



## News Release

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### **THine releases new products of V-by-One® HS specially designed for multifunction printers, cameras, and amusement markets**

Tokyo (October 27, 2009) – THine Electronics, Inc. (JASDAQ:6769), the global leader in high-speed serial interface and provider of mixed-signal LSI for flat panel displays, announced today that THine releases new products of its high-speed serial interface of THCV233 and THCV234 as families of V-by-One® HS, specially designed for wide markets visual data related markets such as multifunction printers, cameras, and amusement markets .

V-by-One® HS has been developed to offer high speed solutions with lower costs and EMI for long distance. The new V-by-One® HS products, THCV233 and THCV234, also achieving the high-speed of 3Gbps, can be applied to various markets such as multifunction printers, industrial cameras, security cameras, scanners for consumers, amusement, factory automation equipments, medical equipments. THine's high-speed technology reduces number of cables and enables to decrease costs of cables as well as EMI, enhancing noise tolerance drastically, downsizing key components such as moving head of scanners, transmitting digital data for long distance.

For example, multifunction printers, shifting to higher resolution with full colors, require more high-speed data transmission from scanner to controlling print circuit boards. V-by-One® HS technology can reduce number of cables to one sixth of current LVDS interface cables and engineers can design downsized scanner heads and related parts.

In addition, THCV233 and THCV234 enhance noise tolerant features drastically in order to communicate control data between scanner heads and controllers more easily and reduce corresponding noise related costs.

THCV233 and THCV234 are designed also for camera application markets such as industrial cameras and security cameras. This chipset enables to transmit real-time pixel data for as long distance as 20 meters without data compression. Further more, using its sub-links, this chipset can communicate control data between camera modules and controlling PCs, reducing influence from noises drastically without adding cables to V-by-One® HS interface systems. Camera systems with V-by-One® HS technology are expected to transmit pixel data and control the camera modules more stably under noisy application environment.

THine plans to expand the application markets of V-by-One<sup>®</sup> HS in order to deliver values of higher speed, lower space, lower costs, more noise tolerance, and long-distance transmission for customers of DTV markets and many visual data related markets.

#### ■ Price and availability

Sample price of THC233 and THC234 is 1,500 yen. THine plans to start volume production in the second quarter in 2010.

#### ■ Key benefits of THC233 and THC234

##### Main link

- Conversion between LVDS and V-by-One<sup>®</sup> HS
- Color depth selectable: 32bit/24bit
- LVDS clock frequency: Max. 100MHz
- V-by-One<sup>®</sup> HS data rate: Max. 3.4Gbps
- Pre-emphasis and equalizer
- On chip data error test mode

##### Sub-link

- Reciprocal control between THC233 and THC234 through sub-links
- 2-wire serial interface: Max. 400Kbps
- GPIO THC233: 4, THC234: 5
- Small package: 7mm×7mm QFN 48 pins
- Supporting two power sources of 1.8V and 3.3V

#### ■ Images of THC233 and THC234



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