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## 1 Abstract

The ZSOM-Control whadware design has been revised.

The new Hardware revision is 1.2

The Relevant changes are listed in this document. Unless otherwise noted, V1.2 will be delivered from July 2020 on.

## 2 Product Changes

### 2.1 LEDs

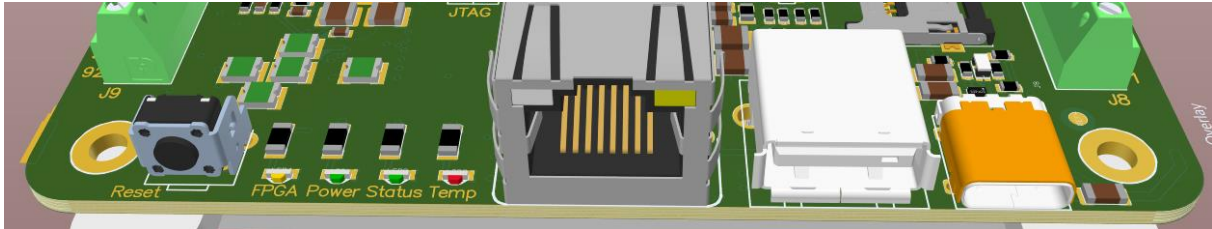


Figure 1 Version 1.2

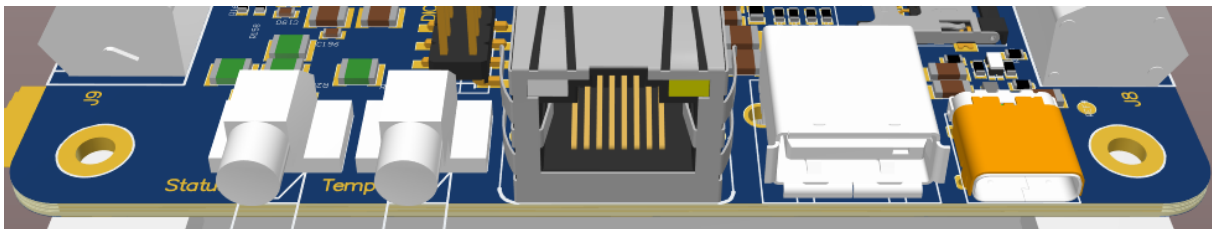


Figure 2 Version 0.1 and 1.0

#### 2.1.1 The LEDs on the edge of the board have been moved.

This is due to the following changes:

#### 2.1.2 The Light pipes are no longer mounted on the board.

Light pipes can be implemented in a housing of the user application if needed.

#### 2.1.3 Power LED added

The LED is on as long as the board is powered.

#### 2.1.4 FPGA LED added

THE LED can be controlled by the FPGA application.

### 2.2 Reset button

The reset button has been moved to the edge of the board for better accessibility

### 2.3 SD Card

The SD Card has not been functional in previous hardware versions. Note: The Micro SD can only be exchanged when board is not powered,

## 2.4 SIM card



Figure 3 Version 1.2

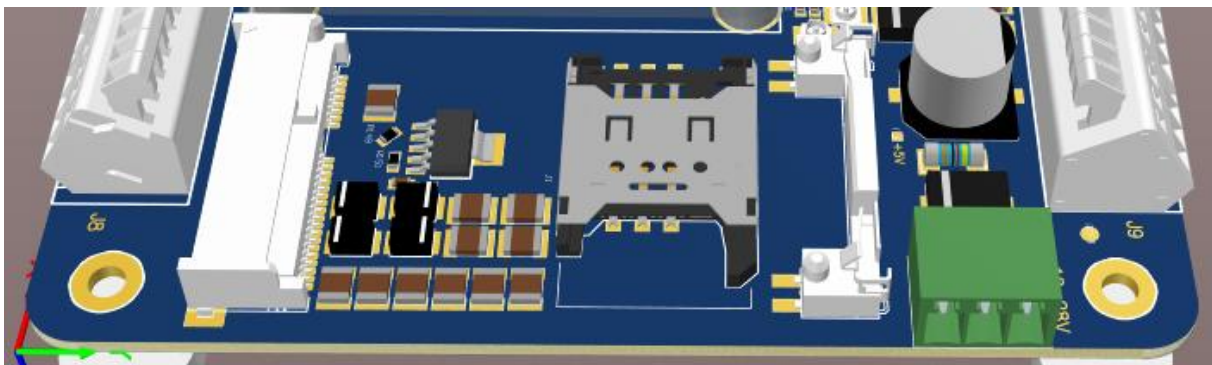


Figure 4 Version 0.1 and 1.0

The new design has a Nano SIM card holder. Previous designs had Mini SIM card holders. The card is accessible when module and heat spreader are mounted.

## 2.5 DIO

The DIOs have 20kOhm pull ups. Previous designs had 47kOhm pull downs. This allows for direct connection of switches and I<sup>2</sup>C devices.

## 2.6 ADC

The Input impedance is now 1MOhm. Previous designs had 10MOhm. The filter characteristics have changed. **TDB**

## 2.7 DAC

The maximum current allowed is now allowed on all four channels. In previous designs the maximum output current was the sum of all four channels. The antialiasing filter has been improved.

## 2.8 9 Axis IMU

A smart sensor combining accelerometer, gyroscope, magnetometer and orientation software has been added to the design.

### 2.9 Connection pads

The connection pads are reduced to a single row. The position of the screw terminals has not changed. The second row of holes are replaced by test pads. The design allows now for mounting pin header rows.

## 3 Document Revisions

Date		Revision
06.07.2020	ba	First Version

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INTERIM