CEC

Consumer Electronics Control

Also known as;

Samsung – Anynet+   **Sony – Bravia Link or Bravia Synch**   **Sharp – Aquos Link**

Hitachi – HDMI-CEC   **Toshiba – Regza Link or CE-Link**   **LG – Simple Link**

Philips – Easy Link   **Panasonic – Viera Link or EZ Synch**   **Pioneer – Kuro Link**

In fact, pretty much every major Consumer Electronics manufacturer has their own name for it and builds it into their equipment. Showing us that they see it as a major part of their product development.

CEC

Consumer Electronics Control

Consumer Electronics Control (CEC) is an HDMI feature designed to allow the user to command and control up to ten CEC-enabled devices connected through HDMI by using just one of their remote controls
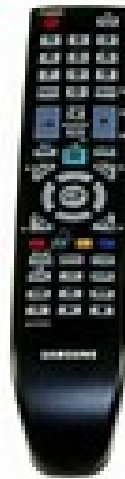
Products like these

Controlled with just this.

CEC

Consumer Electronics Control

Is a one-wire bidirectional serial bus that uses the industry-standard AV.link protocol to perform basic remote control functions. It is implemented as a single wire (pin 13) within the HDMI connector

The basic technology of the CEC bus originated in Europe, on the SCART interface, where it's been used with great success for many years. HDMI borrows and improves on the basic SCART technology, allowing AV products to discover and communicate with one another across a system.

It was originally defined in HDMI Specification 1.0 and updated in HDMI 1.2, HDMI 1.2a and HDMI 1.3a (the last added timer and audio commands to the bus). It has continued to develop since.

USB to CEC Adapters exist that allow a computer to control CEC-enabled devices.

CEC

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It allows basic command functions such as, Vol+, Vol-, Up, Down, Left, Right, Select, System Standby ect.

Although basic, the functions available are (in general) the functions that most people use all the time.

However, modern control concepts (bespoke buttons like YOU VIEW or the SKY button) are not supported. It also doesn't support gesture or voice control

Techy Bit!!

In any HDMI set up the TV/Display is considered the root or main component.

All components in a CEC set up will get 2 special tags. They will get a physical address and a logical address.

Any NON-CEC Components will just get a physical address.

The TV will always get a physical address of 0.0.0.0
And it will get a logical address of 0

Physical addresses are taken up based on the position
of the device in relation to the root.

A good way of thinking about the topology is as if it were a tree. The TV is the ROOT, the Receiver (s) the BRANCH and the connected products are LEAFS

TV has a
Physical 0.0.0.0

AVR HDMI out to
TV HDMI 1 will
get
Physical 1.0.0.0

Media Box to
AVR INPUT 1

Bluray to AVR
INPUT 2

Media Box gets
Physical 1.1.0.0

Bluray gets
Physical 1.2.0.0

Logical addresses are taken on by the devices depending on their functionality/position in the system (as mandated by the CEC specifications document).

TV has a
Physical 0.0.0.0
Logical   0

AVR has a
Physical 1.0.0.0
Logical   5

Bluray gets
Physical 1.2.0.0
Logical   9

Media Box gets
Physical 1.1.0.0
Logical   8

The Full List Is As Follows;

- 0   TV
- 1   Recording Device 1
- 2   Recording Device 2
- 3   Tuner 1
- 4   Playback Device 1
- 5   Audio System
- 6   Tuner 2
- 7   Tuner 3
- 8   Playback Device 2
- 9   Playback Device 3
- 10   Tuner 4
- 11   Playback Device 4
- 12   Reserved
- 13   Reserved
- 14   Free Use

CEC Things To Remember

CEC is a shared wired bus. So, if one device causes issues then it can affect the other devices in the chain.

The Pulse-Eight matrixes can compensate for this and work round faults and also cross vendor incompatibilities

CEC provides a high "wife acceptance" factor. A non technical user can use a single (TV) remote and control such things as the Blu-ray, the AVR and the TV.

THE END