

### **Overview**

All-in-one camera, microphone, and speaker system.



#### **Features**

- Newly developed SoundCap Eye
- 4K Camera with Smart Framing
- One-USB connection to start the collaboration
- Engineered Adaptive echo canceller and Noise reduction
- Hexa-microphone Beamforming
- 90 dBSPL (1 m) Embedded Speaker
- Iconic mute button of remote control
- Multiple installation options



Specifications 1/2

#### **General Specifications**

Description		Video Conference System
Dimensions (W x D x H)		W620 mm x D90 mm x H70 mm
Weight		1.7 kg
Power Requirements		AC 100 - 240 V (50/60 Hz)
Maximum Power Consumption		42.0 W
Safety		CB/G, UL, CE, RCM, KC, CCC*, BSMI*, BIS*
EMC		FCC, IC, CE, RCM, KC, CCC*, BSMI*
Radio Interference Standard		FCC, IC, CE, RCM, KC, SRRC*, NCC*, ANATEL
In Operation	Temperature	0°C - 40°C
	Humidity	20% - 85% (no condensation)
Storage	Temperature	-20°C - 60°C
	Humidity	20% - 85% (no condensation)
Indicator		Status Indicator
Accessories		Read this first, Safety Guide Quick Guide, USB 2.0 cable (Type C-A, 5 m / 16.4 ft), HDMI cable (2 m / 6.6 ft),
		Remote control (RC-RBT1), Lens cap, Terminal cover, Coin battery (CR2032) x 2, AC adaptor with power cord (CW2002100),
		Table stand, Wall mounting bracket, Terminal cover screw (2.5 mm x 8 mm) x 2,
		Hexagonal screw (M3 x 8 mm) for table stand x 2, Screw (M3 x 8 mm) for wall mounting bracket x 1, Hexagonal wrench
Options		Mounting Accessory BRK-TV1, USB 3.2 Gen 2 cable (A-C) 10 m CBL-L10AC, USB 3.2 Gen 2 cable (A-C) 25 m CBL-L25AC
Supported OS		Windows 11, Windows 10, macOS 12, macOS 11, macOS 10.15, Chrome OS
Installation		Tabletop installation: Table stand (accessory)
		Wall mount installation: Wall mounting bracket (accessory)
		Installation below display: BRK-TV1 (option)

<sup>\*</sup> Tentative

#### **Connections**

USB Type-C		USB 2.0/3.2 Gen 1, UAC 2.0, UVC 1.1, DisplayLink
HDMI		Version 1.4
		Resolution: 720 x 480, 1280 x 720, 1366 x 768, 1920 x 1080
		Frame Rate: 30 fps
		HDCP: Version 1.4
		HDMI-CEC: Power control, Input selection
Bluetooth	Common	Version 5.0
		Supported Profiles: HFP(1.7), A2DP, AVRCP, BLE
		Supported Codec: CVSD, SBC, mSBC
		Wireless Output: Class 1
		Maximum Communication Sistance: 10 m (32.8 ft) (no obstacles)
		Radio Frequency (Operational Frequency): 2,402 to 2,480 MHz
	U.K./EU	Maximum Output Power (EIRP): 7.6 dBm (5.8 mW)
	USA/Canada	Maximum Output Power: 7.23 dBm (5.3 mW)
	Korea	Maximum Output Power: 0.003 W
Wi-Fi Network	Common	Wireless LAN Standards: IEEE 802.11b/g/n
		Radio Frequency Band: 2.4 GHz
		Available Security Method: OPEN, WEP, WPA/WPA2-PSK, WPA3-SAE
	U.K./EU	Radio Frequency (Operational Frequency): 2,412 to 2,472 MHz
		Maximum Output Power(EIRP): 19.7 dBm (93.3 mW)
	USA/Canada	Radio Frequency (Operational Frequency): 2,412 to 2,462 MHz
		Maximum Output Power: 14.01 dBm (25.2 mW)
	Korea	Radio Frequency (Operational Frequency): 2,412 to 2,472 MHz
		Maximum Output Power: 0.01 W/MHz



Specifications 2/2

#### **Audio**

Speaker	Full-range speaker x 1
Speaker Loudness	90 dBSPL (1m)
Speaker Frequency Response	100 Hz - 20 kHz
Microphone	Hexa-microphone (6 x MEMS)
Microphone Coverage	120 degrees audio pickup
	Max Distance: 6.0 m (19.6 ft, Face focus beamforming off) / 3.0 m (9.8 ft, Face focus beamforming on)
Microphone Frequency Response	100 Hz - 16 kHz
Audio Processing	Adaptive echo canceller, Noise reduction, Automatic tracking, Automatic gain control, Automatic room EQ,
	Dereverberation, SoundCap Eye (Face focus beamforming, Self-silence, Self- volume balancer)

