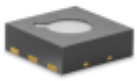
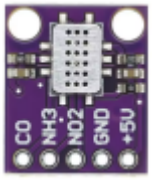
LamaPLC: Sensors

The page below lists sensors compatible with microcontrollers such as Arduino, Raspberry Pi Nano, ESP32, and ESP8266, as they operate at 3.3V/5V signal levels.

The search is easier in the summarized abbreviation index, depending on the type designation.

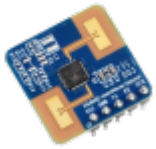
Temperature, Humidity, Air-pressure, Gas, Air-quality Sensors and Module

 AHT10 Modul Temperature, Humidity + Arduino example code	 ENS160 + AHT21 Air Quality Sensor - CO, ECO, TVOC, Temp & Humidity Module
 AHT20/BMP280 Modul Temperature, Humidity, Air pressure + Arduino example code	 MAX31865 RTD to Digital Converter - PT100/PT1000 Platine
 PTA8C04 4-channel PT100 Modbus Modul with Modbus RTU + Holding Registers Description	 NT18B07 7 Kanal RS485 Temperature Sensors with Modbus RTU + Holding Registers Description
 DS18B20 1-Wire Digital Thermometer	 BMP/BME Bosch Temperature/Humidity/Pressure sensors with I²C communication (BME280, BME680, BMP180, BMP280, ...)
 DHT Temperature / Humidity sensors with 1-wire / I²C communication (DHT11, DHT20, DHT22/AM2302, ...)	 DPS Infineon Temperature/Pressure sensors with I²C communication (DPS310)
 D6T Omron Non-Contact Thermal Sensors with I²C communication (D6T-32L, D6T-44L, D6T-8L, D6T-1A, ...)	 GM MEMS Gas-sensors (GM-102b, GM-302b, GM-502b, GM-702b, ...)

 ENS ScioSense Multi-gas sensors with I²C communication (ENS-160)	 HTU TE Connectivity temperature/humidity sensors with I²C communication (HTU-21)
 MQ Winsen Gas-sensors (MQ-2, MQ-3, MQ-4, MQ-5, MQ-6, MQ-7, MQ-8, MQ-9, MQ-131, MQ-135, MQ-137, ...)	 SGP SGP Sensirion TVOC/VOC sensors with I²C communication (SGP30, SGP40, SGP41, ...)
 SHT Sensirion Temperature/humidity sensor with I²C communication (SHT20, SHT21, SHT25, SHT30, SHT31, SHT35, SHT40, GY21, ...)	 HDC Texas Instruments Temperature/humidity sensors with I²C communication (HDC-1080)
 CJMCU-6814 combined gas sensor module for CO, NO_2, NH_3 (MICS-6814)	 MH-Z19 series of NDIR CO^2 sensors (MH-Z19B, MH-Z19C, MH-Z19D, MH-Z19E)
 CJMCU-811 CCS811 Gas Sensor (VOCs TVOC CO2)	 Sension SCD CO^2 measurement module (SCD30)
 Sension SCD CO^2 measurement module (SCD40, SCD41)	 MLX90614 (GY-906) infrared non-contact thermometer

Distance measurement, Gesture Recognition, Optical flow, Motion

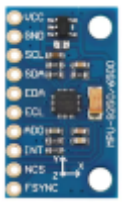
 HC-SR04 Ultrasonic Sensor Module	 VL53Lnn STMicroelectronics time-of-flight (ToF) laser-ranging sensors with I²C communication (VL53L0X, VL53L1X, VL53L0/1XV2, GY-530, ...)

