

## Sensor Add-On Module



Sensor module consists of Ambient light sensor, proximity sensor, temperature sensor and accelerometer.

ISL29023 is an integrated ambient and infrared light to digital converter with I2C Interface. Its advanced self-calibrated photo diode array emulates human eye response with excellent IR rejection. Variation in light intensity falling on the sensor is detected.

VCNL3020 is a fully integrated proximity sensor. Any movement in-front of the module will make the proximity value to change.

TMP102 is a serial output temperature sensor. The device is specified for operation over a temperature range of  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

MMA8452Q is a smart, low-power, three-axis, capacitive, micro machined accelerometer.

These sensors communicate with the processor through I2C interface. Interface connector of UTLP is used to connect UTLP to the sensor add-on board.

## Technical Specification

<b>Ambient light sensor</b>	<b>ISL29023IROZ-T7</b>
<b>Power Supply Range</b>	<b>2.25 to 3.63V</b>
<b>Supply current</b>	<b>85µA max</b>
<b>Vendor</b>	<b>Intersil</b>
<b>Accelerometer</b>	<b>MMA8452QT</b>
<b>Supply voltage</b>	<b>1.95 to 3.6V</b>
<b>Supply current</b>	<b>165µA max</b>
<b>Vendor</b>	<b>Freescale Semiconductor</b>
<b>Proximity Sensor</b>	<b>VCNL3020-GS08</b>
<b>Supply voltage</b>	<b>2.5 to 3.6V</b>
<b>Supply current</b>	<b>4mA max</b>
<b>Vendor</b>	<b>Vishay</b>
<b>Temperature Sensor</b>	<b>TMP102AIDRLT</b>
<b>Supply voltage</b>	<b>1.4 to 3.6V</b>
<b>Supply current</b>	<b>85µA max</b>
<b>Vendor</b>	<b>Texas instruments</b>
<b>Interface</b>	<b>I2C</b>
<b>Connector part no</b>	<b>P9134-02024-4</b>
<b>Connector Type</b>	<b>Dual row Pin Right Angle header (20 pin connector)</b>
<b>Pitch</b>	<b>1.27mm</b>

## Interface Connector Pin Description

Pin	Signal Name	Description
1	NC	No Connection
2	NC	No Connection
3	NC	No Connection
4	NC	No Connection
5	GND	GROUND
6	GPIO158	GPIO from OMAP Processor
7	GPIO162	GPIO from OMAP Processor
8	GND	GROUND
9	GPIO161	GPIO from OMAP Processor
10	GPIO159	GPIO from OMAP Processor
11	GPIO156	GPIO from OMAP Processor
12	GND	GROUND
13	GPIO157	GPIO from OMAP Processor
14	I2C2_SDA	I2C2 Serial Data
15	I2C2_SCL	I2C2 Serial Clock
16	3.3V	3.3V
17	3.3V	3.3V
18	GND	GROUND
19	5V	5V
20	GND	GROUND

## Power Requirements

Sensor Add-On board needs 3.3V external power supply which can directly be drawn from UTLP.  
The Power Pins are as follows:

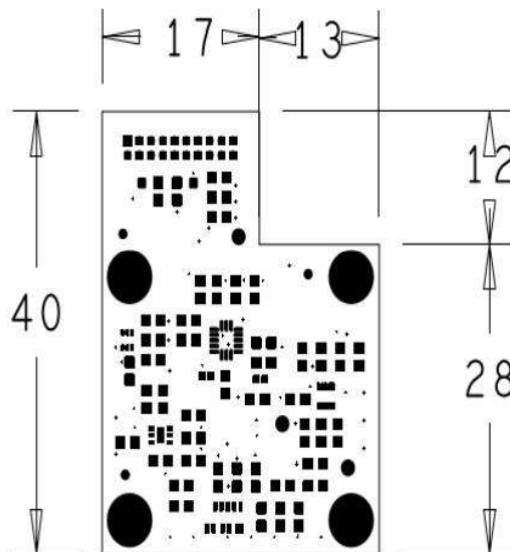
**VCC\_3V3:** The input voltage to the sensor Add-on module from UTLP through 20 Pin interface connector.

**GND:** Ground pins.

A **20 Pin Interface connector** is used as an interface between the sensor board and UTLP.

I2C bus is used for communication between the sensor add-on board and UTLP.

The length and width of the Sensor Add-On module is 40mm X 30mm. Four mounting holes allow the board to be attached to a surface or case.



\*All dimensions are in mm

## Contact Details

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