemaConnect US	Art. No. 506887