



## News Release

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## THine releases V-by-One® HS Standard version 1.3

TOKYO (August 5, 2010) -- THine Electronics, Inc. (NASDAQ: 6769), the global leader in high-speed serial interface and provider of mixed-signal LSI for flat panel displays and mobile phones, announced today that THine releases V-by-One® HS Standard version 1.3 in order to contribute cost down of 3D televisions and support the resolution of Cinema Full HD of the 21:9 aspect ratio, in accordance with the new trends of viewing 3D televisions and internet televisions.

V-by-One®HS Standard is developed to provide solutions to develop better picture qualities and reduce total costs of television sets. In 2007 the brief specification of V-by-One®HS Standard is disclosed by THine, in 2008 the full specification version is disclosed, and until today it is widely evaluated or selected in television markets and document processing markets. For example, while 3D televisions with 240 Hz frame rate panels requires 48 LVDS cable pairs, they need only 8 pairs if they use V-by-One®HS interface.

V-by-One®HS achieves the high-speed transmitter/receiver of 3.75Gbps per pair cable. This marvelous feature results in improving signal quality, reducing EMI, lowering energy consumption, and decreasing total costs including cables and connectors. THine has delivered V-by-One®HS Standard to almost one hundred companies and has granted royalty free specification rights to V-by-One®HS partners. V-by-One®HS Standard has been penetrated widely in major suppliers of televisions and document processing equipments.

The major features of V-by-One®HS Standard version1.3 are the following two points:

1) 3D frame identification.

Since 3D televisions have identification on every frame, method to label 3D information on frame are described in V-by-One®HS Standard version1.3. This definition enables the television sets to identify right views and left views smoothly in 3D televisions and reduce engineering hours and adjusting activities in developing new 3D models among television set makers, FRC venders, and panel venders.

2) Data lane of Cinema Full HD, including 2560x1080p.

In addition, V-by-One®HS Standard version1.3 defines the number of data lanes for Cinema Full HD of the 21:9 aspect ratio, including 2560x1080p resolution. In fact, V-by-One®HS Standard version1.3 requires the industry-fewest 4 data lanes for the 120Hz refresh rate or the pixel clock of 370MHz. Thus, the new version can support the increase of 3D televisions as well as internet televisions. Also V-by-One®HS users can obtain cost advantages in internal interface systems.

World major television makers and related parts makers are going to adopt or interested in V-by-One<sup>®</sup>HS and they are developing their new strategic products with V-by-One<sup>®</sup>HS. Moreover, global leaders in digital TV controllers with high market shares announce to deliver samples with V-by-One<sup>®</sup>HS and major FPGA suppliers supports V-by-One<sup>®</sup>HS. In addition, cable makers, connector makers, and test/measurement equipments makers have already deliver their products that support V-by-One<sup>®</sup>HS.

V-by-One<sup>®</sup>HS Standards is expected to penetrate more widely by incorporating new trends in television markets.

■ Key features of V-by-One<sup>®</sup> HS Standard version 1.3

- 3D frame identification
- Minimal interface design for Cinema Full HD and 4Kx2K resolution
- High data transmission quality solving cable skew problems with high speed SerDes using Clock Data Recovery technology
- High transmission quality with high performance equalizer in noisy conditions
- Lower EMI with clock embedded transmission, No reference clock at receiver
- Total cost and space reduction by reducing number of cables and connectors
- Seamless transition from LVDS to V-by-One<sup>®</sup>HS minimizing change of device input/output and peripheral design
- Lower energy consumption with variable transmission speed
- Ease of use

About THine Electronics

THine Electronics, Inc. is a fabless LSI company that provides innovative mixed signal LSI and analog technologies such as V-by-One<sup>®</sup>HS, LVDS, other high speed data signaling, timing controller, Analog-to-Digital Converter (ADC), Image Signal Processor (ISP), radio frequency (RF) and power management in growing niche markets for our customers' solutions, targeting its strategic markets in flat screen TVs, electronic paper displays, LCD monitors, projectors, projection televisions, mobile phones, document processing, amusement, and automotive markets.

THine is headquartered in Tokyo, Japan, and has design centers in Kyoto and Kyushu, Japan, as well as subsidiaries in Taipei, Taiwan and Seoul, Korea. THine Electronics is listed on the JASDAQ under the security code of 6769. For more information, please visit [www.thine.co.jp](http://www.thine.co.jp).

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