 VL6180X STMicroelectronics Time-of-Flight (ToF) sensor with I²C communication	 TOFnnnC STMicroelectronics Time-of-Flight (ToF) sensors with I²C communication (TOF050C, TOF200C, TOF400C, ...)
 PAJ Pixart gesture recognition sensors/module with I²C communication (PAJ7620U2, GY-PAJ7620)	 APDS Avago ALS and proximity detection sensors with I²C communication (APDS-9900, APDS-9930, APDS-9960)
 M01 V0.4 Laser ranging sensor with UART communication	 A0221AU/A02YYUW Waterproof Ultrasonic Distance Sensor with UART communication
 Waveshare TOF Laser Range Sensor with UART / I²C communication	 RD-XX Ai-Thinker Radar Module with UART communication (RD-01, RD-03, RD-03D, ...)
 RCWL Microwave radar sensor (RCWL-0516)	 CJMCU-3901/PMW-3901 compact optical flow sensor module/IC by PixArt with SPI communication
 PIR sensors (HC-SR501, HC-SR505, AM-312, EKMB/EKMC)	 LM393 sensor (FC-03, HC-89) Infrared Speed Sensor Module

Light, Ambient light, Proximity

 CJMCU-3216 / AP-3216 integrated digital ambient light and proximity sensor module/IC with I²C communication	 LM393 (KY-026) Flame Sensor (IR) Module

Motion detection, Magnetometer, Magnetic angle sensors, 6DOF, Vibration

 MPU-9250/6500 9-axis motion detection module	 MPU-6050 (HW-123, GY-521) 6-axis MotionTracking device
 Magnetic angle sensors (AS5047P, AS5600, MT6701, MT6816, MT6835, TLE5012B)	 GY-511 6DOF sensor module
 Vibration sensors (GXFM0459, LDTM-028K)	

Signal Converters, Shift Registers

 PCA9306 I²C Voltage Level Translator	 CJMCU-164 SN74HC164D 8-bit Shift Register Module
 TTL to RS485 Module MAX485	 TCA9548A (HW617); Low-Voltage 8-Channel I²C Switch Module
 MCP23017 / MCP23S17 (CJMCU-2317) 16-Bit I/O Expander with Serial Interface I²C / SPI	 SC16IS750 / SC16IS752 One or two serial (UART) ports from microcontroller via I²C or SPI communication (CJMCU-750, CJMCU-752)
 Texas Instruments ADCs Delta-sigma multi-channel Analog Converters with SPI communication (ADS111x, ADS12xx)	 TXS0108E (HW-0108) 8-channel, bidirectional 5V-3.3V logic level converter

Amplifiers, DC-DC converters, PWM signal converters

 XY_MOS MOS FET Drive Module 400W Support PWM Controller	 CJMCU-8221 Analog Devices Precision instrumentation amplifier module

Weight sensors

 YR-3180 YR-3180 - Weight sensor module with UART or Modbus communication + Modbus map	 HX711 24-bit analog-to-digital converter (ADC)

Energy meters (EM)

Eastron SDM 630 3-phase Energy Meter with Modbus communication + Modbus map	Eastron SDM 230 1-phase Energy Meter with Modbus communication + Modbus map

Energy harvesting (EH)

 LTC-3588 Nanopower energy harvesting power supply IC	 BQ25570 / CJMCU-2557 Texas Instruments nano-power management IC and module
 LTC-3108-1 Ultra Low Voltage Boost Converter Power Manager Breakout Board	

Energy, power, current, voltage, XDCP

 INA-Moduls current/voltage/power monitor with I²C communication INA219 INA226 INA228 INA237 INA238 INA260 INA3221	 CJMCU-219/INA-219 breakout board/IC with I²C communication
 Allegro ACS758 Hall-effect linear current sensors (CJMCU-758)	 Digitales Potentiometer Board Moduls Renesas X9C series (X9C102, X9C103, X9C104, X9C503)

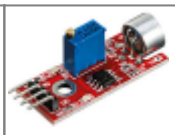
Magnetic, Induction, Angle

 AS5600 Magnetic Induction Angle Measurement Sensor Module

Healthcare sensoric

 MAX30100/MAX30102 Heart Rate Click Sensor Module	 CJMCU-6701 Biosensor for measuring Galvanic Skin Response (GSR) with SPI communication

Audio, Microphone

 MAX4466/MAX9814 Low-noise Microphone Preamplifiers	 LM393 (HW-484, KY-037, KY-038) High-Sensitivity Sound Detection Module