#### **Camera and Video**

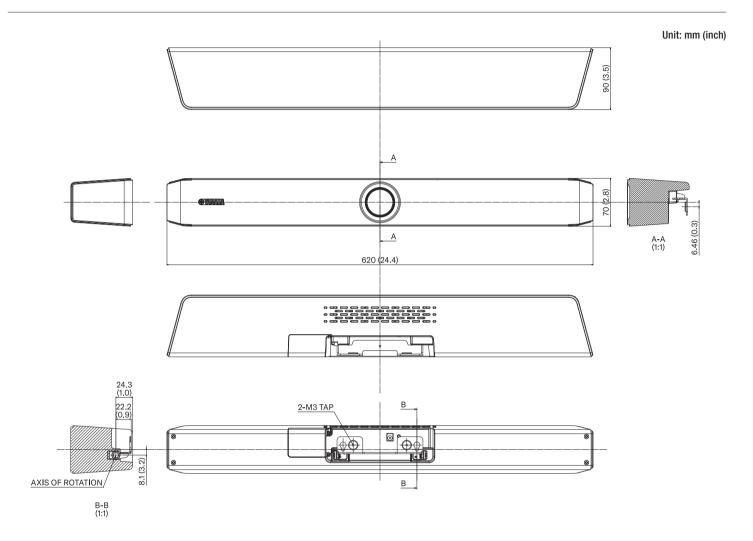
Sensor	CMOS 8M pixel (4K)
Diagonal Field of View	120 degrees
Focus Distance	0.5 m (1.6 ft) to ∞
Frame Rate	6 fps, 7.5 fps, 10 fps, 15 fps, 30 fps
Supported Video Resolution	3840 x 2160
	2560 x 1440
	1920 x 1080
	1280 x 720
	640 x 360
Supported Video Codec	YUY2, MJPEG, NV12
Frame Control	Smart framing (Group, Individual, Speaker tracking) or manualpan-tilt-zoom(PTZ), configurable preset x 2
	Maximum Zoom Ratio: 5.0x
	People Detection Max Distance: 4.5m
Video Processing	Automatic white balancing, Automatic exposure control, Noise reduction

#### **User Interface**

Function Button	Factory default setting, Remote control pairing
Remote Control	Power, Microphone mute x 2, Speaker volume, Camera ePTZ, Smart framing ON/OFF, Camera preset x 2, OSD menu control
OSD Menu	Meeting area, Smart framing mode, Camera preset, Mic, Speaker, Bluetooth
People Presence Detection	Auto wake-up
Yamaha CS Manager	Supported OS: Windows 11, Windows10 (64 bit), macOS 12, macOS 11, macOS 10.15
	Functions: Device status monitor, Security setting, Power setting, Audio setting, Camera setting, Smart framing setting,
	Bluetooth setting, HDMI screen setting, Network (Wi-Fi) setting, NTP setting, Firmware upgrading, Factory default setting,
	Logs retrieving



### Dimensions 1/3

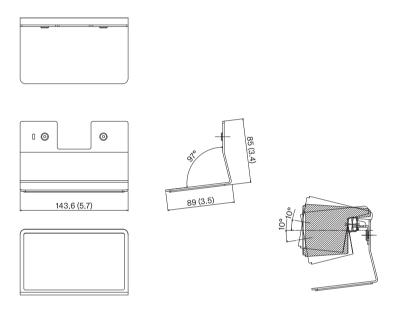




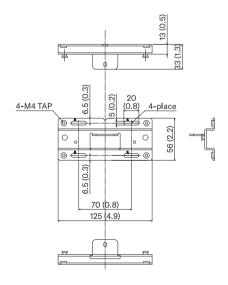
### Dimensions 2/3

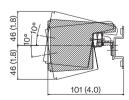
Unit: mm (inch)

## **Table Stand**



# Wall Mounting Bracket



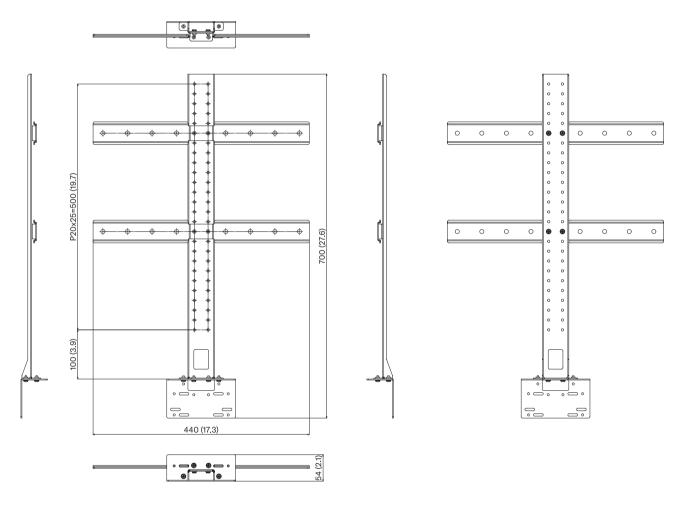




### Dimensions 3/3

Unit: mm (inch)

