298.00 EUR
incl. 19% VAT, plus shipping

- LoRaWAN !

Support: LoRa keys/format | AT Commands Manual

LS-111P is designed to measure Carbon Dioxide (CO2), Temperature and Humidity by LoRa® long-range and low-power wireless connectivity. It is integrated LoRa® wireless technology, CO2 sensor knowhow and high-performance MCU solution for various IoT markets usage. With calibrated CO2 sensor module and compensated Temperature/ Humidity sensor integration, the data is ready for use. It is perfect for monitoring air quality in schools, office buildings, greenhouses, factories, hotels, hospitals, transportation lines and anywhere high levels of carbon dioxide are generated.

Features:
- LoRaWAN™ compliant
- High receiver sensitivity, long range solution
- Integrated with calibrated CO2 sensor
Accuracy: ±50 ppm, ±3% of reading
Range: 0 ~ 10,000 ppm
- Integrated with compensated Temp/ RH sensor
- Wide range DC power-in, 8~24V /or Micro-USB DC power-in, 5V
- Display CO2 concentration, Temp/ RH
- Alarm LED indicator

LoRa® Module	GlobalSat LM-130H LoRaWAN™ Module
Frequency	863 ~ 870 MHz (EU) 902 ~ 928 MHz (US) 920 ~ 928 MHz (ROA)
LoRa® Antenna	External Omni Antenna 824 ~ 960 MHz 2dBi SMA Male connector
Sensitivity	-132 dBm @ 980 bps
Tx Power	Up to 100 mW
Sensing Element	• CO_2: Gold-plated infrared (NDIR) wave-guide technology with Automatic Baseline Correction (ABC) and passive gas diffusion (no moving parts) • Temperature & Humidity: CMOS sensor

Response Time	• CO_2: < 10 sec. @ 30 cc/min. flow rate < 3 min. diffusion time • Temperature: min. 3 sec.■max. 30 sec. at τ 63% • Humidity: < 8 sec. at τ 63%
Accuracy (at 25■)	• CO_2: ±50 ppm or ±3% of reading • Temperature: ±0.5 ■ • Humidity: ±5 %RH
Repeatability	• CO_2: ± 20 ppm + (±reading * 1%) • Temperature: ±0.3 ■ • Humidity: ±0.3 %RH
Zero Drift	• CO_2: < ± 10 ppm/yr. with Automatic Baseline Correction (ABC) • Temperature: < 0.04 ■/yr • Humidity: < 0.5 %RH/yr
Measurement Range*	• CO_2: 0 ~ 10,000 ppm • Temperature: -40 ~ +125 ■ • Humidity: 0 ~ 85 %RH
Pressure Dependence	CO_2: 1.6 % reading per kPa
Operation Temperature	-10 ~ +60 ■
Operation Humidity	0 ~ 85 %RH, Non condensed. 0 to 50■
Storage Temperature	-20 ~ +70 ■
Warm-up Time	≤ 1 min. (at full specs ≤ 15 mins)
LED Indicator	Orange LED x 1 (by threshold setting, default is 800 ppm) Red LED x 1 (by threshold setting, default is 1000 ppm)
Dimension	Wall-mount: 113.57(H) x 80(W) x 28.79(D) mm
Weight	101 ±2g
Case Material	ABS
Accessories	LoRa® Antenna (External Omni Antenna) x 1 Sensor Programmable Cable (Optional)
Certification	CE, FCC, Telec, ThingPark