

# OPTIGA™ TPM SLM 9670 Industrial Grade TPM

The OPTIGA™ TPM SLM 9670 is a member of the OPTIGA™ TPM family. It addresses the requirements of industrial and other demanding applications where an extended temperature range, an extended lifetime and industrial-grade quality are key.

Pushing beyond the qualifications processes performed for standard TPMs, the OPTIGA™ TPM SLM 9670 is qualified according to the industrial JEDEC JESD47 standard to enable the requisite performance under demanding environmental conditions.

OPTIGA™ TPM SLM 9670 offers high levels of flexibility to address innovative use cases of Smart Factories and Industry 4.0 that call for robust security

Heatmap indicator: Industrial - PLC, Diagnostics, Computing Security				
AMERICAS	JAPAN	GC	AP	EMEA



## Features

- > Standardized security chip compliant with TCG TPM 2.0 standard
- > Secured storage for critical data and secrets
- > Advanced protection mechanisms against physical and logical attacks
- > Support of cryptographic algorithms RSA-1028, RSA-2048, ECC NIST P256, ECC BN256, SHA-1, SHA-256
- > temp. range -40°C to 105°C
- > lifetime of 20 years
- > JEDEC JESD47 industrial qualification
- > Independently security evaluated and certified

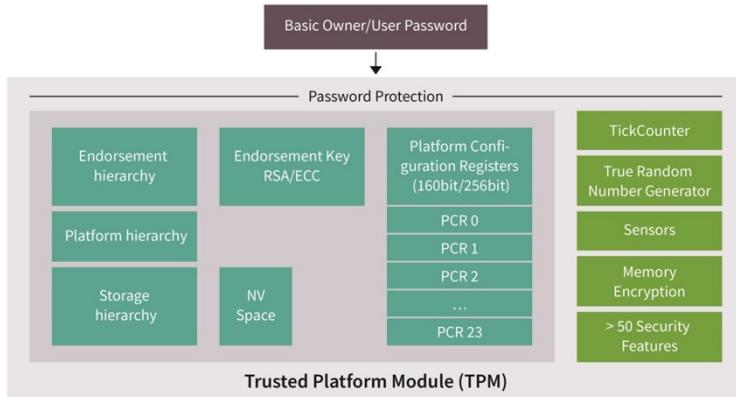
## Evaluation board: Iridium board SLM 9670 TPM2.0

Iridium add-on board for Raspberry Pi, for integration into corresponding platform OS (Linux, Win10IoT, etc.)

- > 3 V or 1.8 V power supply
- > Plug & play with 26-pin Raspberry Pi 1 header, compatible with Raspberry Pi 2 & 3
- > Reset manually via push-button or via RST signal from Raspberry Pi



## Diagram



## Benefits

- > Standardized and certified security chip
- > Physically separated from the main processor
- > Building block for secured computing platforms and embedded systems

## Competitive advantage

SLM 9670 is equipped with a variety of functions to secure industrial devices and systems. These include:

- Key storage and management
- Identification and authentication
- Signature generation and verification
- Software and firmware integrity attestation
- Secured logging and secured time

## Target applications

- > Industrial PCs
- > Servers
- > Programmable Logic Controllers (PLC)
- > Industrial Network Infrastructure & Equipment Including
- > Gateways
- > Routers
- > Wireless Access Points
- > Switches

## Product collaterals / Online support

- > [Product page](#)
- > [Product brief](#)
- > [Application notes](#)
- > [Tools & Software](#)
- > [Product presentation](#)

## Product overview incl. data sheet link

OPN	SP Number	Registerable	MDQ	MQQ	MOQ	Package	DC in €/100 pcs
<a href="#">SLM9670AQ20FW1311XTMA1</a>	SP002676674	Y	5000	5000	5000	PG-VQFN-32	121
<a href="#">IRIDIUMSLM9670TPM20TOBO1</a>	SP001793410	Y	-	-	1	board	3.900

# XENSIV™ DPS368 - ultra small waterproof pressure sensor

Heatmap indicator: home appliances, drones, healthtech, wearables

AMERICAS	JAPAN	GC	AP	EMEA
Green	Yellow	Green	Green	Green

XENSIV™ DPS368 is a miniaturized digital barometric pressure sensor capable of measuring both pressure and temperature. It offers an ultra-high precision ( $\pm 2$  cm) and a low current consumption for precise measurement of altitude, air flow & body movements. Due to its robust package, it can withstand 50 m under water for one hour (IPx8) and protects the sensing cells against dust and humidity. Additionally, the robustness facilitates handling in assembly line.