### **BRK-TV1**



### **Options**

• Monitor Mounting Bracket BRK-TV1

• USB Cable (10 meters) CBL-L10AC

• USB Cable (25 meters) CBL-L25AC

### **Software**

• Yamaha CS Manager



### **Architectural and Engineering Specifications**

The Yamaha CS-800 shall be an integrated video conference system for huddle rooms. The CS-800 shall compromise an 8-megapixel (4K) camera, six MEMS microphones, a full-range speaker, versatile connectivity (USB Type C, HDMI, Bluetooth, and Wi-Fi), and an easy-to-use interface that provides access to features and functions designed to deliver a seamless, efficient video conferencing experience in a broad range of office environments. The CS-800 shall be supplied with a wireless remote control unit that provides direct access to essential functions. A multi-color status indicator LED on the front panel shall provide essential status monitoring. The CS-800 shall be ideally suited for use in rooms up to 6 meters (19.6 feet) in depth.

The 4K camera shall have a 120-degree field of view and a focus range of from 0.5 meters (1.6 feet) to infinity. Maximum zoom ratio shall be 5x, and framing shall be controllable either automatically by software (group, individual, or speaker tracking) or manual PTZ buttons on the supplied remote control unit. Buttons to save and recall two sets of PTZ settings shall be provided on the remote control unit. White balance, exposure, and noise reduction shall be automatic. The camera shall support frame rates of 6, 7.5, 10, 15, and 30 frames per second, and video resolutions of  $3840 \times 2160$ ,  $2560 \times 1440$ ,  $1920 \times 1080$ ,  $1280 \times 720$ , and  $640 \times 360$ .

The CS-800 shall pick up sound via an array of six MEMS microphone units, using face focus beamforming technology to focus on the speaker while rejecting unwanted sound. Microphone pickup shall cover an angle of 120 degrees up to a maximum distance of 6 meters (19.6 feet) when face focus beamforming is OFF, or 3 meters (9.8 feet) when face focus beamforming is ON. Microphone frequency response shall be from 100 Hz to 16 kHz. Audio processing functions available for sound pickup shall include adaptive echo cancellation, noise reduction, automatic tracking, automatic gain control, automatic room EQ, dereverberation, and SoundCap Eye (including face focus beamforming, self-silence, and self-volume balancing).

The CS-800 shall include a built-in full-range speaker for sound output. The maximum sound pressure level of the speaker shall be 90dB @ 1 meter. The speaker shall have a frequency response of 100 Hz to 20 kHz.

The CS-800 shall be supplied with a wireless remote control unit having the following functions: Power, microphone mute x2, speaker volume, camera PTZ control, smart framing ON/OFF, camera preset x2, and on-screen display menu control.

Connection between the CS-800 and the host computer shall be made via a single USB cable that will transfer camera and microphone data from the CS-800 to the computer and audio output data back to the CS-800 for output via its built-in speaker. Connection from the CS-800 to the main display device (HDMI equipped TV or monitor) shall be made via a single HDMI cable. DisplayLink driver software for Windows computers and DisplayLink Manager software for MacOS computers shall allow the computer display to be shown on a TV screen via the CS-800 in systems that use an HDMI equipped TV rather than a dedicated computer display. Detailed CS-800 settings shall be edited and monitored via the Yamaha CS Manager application installed on the host computer. The CS Manager application shall be compatible with major current computer operating systems.

Built-in Bluetooth shall allow a computer or mobile device brought in by a user to be wirelessly connected to the CS-800 so that it can be configured via the connected display device (HDMI equipped TV or monitor) and on-screen display facility. A Bluetooth connection can also be used to allow a local mobile device (tablet or smartphone) to call a remote mobile device user into the conference in audio-only mode. The ability to connect to a network via Wi-Fi shall allow the CS-800 to keep accurate time.

The CS-800 shall be supplied with a table stand and wall mounting bracket. An optional monitor mounting bracket shall allow the CS-800 to be attached below a TV or monitor. The main CS-800 unit shall be powered by a supplied external power adapter, and the remote control unit shall be powered by two CR-2032 coin batteries. Dimensions shall be 620 (W) x 70 (H) x 90 (D) mm. Weight shall be 1.7 kg.

\*All information subject to change without notice.

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YAMAHA CORPORATION P.O.BOX 1, Hamamatsu Japan