

For Immediate Release

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Key Digital Provides Solution to HDTV signal transmission up to 600 ft. via CAT6/STP

Mount Vernon, NY. Key Digital Systems, Inc. – June 13, 2012 – Key Digital is proud to announce a solution to the problem of sending digital HDTV/HDMI and control signals up to 600 ft. via CAT6 cable. Our solution is quite unique and involves a combination of some of the connectivity technologies we exclusively developed. Our HDBaseT-based extenders/baluns such as our FatCat Series model KD-CATHD500FW HDMI balun, when used in conjunction with Key Digital's special CAT6/STP cable (FatCat Series model KD-CAT6STP1X) and RJ-45 connectors (FatCat Series model KD-RJ45SC), create uniquely durable connectivity for signal transmission. Signals such as HDTV/HDMI Video, HDMI audio, bi-directional 100 Mb/s Ethernet, bi-directional RS232 and bi-directional IR can be sent up to 600 feet all over a single CAT6/STP cable.

How does Key Digital make this possible?

The Key Digital solution - as constructed by Key Digital President, Mike Tsinberg and his team of engineers – is a combination of three advanced technologies we used in our products:

1. HDBaseT connectivity. This data communication method utilizes a more advanced method of modulating data in two dimensions: amplitude and time. The more traditional TMDS method using only one time dimension for data. By using data modulation in two dimensions HDBaseT places less stress on time dimension that way allows slower clocks to be used. Slower clocks makes pulse edge jitter to be less impactful on the data eye and allows data eye to be open for longer distance than traditional TMDS method utilized in standard HDMI cables and extenders.
2. Special CAT6STP cable. This cable is specifically designed to give most protection to data and to minimize jitter effects for longer runs:
 - a. Cable video bandwidth is 550 MHz to reduce jitter
 - b. Overall braided STP prevent RF interference from household appliances and ground loops between source and sink
 - c. Individually shielded twisted pairs prevents interference inside the cable
 - d. Closely matched twisted pair turns will align arrival time for data "eyes" enabling a better capture at the Rx.



3. EDID control. KD-CATHD500FWTx is equipped with an EDID control buffer that allows it to replace the display EDID with a number of preprogrammed EDID files. To enable 600 feet connectivity, the system has to be switched to 1080i/1080p-24/720p resolution. That class of resolution maintains a maximum of 74.25 MHz video data clock which allows the data eye to be of sufficient length in order to avoid cable jitter degradation. Selecting EDID position 1 (Picture 1) will prevent the source from exceeding that resolution range. It is important to notice that there is no picture quality degradation when the source is switched from 1080p/60 to 1080i/1080p-24/720p due to the fact that none of the TV content or delivery media exceed that resolution range. This method will not allow to use Frame Packing 3D format. The 1/2H Side-by-Side 3D format used in broadcasting will pass this connection since it requires only 1080i/60 bandwidth. The 1080p/24 Frame Packing 3D format used in Blu-Ray requires 1080p/48 bandwidth that can only be sent up to distances of 400 ft. using this system. By selecting EDID position 1 or position 2 on KD-CATHD500FWTx, the balun will force the source to output 1080i/1080p-24/720p 2D or 1/2H Side-by-Side 1080i 3D format.

Key Digital's FatCat Series model KD-CATHD500FW Tx/Rx HDMI/HDBaseT balun kit in combination with the FatCat Series model KD-CAT6STP1X CAT6/STP cable and EDID control feature allows HDMI/HDTV connectivity up to 600 feet with the additional benefit of being able to transmit 100 Mb/s Ethernet, bi-directional RS232 and bi-directional IR over the same cable.

Key Digital® will be displaying Compass Control® at CEDIA 2012 – for more information [click here](#) or visit us at Booth #2046. Also please download the Compass Control® demo app by [clicking here](#).

Key Digital Industry Leadership



Mike Tsinberg, Founder and President of Key Digital, is a holder of 40 HDTV patents.

- "Father of DVD" - Developed architecture and system software for world first Digital Video Disk (DVD) MPEG2 based authoring system - key DVD enabling technology
- Participated with Emmy Award Winner for DVD technology development
- 2009 Inductee as one of the Top 200 Pioneers of HDTV by the Academy of DTV Pioneers (CEA)
- SMTPE Fellow

About Key Digital®

Key Digital is a CES award-winning developer and manufacturer of leading-edge technology for HDTV applications, delivering total video systems solutions. The company manufactures a wide range of digital video processing and video signal distribution solutions marketed broadly to the HDTV community, such as digital video and audio processors, switchers, distribution amplifiers, cables, adapters, and more. For more information, visit us at www.keydigital.com.