TWRPI-MMA6900
Accelerometer plug-in module
for the Tower System

freescale
semiconductor

Get to know the TWRPI-MMA6900

Features

- MMA6900Q: ±3.5 g (11-bit data sensitivity = 3.43 mg/digit typical at 25 degrees C)
- Low detection threshold of 8.6 mg (acceleration) or >= 0.5 degrees (angle)
- Offset tolerance value at 25 degrees C (+/- 30 mg) and over temperature (+/-50 mg)
- Embedded signal processing including fault and overload diagnostic flagging
- 11-bit SPI-compatible digital data
- Bi-directional internal self-test
- Qualified AEC-Q100
- Wide operating temperature range from -40 degrees C to +105 degrees C
- Over-damped transducer
- Robust 6 x 6 mm QFN package with greater than 100 kHz package resonance frequency
- 3.3 V or 5 V single supply operation

Step-by-step installation instructions

In this Quick Start Guide, you will learn how to install the TWRPI-MMA6900 Tower plug-in.

STEP 1
Install the TWRPI-MMA6900

- Identify an open general purpose TWRPI socket on a TWRPI-compatible Tower System module.
- Identify the correct orientation of the TWRPI-MMA6900.
- Carefully insert the TWRPI-MMA6900 into the available general purpose TWRPI socket. The TWRPI is keyed and uniquely sized to only fit in the appropriate TWRPI socket with the correct orientation.

STEP 2
Verify latest software installation

- Check **freescale.com/tower** for software updates regarding the TWRPI-compatible Tower System module. Updating the software on the respective Tower System module will ensure that the TWRPI you are adding is fully supported.

STEP 3
Follow the respective Tower System module Quick Start Guide

- Follow the appropriate instructions located in the Quick Start Guide of the TWRPI-compatible Tower System module.

STEP 4
Explore additional resources

- Additional documentation and software resources related to the TWRPI-MMA6900 are available at **freescale.com/tower**.

To learn more about the TWRPI-MMA6900 and other modules within the Tower System, visit **freescale.com/tower**. To become a member of the online Tower Geeks community, visit **towergeeks.org**.

freescale™
semiconductor