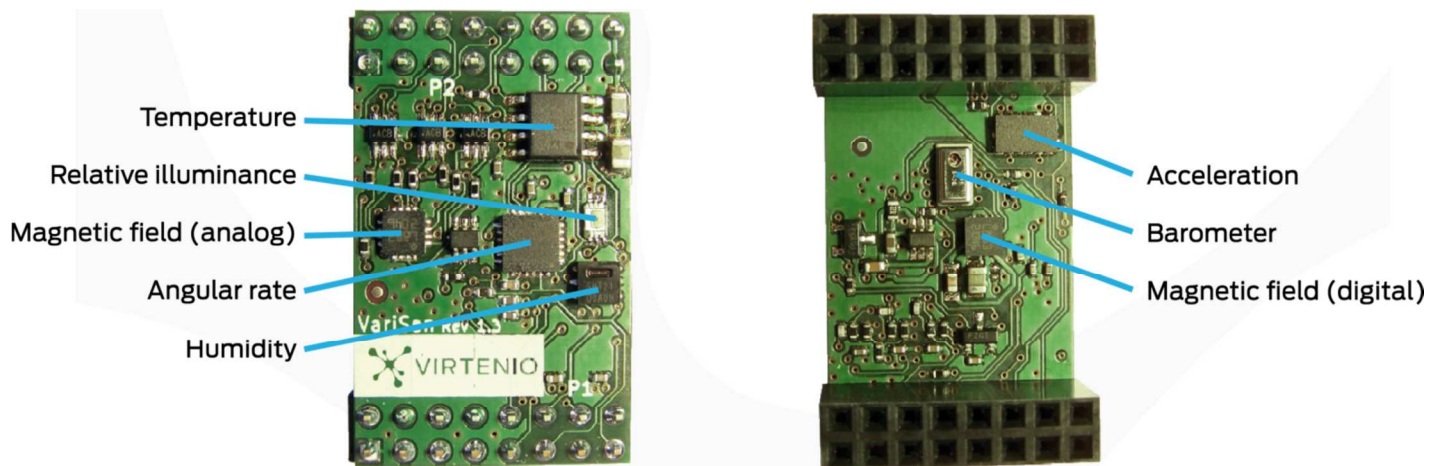


Sensor board for the expansion board Preon32Shuttle



Product features

- Up to eight different sensors are combined on one board:
 - Digital temperature sensor (ADT7410) from Analog Devices
 - Digital light sensor (BH1715FVC) from ROHM
 - Digital humidity sensor (SHT21) from Sensirion
 - Digital barometer (MPL115A2) from Freescale
 - Digital 3-axis accelerometer (ADXL345) from Analog Devices
 - Digital 3-axis angular rate sensor / gyro (ITG-3200) from InvenSense
 - Digital 3-axis magnetic field sensor (HMC5883L) by Honeywell
 - Analog 3-axis magnetic field sensor (HMC1043) by Honeywell
- Available in different assembly variants

Description

The sensor board "VariSen" is a versatile development platform for the expansion board Preon32Shuttle. It contains up to 8 different sensors for physical quantities such as acceleration, rotation rate, magnetic field strength, air pressure and light intensity. All sensors can be accessed through the virtual machine with Java™ drivers from VIRTENIO. Depending on the desired application, different assembly variants of the sensor boards are available.

Application

- Home automation, logistics and climate monitoring, navigation, motion analysis
- Platform for development, research and teaching
- Implementation of novel applications in wireless networks
- Algorithms for sensor data fusion

Table 1: Technical data sensors
Sensors

ADT7410: Digital temperature sensor
 Coverage: -55 - 150 °C
 Resolution: 13 bit
 Tolerance: ± 0.5 °C in the range -40 - 105 °C

BH1715FVC: Digital light sensor
 Coverage: 1-65535 lx
 Resolution: 16 bit

SHT21: Digital humidity sensor
 Coverage: 0 - 100% relative humidity
 Resolution: 12 bit

MPL115A2: Digital barometer
 Coverage: 50 -150 kPa
 Resolution: 0.15 kPa

ADXL345 Digital 3-axis acceleration sensor
 Coverage: -16g to +16 g
 Resolution: 13-bit

ITG-3200: Digital 3-axis angular rate sensor
 Coverage: -2000 To +2000 °/s
 Resolution: 14 LSBs per °/s

HMC5883L: Digital 3-axis magnetic field sensor
 Coverage: -8 To +8 Gauss
 Resolution: 12 bit

HMC-1043: Analog 3-axis magnetic field sensor
 Coverage: -6 To +6 Oe

General

Dimensions: 20x33x12mm (LxWxH)

Supply voltage: 2.7 to 3.6 V