Toshiba's New Reference Board Solution for TZ1200 App-Lite™ Graphics Processor

Comprehensive development tool supports development of wearable devices and IoT applications

Düsseldorf, Germany, 19th September, 2017 – Toshiba Electronics Europe today announced the launch of a new reference design board for their TZ1200 App-Lite™ graphics processor. The reference board forms part of a comprehensive development platform ecosystem that allows designers to rapidly configure and develop wearable devices and IoT applications.

The comprehensive reference design board is a fully-featured design that includes all of the main components needed to rapidly build and debug prototypes. At the heart of the system is the ultra-low power TZ1200 App-Lite™ graphics processor based on a high-performance 32-bit ARM® Cortex®-M4F processor capable of operating at 96/ 120MHz with just 70µA/MHz current consumption in active mode.

The TZ1200 includes embedded 2D graphics accelerators (GFX) that provide a powerful platform for alpha-blending, drawing, rotating, texturing and resizing images as well as performing on-the-fly colour conversion. The graphic accelerators together with an optimized bus structure, removes almost all of the load on the processor and contributes significantly to further power saving.

The reference design board also incorporates a THGBMHG6C1L that provides 8GB of *e*•MMC™ Flash memory for data storage and application program booting. The ultra-low power TC35679 Bluetooth Low Energy (BLE 4.2) single-chip device and integrated PCB antenna provide wireless connectivity for the system.

The small form factor (50mm x 40mm) incorporates multiple connectors that provide ease of access and expansion. The display connector carries MIPI DSI, parallel and SPI signals giving the user the flexibility to connect round, rectangular or customized displays. TZ1200's high-precision analogue front-end (AFE) combines a 24-bit delta-sigma ADC, 12-bit ADC, 12-bit DAC and an LED DAC, all available on the AFE connector, e.g. to interface to optical heart rate or ECG sensors. The expansion options are completed by another connector that provides GPIO, ADC, UART, I2C, SPI signals allowing the connection of further external components for quick prototyping, e.g. Arduino shields via a simple conversion board.

The TZ1200 board can be either battery powered or power is supplied via a micro USB connector to the on-board voltage regulator.

Beside product prototyping the board can be used as software development platform too. Multiple free software including an advanced graphics library, graphics drivers, graphics examples, CMSIS drivers and BLE drivers are available. Users also benefit from access to Toshiba's online App-Lite™ Developer Zone that includes a range of information for developers and software downloads.

The TZ1200 reference board is shipping now.

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About Toshiba Electronics Europe

Toshiba Electronics Europe (TEE) is the European electronic components business of Toshiba Electronic Devices and Storage Corporation. TEE offers a broad IC and discrete product line including high-end memory, microcontrollers, ASICs and ASSPs for automotive, multimedia, industrial, telecoms and networking applications. The company also has a wide range of power semiconductor solutions as well as storage products including HDDs, SSDs, SD Cards and USB sticks.

TEE was formed in 1973 in Neuss, Germany, providing design, manufacturing, marketing and sales and now has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom. TEE employs approximately 300 people in Europe. Company president is Mr Akira Morinaga.
For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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