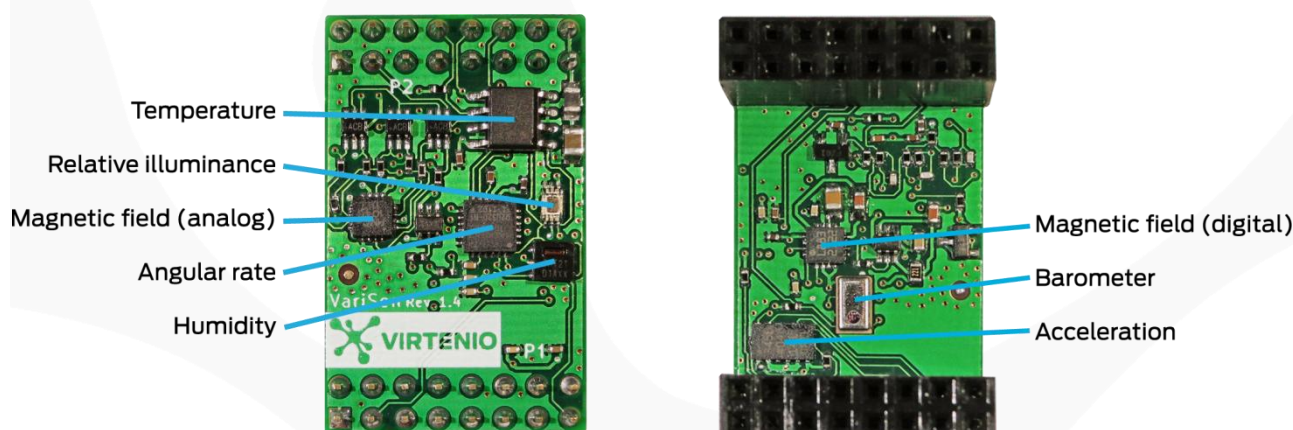


Sensor board for the expansion board Preon32Shuttle



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

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