Freescale Expands Tower System Offering with new, Feature-Rich Modules

The Freescale Tower System development platform, which has rapidly become an industry standard and a preferred tool to help developers quickly evaluate and prototype their applications, continues to expand with new, feature-rich development boards (modules) for medical, industrial and general embedded applications. Today, Freescale announced four new controller modules, two interchangeable peripheral modules and five complete Tower System kits for the reconfigurable development platform.

Adding to a growing portfolio of Tower System development tools, the new controller modules feature the Kinetis family (90 nanometer, 32-bit microcontrollers (MCUs) based on the ARM® Cortex™-M4 core), as well as 8-bit S08 and 32-bit ColdFire Flexis MCUs. Two new peripheral modules add high-precision analog functionality and low-power Wi-Fi™ for sensor and embedded applications that require battery-powered wireless connectivity.

Designers using the Tower System experience a customizable embedded design environment with mix-and-match tool selections to suit their design needs. Interchangeable, easy-to-use modules promote the reuse of hardware from design to design and across architectures, speeding time to market and scaling down overall tool costs.

* One of the first development boards for Kinetis MCUs, the TWR-K40X256 module, enables design and evaluation with the K30 and K40 families. This development board is suited for ultra-low-power applications like GPS receivers, bike computers, currency counters and blood glucose monitors. It features the on-board Kinetis K40 device, which includes full-speed USB 2.0 On-The-Go with device charge detect capability and a flexible low-power segment LCD controller with support for up to 320 segments. The module also includes on-board capacitive touch pads; integrated, open-source JTAG; SD card slot; MMA7660 3-axis accelerometer; 28-segment LCD and Tower Plug-In (TWRPI) sockets for additional expansion (sensors, keypads, rotary dials, sliders, etc.). As with other modules in the Tower System, this development board can be purchased individually (TWR-K40X256) for standalone debug or as part of a complete Tower System kit (TWR-K40X256-KIT).

* The TWR-K60N512 module enables design and evaluation with the K10/20 and K60 families of Kinetis MCUs. Ideally suited for industrial applications like building automation controllers, elevator control panels, instrument clusters and surveillance cameras, TWR-K60N512 features the on-board Kinetis K60 device, which includes IEEE 1588 Ethernet, full- and high-speed USB 2.0 On-The-Go with device charge detect capability, hardware encryption and tamper detection capabilities. Like the TWR-K40X256, this module also includes capacitive touch pads; integrated, open-source JTAG; an SD Card Slot; MMA7660 3-axis accelerometer; and Tower Plug-In

(TWRPI) sockets for expansion. It also can be purchased as part of a complete Tower System kit (TWR-K60N512-KIT).

* The TWR-MC9S08JE module is the development tool for the low-power Flexis 8-bit MC9S08JE USB MCU family. This module features the on-board MC9S08JE device, providing ultra-low-power operation, USB connectivity and high measurement accuracy, high-resolution ADC and DAC modules, a rich peripheral set including a USB 2.0 device controller and multiple serial interfaces. A complete Tower System kit for this module is also available (TWR-S08JE128-KIT).

* The TWR-MCF51JE module provides designers with a low-power, low-cost development tool that leverages the Flexis 32-bit ColdFire V1 family of MCUs. Like its 8-bit Flexis counterpart (MC9S08JE), this module features ultra-low-power operation, USB connectivity and high measurement accuracy, high-resolution ADC and DAC modules, a rich peripheral set including a USB 2.0 device controller, and multiple serial interfaces. A complete Tower System kit for this module is also available (TWR-MCF51JE-KIT).

The following peripheral modules have recently been added to the growing catalog of Tower System offerings and are designed for use with other MCU and peripheral modules in the Tower System development platform.

* The newest Tower System Wi-Fi module (TWR-WIFI-G1011MI) provides easy-to-use Wi-Fi connectivity. The fully certified on-board GS1011MIP Wi-Fi module from GainSpan features a highly integrated, low-power SOC consuming few µA in standby current for battery-operated devices that require years of battery life. It includes both uART and SPI interfaces, a full Wi-Fi stack with WPS for easy provisioning, over-the-air firmware update, optional networking stack and services, and 802.11i security.

* The Analog module (TWR-ADCDAC-LTC) features high-performance data conversion products and acts as a “playground” for engineers to evaluate and develop applications requiring high-resolution analog functionality. Developed in conjunction with Linear Technology, this module features two digital-to-analog converters, two analog-to-digital converters, a voltage regulator and a voltage reference, all from Linear Technology. Four on-board 14-pin headers are also included for connecting to any Linear Technology QuikEval™ demonstration board.

New Tower System kits have been added to the Tower System portfolio and provide designers everything they need to get started with their evaluation, prototyping and design. Each Tower System kit includes the main controller module, at least one peripheral module (such as serial or memory) and the backplanes (elevator modules) that provide power regulation circuitry to the assembled development system.

http://www.wirelessdesignmag.com/product-releases/2011/02/freescale-expands-tower-system-offering-new-feature-rich-modules?qt-most_popular=0&qt-digital_editions=0