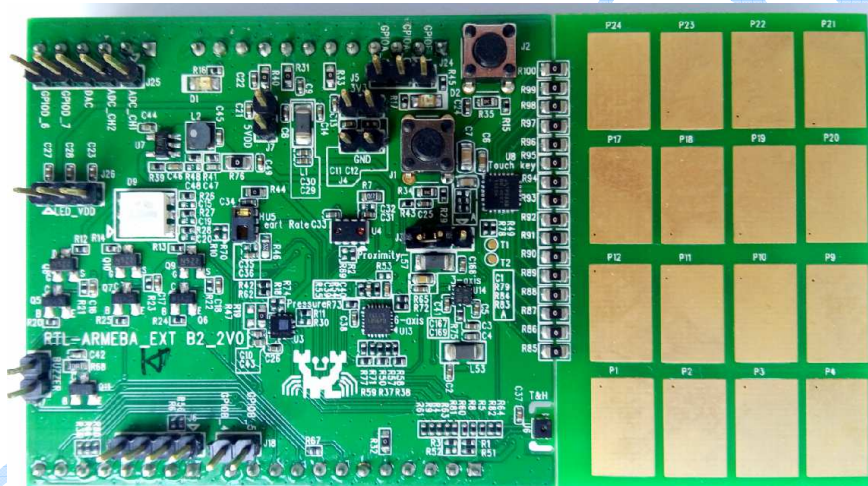


PRODUCT SPECIFICATION
WFM250 Booster Pack

WFM250 SENSOR BOARD

(MPU-6500A) SENSOR BOARD



Data Sheet V1.0 (2015/08/18)

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Document History

| Revision | Date | Description |
|----------|------------|-----------------|
| V1.0 | 2015/08/18 | Initial version |
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1. Introduction

The WFM250_SEVK is WFM250_EVK sensors expanded evaluation and exploitation. WFM250_SEVK interior includes Smart-Bezel Touch Button, Integrated Heart Rate Sensor, Integrated Proximity and Ambient Light Sensor, digital output barometer, Humidity and Temperature Sensor, 3-Axis Accelerometer and triple-axis MEMS gyroscope. It must be used with WFM250_EVK use.

The MPU-6500 is a 6-axis Motion Tracking device that combines a 3-axis gyroscope, 3-axis accelerometer, and a Digital Motion Processor™ (DMP) all in a small 3x3x0.9mm package. It also features a 4096-byte FIFO that can lower the traffic on the serial bus interface, and reduce power consumption by allowing the system processor to burst read sensor data and then go into a low-power mode. With its dedicated I2C sensor bus, the MPU-6500 directly accepts inputs from external I2C devices.

2. Key Features

Gyroscope Features

The triple-axis MEMS gyroscope in the MPU-6500 includes a wide range of features:

- Digital-output X-, Y-, and Z-axis angular rate sensors (gyroscopes) with a user-programmable fullscale range of ± 250 , ± 500 , ± 1000 , and $\pm 2000^\circ/\text{sec}$ and integrated 16-bit ADCs
- Digitally-programmable low-pass filter
- Gyroscope operating current: 3.2mA
- Factory calibrated sensitivity scale factor
- Self-test

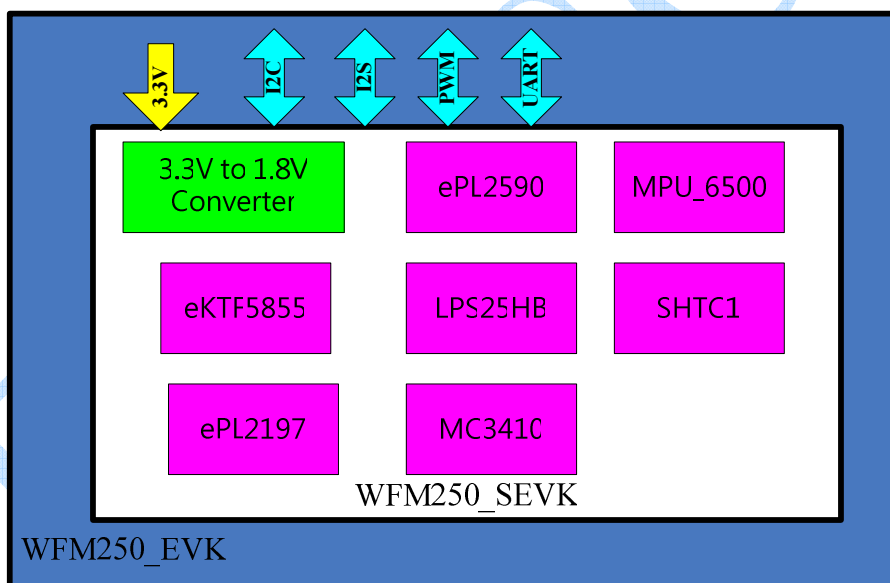
Accelerometer Features

The triple-axis MEMS accelerometer in MPU-6500 includes a wide range of features:

