

Analog, Sensors and Microcontrollers

Freescale Tower System

Modular development tools for automotive

Features

- Quickly combine Tower System automotive sensor modules to build a prototype of your application
- Open Source: build your own Tower System modules to integrate your IP
- Cost-optimized hardware
- Software support from Freescale and third parties
- Growing community of third-party hardware support
- On-line communities: element14.com and towergeeks.org
- Freescale's website: freescale.com/towersensorpakauto

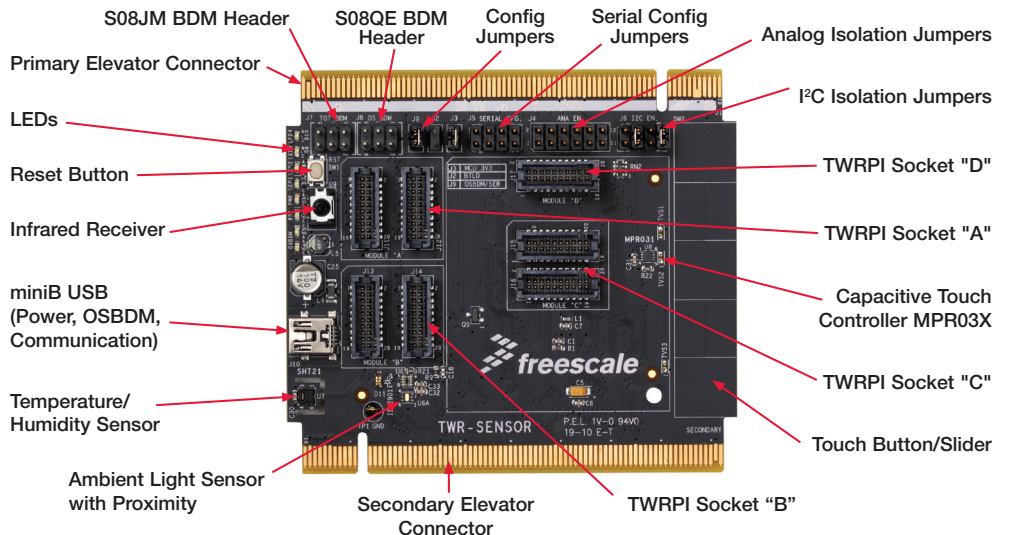
Overview

Freescale's Tower System automotive sensor modules are designed to save you development time for automotive applications, such as airbag systems, electronic stability control, electric parking brake, tilt angle measurement and engine control.

The Tower System automotive sensor modules combine 8-bit computing, sensors and analog products into a single stand-alone board. The Tower System board has a 8-bit microcontroller with 6 KB of RAM, 96 KB of flash, and supports the full range of Freescale Xtrinsic automotive sensors via plug-in daughter boards. The kit offerings also include complete development boards for the PSI5 or DSI communication protocols for satellite sensors.

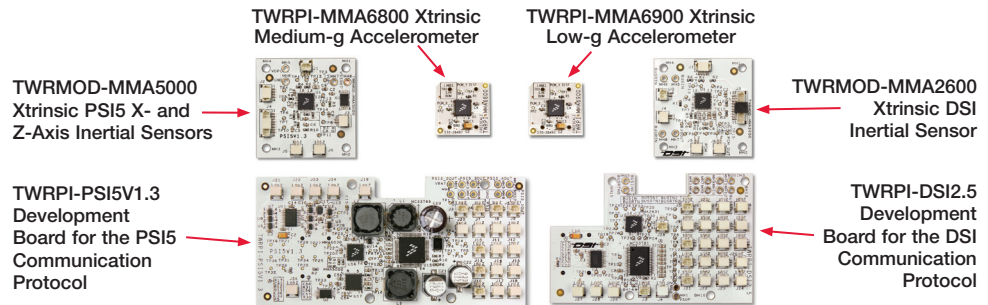
The Tower System is a trusted platform for programming with the automotive sensor modules, which goes beyond simple device evaluation. Freescale provides software drivers and examples within the firmware which may be reused for application development.

Get to Know the TWR-SENSOR-PAK-AUTO



Tower System Automotive Sensor Modules: At a Glance Offering

- Interchangeable Freescale sensor modules
 - Low-g XY accelerometer (MMA6900)
 - Medium-g XY accelerometer (MMA6500/MMA6800)
 - High-g X and Z sensors with PSI5 protocol (MMA5000)
 - High-g X and Z sensors with DSI protocol (MMA1600/MMA2600)
 - Development boards for PSI5 (MC33789) and DSI (MC33781) communication protocols
- On-board MCU (MC9S08QE96)
 - Stand-alone operation
 - Slave MCU mode
 - Tower System MCU mode (with limited peripheral connectivity)
 - Touch-sensing software evaluation
- OSBDM/serial-to-USB
 - On-board MC9S08JM60 MCU
 - OSBDM support for MC9S08QE96 MCU
 - Serial-to-USB support



Development Tools

Kit Number	Includes
TWRPI-MMA6900	Tower System plug-in board includes the Xtrinsic MMA6900 Low-g accelerometer
TWRPI-DSI2.5	Development board for the DSI communication protocol (Uses MC33781 as a master device for four differential DSI 2.5 buses)
TWRMOD-MMA2600	Xtrinsic DSI high-g X- and Z-axis sensors (MMA1600/MMA2600)
TWRPI-PSI5V1.3	Development board for the PSI5 communication protocol (Uses airbag system basis chip (SBC) MC33789)
TWRMOD-MMA5000	Xtrinsic PSI5 X- and Z-axis inertial sensors (MMA5000)
TWRPI-MMA6800	Xtrinsic medium-g MMA6800 accelerometer
TWRPI-MMA6500	Xtrinsic medium-g MMA6500 accelerometer
TWRSKT-MMA2600	Additional plug-in socket board to test and characterize the Xtrinsic MMA1600/MMA2600 inertial sensors
TWRSKT-MMA5000	Additional plug-in socket board to test and characterize the Xtrinsic MMA5000 inertial sensors

*Contact Freescale for lead time availability

About element14

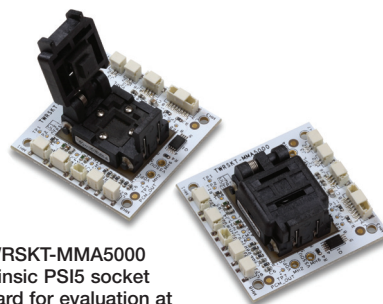
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Documentation

Document Title	Description
Tower System Quick Start Guides	Each board includes an online guide to help you get up and running quickly
GUI	Documentation screens are included throughout the user-friendly GUI software



TWRSKT-MMA5000 Xtrinsic PSI5 socket board for evaluation at device level

Tower Geeks Online Community

TowerGeeks.org is an online design engineer community that allows members to interact, develop designs and share ideas. Offering a direct path to explore and interact with other engineers designing with the Tower System, TowerGeeks.org is a great way to discuss your projects, post videos of your progress, ask questions through the forum and upload software. With updates through Twitter and Facebook, it's easy to get involved.

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For current information about Freescale products, please visit freescale.com/towersensorpakauto

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Document Number: TWRPAKAUTOFS REV 0