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Sumitomo Electric Provides BS4K Set-Top Box

Sumitomo Electric Industries, Ltd. will start providing the Cable Plus™ STB-2, a BS4K set-top box with Android TV built in, to cable television companies all over Japan through KDDI Corporation (hereinafter, "KDDI") from April 2019. Sample units will be available through KDDI from the next month.

The Cable Plus™ STB-2 is a set-top box for cable TV companies, supporting BS4K[1] broadcasting that started on December 1, 2018. Supporting BS and BS4K trans modulation system and pass through system, this set-top box will be widely used by many cable TV operators. It is equipped with a triple tuner and can record up to two programs[2] while another cablecasted program is being watched.

In addition, it is equipped with the Google Assistant, which enables voice command by speaking to an accessory remote controller or Google Home. Voice command will provide you with an even more comfortable viewing environment.

BS4K Set-Top Box "Cable Plus™ STB-2"

<Main features of the product>

1. Supporting BS4K broadcasting

(1) Receiving high-definition, wide color gamut BS4K broadcasting

This unit supports HDR[3] (HDR10 and HLG), outputting HDR or SDR signals according to whichever system is the

most suitable for the TV linked. You can enjoy BS4K broadcasting and HDR video-on-demand contents even on a TV without supporting the HLG system.

(2) Supporting both trans modulation and pass through methods

At the back of the main unit, individual input and output terminals for both cable TV and satellite TV broadcasting are available, enabling reception of BS and BS4K broadcasting signals, regardless of whether customers' cable television companies provide the trans modulation system or pass through system.

(3) Compliance with JLabs SPEC-033 and 034

The Cable Plus™ STB-2 complies with JLabs SPEC-033 (single QAM modulation system) and JLabs SPEC-034 (multiple QAM modulation system), advanced BS digital broadcasting trans modulation operation specifications. It can receive 4K TLV stream transmitted in single 256QAM or multiple 64QAM.

2. Available with voice command

By pressing the Google Assistant key on the accessory remote controller and speaking to the controller, you can verbally operate.

* Speaking to Google Home can provide the same voice commanding operation.

3. Supporting Hybridcast™ linkage of broadcasting and communications

By connecting the main unit with the Internet environment and pressing the "d" button on the remote controller while you view a Hybridcast™-compatible program, you can enjoy contents linked with the program.

4. Maintaining basic functions of the existing Cable Plus™ STB
(1) Featuring Android TV™

You can enjoy movies, music, games, and community information on your TV or mobile device by downloading a wide variety of applications. You can continue using voice command on contents search and screen sharing functions between mobile terminal and TV (compatible with Chromecast built-in™).

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(2) Supporting G-Guide EPG

The Cable Plus™ STB-2 supports the G-Guide EPG, offering an automatic program recording function by using program listings for up to one month in advance and searching for programs by various search parameters, including favorite programs, categories, fields and persons.[4]

(3) Interactions with mobile terminals and the Internet

The Cable Plus™ STB-2 can distribute an on-air or recorded program to a player device supporting DLNA in a home network. It also enables the TV to play a program that is being received or was recorded by a device with the DLNA server function.

In addition, you can copy content that was recorded through the Cable Plus™STB-2 and enjoy it on a mobile device.[5]

(4) Improved maintenance service for cable TV operators and community-based services for users.

The Cable Plus™ STB-2 is equipped with a remote maintenance function that enables TR-069[6]-supported remote firmware updating and confirmation/change/resetting of device settings. It supports a viewing information collection function, thereby helping to improve customer service.[7]

Since the start screen can be customized to suit the cable TV operator, each provider can offer its own community-based services.

<Main specifications>

Platform	Android TV (Android™ 8.0, Oreo)
Media device	Quad Core ARM B53 18K DMIPS
Video output format	Max. 4K (3840 x 2160), 60 fps
HDR compatibility	HDR10, HLG
Video decoding	MPEG2, H.264(AVC), H.265 (HEVC[8])

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Transcode	H.264/AVC, MPEG2 (HD) => H.264/AVC (720 p / 480 p)
Video/audio output interface	Digital video/audio: HDMI 2.0b*[9]/HDCP 2.2*[10] -compliant (back of main unit)
Expansion interface	Front: USB2.0 x 1; back (for recording): USB3.0 x 1
Wired network interface	10Base-T / 100Base-TX / 1000Base-T (back of main unit)
Wireless network interface	2x2 MIMO-supported IEEE802.11a/n/ac (5 GHz) / IEEE802.11b/g/n (2.4 GHz) * Either 5 GHz or 2.4 GHz can be used. Bluetooth 4.2 (BR/EDR/BLE)
Tuner function	Triple tuner (watching 1 program + recording 2 programs max.) * QAM (256QAM-supported), OFDM, PSK: 3 tuners
Remote control	Communication method: Bluetooth Low Energy, IR (for TV)
Main unit power consumption	Approx. 18 W max. (for normal operation)
Main unit weight	Approx. 600 g
Dimensions	W 240 mm x H 33 mm x Depth 172 mm (excluding projections)
JLabs SPEC compliance	SPEC-001/003/004/005/006/007/017/018/019/020/032/033/034/035

*1 Does not support 8K broadcasting.

*2 Simultaneous recording has certain operating conditions. A separately sold external hard disk needs to be connected to Cable Plus® STB-2. Programs can be recorded on a DLNA-supported recorder within the same home network. For DLNA-supported recorders, refer to the following link.

http://www.jlabs.or.jp/judging/judging-dlna/dlna-equipment (Japanese only)

*3 HDR (high-dynamic-range):

A technique enabling a more extensive range of brightness, color, and contrast of video image. You can enjoy images as if seeing them with your eyes. HDR has several systems, including HDR10, HLG (Hybrid Log-Gamma), etc. Conventional image is called SDR

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(Standard-dynamic-range).

*4 The adopted electronic program guide (EPG) is G-Guide, which was developed by U.S.-based TiVo Corporation. Some of the functions of G-Guide cannot be used without internet access. Even without internet access, however, program listings for eight days (one week) can be displayed.

*5 4K broadcasting does not support the delivery and copying of an on-air program or recorded contents. Also, to communicate with the Cable Plus™ STB-2 from a mobile terminal, an app is needed.

*6 TR-069 (Technical Report 069):

Technical specification that prescribes application layer protocol to control end user devices by remote control.

*7 Users can arbitrarily select whether or not to send viewing information on the setting screen.

*8 HEVC (High Efficiency Video coding):

Another name for the video compression standard H.265 (ISO/IEC 23008-2 HEVC), which has roughly twice the video compression performance as that of the conventional standard (H.264).

*9 HDMI2.0b:

The standard for HDMI terminals, an interface between TVs and peripheral equipment, supporting 4K resolution and HLG.

*10 HDCP2.2:

Copyright protection standard used when 4K images are transmitted through HDMI.

• Cable Plus™ is a registered trademark of KDDI Corporation.

• Google, Android, Android TV, Chromecast built-in, and Google Home are trademarks of Google LLC.

• Hybridcast is a registered trade mark of NHK Japan Broadcasting Corporation.

• G-Guide is a trademark or registered trademark of U.S. TiVo Corporation or its affiliated companies.

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■ Reference

Sumitomo Electric's Website

https://sumitomoelectric.com/