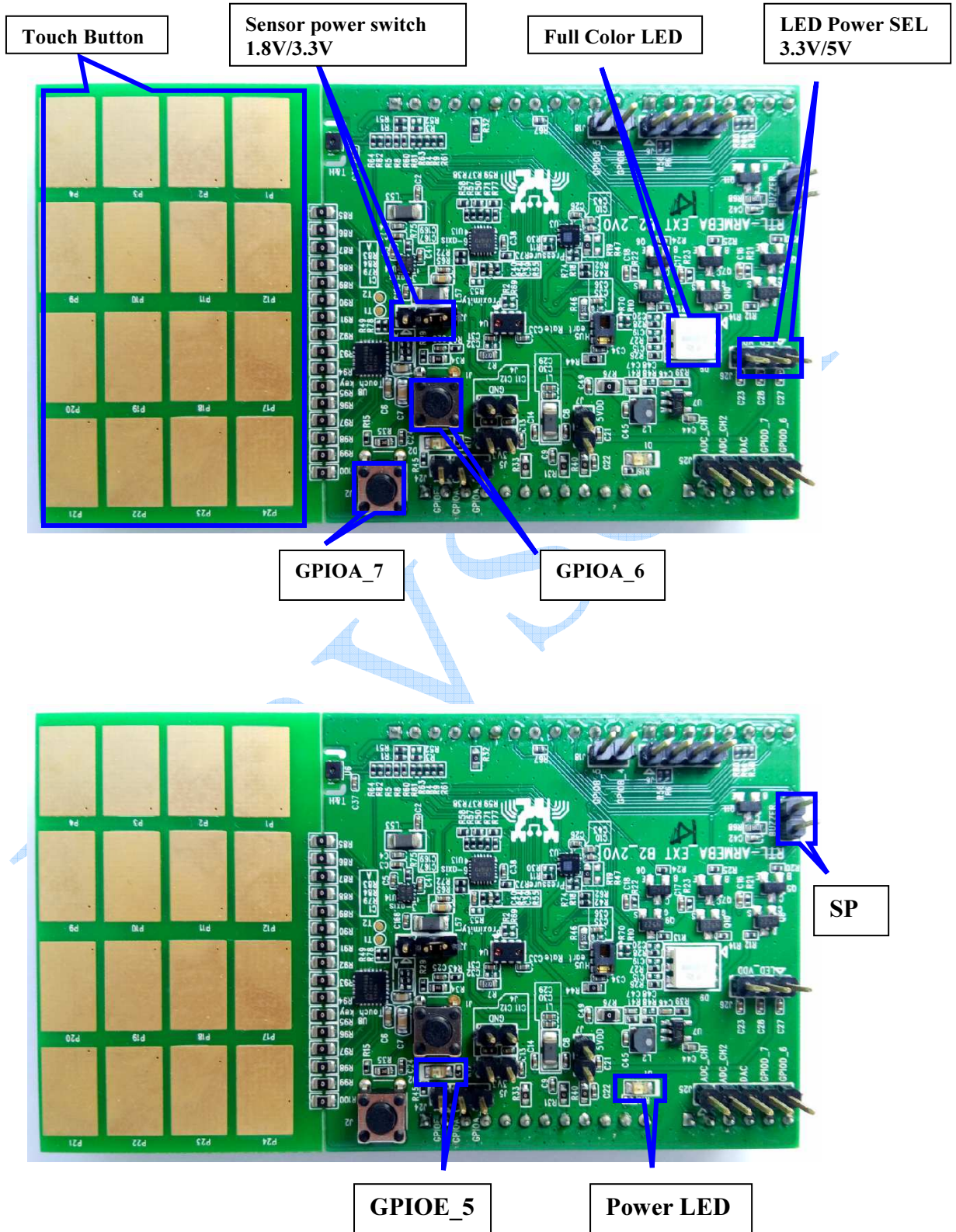
<http://www.rayson.com>

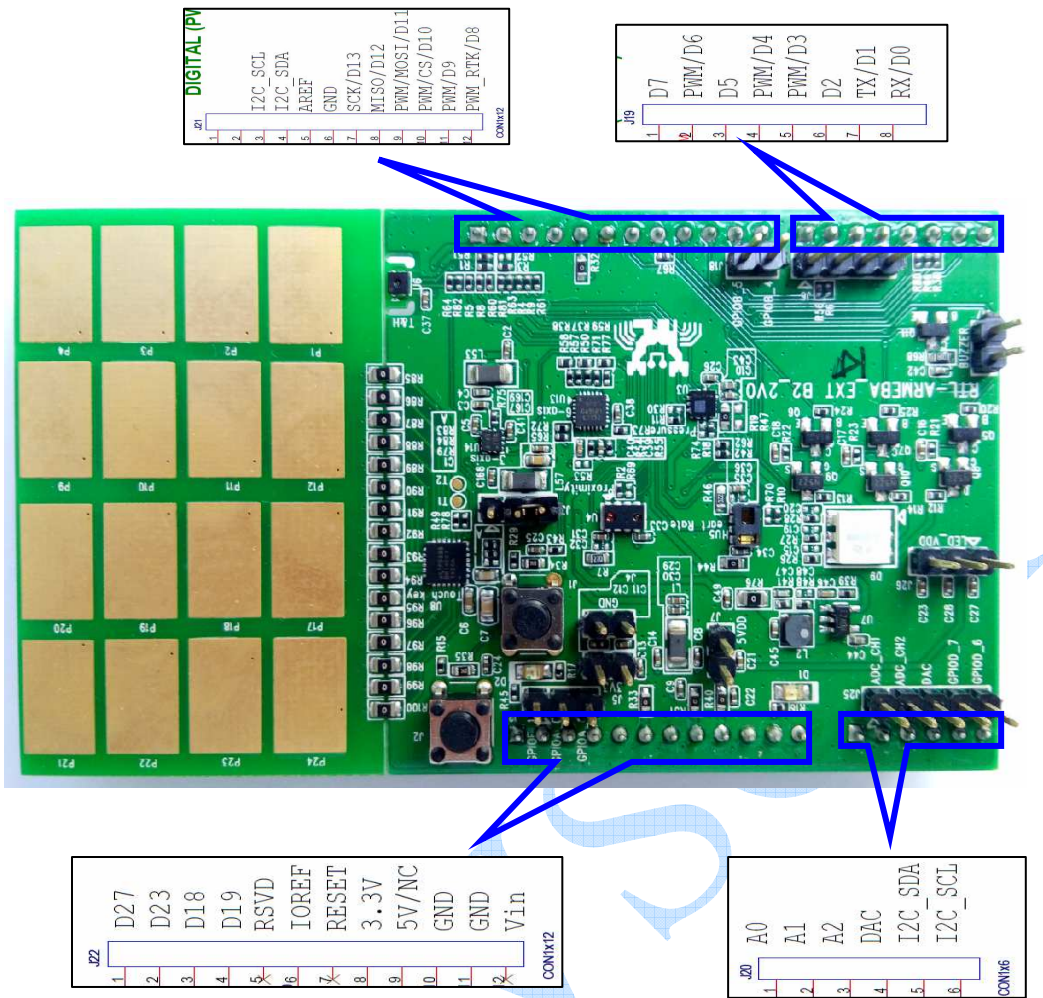
- Digital-output X-, Y-, and Z-axis accelerometer with a programmable full scale range of $\pm 2g$, $\pm 4g$, $\pm 8g$ and $\pm 16g$ and integrated 16-bit ADCs
- Accelerometer normal operating current: $450\mu A$
- Low power accelerometer mode current: $6.37\mu A$ at $0.98Hz$, $17.75\mu A$ at $31.25Hz$
- User-programmable interrupts
- Wake-on-motion interrupt for low power operation of applications processor
- Self-test