The small package ( $2.0 \times 2.5 \times 1.1$  mm $^3$ ) saves up to 80% space compared to other waterproof sensors, which makes the DPS368 ideal for mobile applications and wearable devices.

## Features

- > Package dimensions: 8-pin LGA,  $2.0 \times 2.5 \times 1.1$  mm $^3$
- > Waterproof: IPx8 (50m, 1 hour)
- > Operation range: Pressure: 300 – 1200 hPa Temperature: -40 – 85 °C
- > Precision:  $\pm 0.002$  hPa (or  $\pm 0.02$  m)
- > Rel. accuracy:  $\pm 0.06$  hPa (or  $\pm 0.5$  m)
- > Abs. accuracy:  $\pm 1$  hPa (or  $\pm 8$  m)
- > Temperature accuracy:  $\pm 0.5$  °C
- > Avg. current consumption:  
1.7  $\mu$ A (pressure measurement) @1Hz sampling rate, Standby: 0.5  $\mu$ A.
- > Integrated FIFO
- > Interface: I2C and SPI (both with optional interrupt)
- > Green Product (RoHS) Compliant

## Benefits

- > Best-in-class resolution ( $\pm 0.02$  m)
  - precise measurement of altitude, air flow & body movements
- > High measurement rate (up to 200Hz) & fast read-out
  - quick sensor feedback
- > 50% less power consumption than competitor product when running in full speed due to capacitive technology (AC biasing)
  - longer battery lifetime
- > Robust against water (IPx8, 50 m under water for 1 hour), dust & humidity
  - can be used in harsh environment & facilitates handling in assembly line
- > Very small water resistant package ( $2.0 \times 2.5 \times 1.1$  mm $^3$ )
  - space saving up to 80% compared to other waterproof pressure sensors



## Evaluation board: Sensor Hub Nano DPS368

Infineon sensor hub nano hosts one DPS368 and XMC1100 32-bit ARM Cortex-M0 MCU. The sensor hub nano can communicate to PC or Android™ smart phone wirelessly, thanks to integrated Bluetooth® 4.0 and battery.

Infineon sensor hub nano can be used for quick testing and evaluation of DPS368 and is compatible with Infineon Sensor Software Analyzer (SES2G) and Infineon apps.

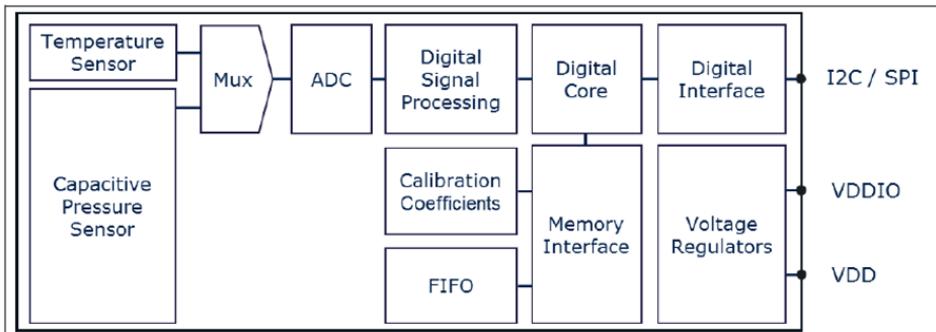
## Competitive advantage

- > Robust against water (IPx8), dust & humidity
- > Smallest IPx8 (50m) certified pressure sensor in the market
- > Ultra high resolution:  $\pm 0.002$  hPa resolution equal to  $\pm 2$  cm

## Target applications

- > Smart watches & wearables
- > Home appliances
- > Drones
- > Health care

## Block diagram



## Product collaterals / Online support

- > [Product page](#)
- > [Product page Evalboard](#)
- > [Product family page](#)
- > [Product brief](#)
- > [Video](#)
- > [App note air flow monitoring](#)
- > [App note water resistant systems](#)
- > [Customer connector](#)
- > [Product presentation](#)

## Product overview incl. data sheet link

OPN	SP Number	Registerable	MDQ	MQQ	MOQ	Package	DC in €/100 pcs
<a href="#">DPS368XTSA1</a>	SP002157814	Y	10000	10000	2500	PG-VLGA-8-2	85
<a href="#">EVALSHNBV01DPS368TOBO1</a>	SP003339264	-	-	-	1	board	4.800

Classification: restricted document! The information presented is valid from May 1<sup>st</sup> 2019. Please check the latest Distribution Price Book for current prices and minimum quantities.