3. Block Diagram



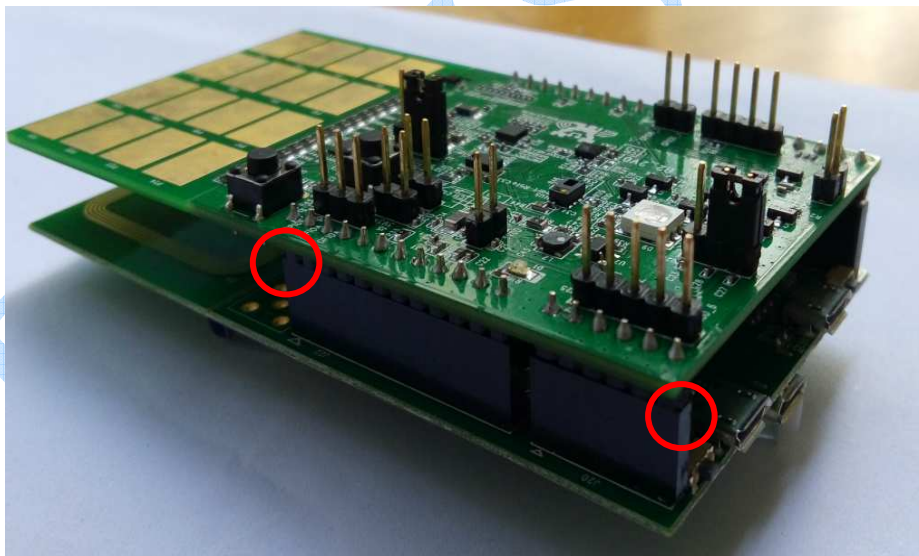
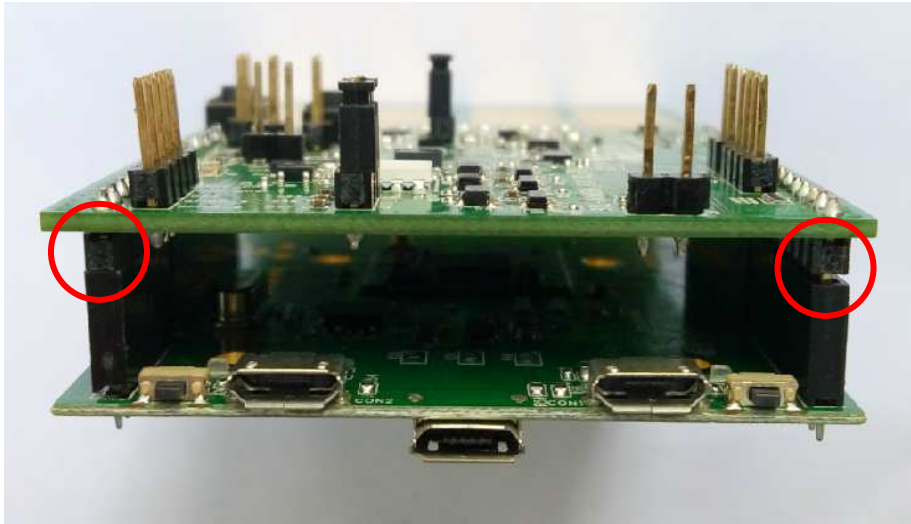
4. Hardware Description





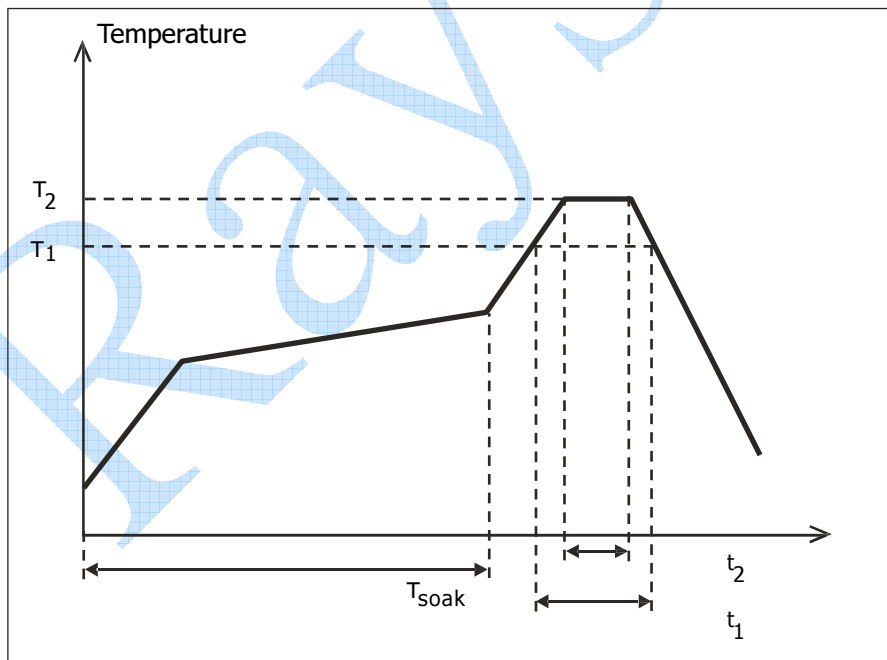
5. Connecting to WFM250

In the plug WFM250 Booster Pack Please note that when strip deformation and human hand injury.



6. Furnace temperature curve

| Reflow profile requirements | | |
|--|-------------------|---------------------------------|
| Parameter Specification | Reference | Specification |
| Average temperature gradient in preheating | | 1~2.5°C/s to 175°C equilibrium. |
| Soak time | T_{soak} | 120~180 seconds |
| Time above 217°C (T_1) | t_1 | 45~90 seconds |
| Peak temperature in reflow | T_2 | 250°C (-0/+5°C) |
| Time at peak temperature | t_2 | 6 seconds |
| Temperature gradient in cooling | | 6°C/second max. |



End of Datasheet

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