

Componentenlijst

benodigdheden voor Lucht kwaliteit meting Hoboken

Component	# nummer	Link	Aantal
LoRa Chip esp32	SX1276	https://jlcpcb.com/partdetail/DreamInk-DL_RFM95868M/C2844472	5
Esp32 MCU	ESP32-WROOM-32-N8	https://jlcpcb.com/partdetail/EspresifSystems-ESP32_WROOM_32N8/C529582	5
Voltage regulator	LD1117S33 TR	https://jlcpcb.com/partdetail/Stmicroelectronics-LD1117S33TR/C86781	5
USB --> UART	CP2102N	https://jlcpcb.com/parts/componentSearch?searchTxt=CP2102N	5
UFL - connector	0734120110	https://www.digikey.be/en/products/detail/molex/0734120110/1894611	5
Antenne LoRa 868MHz		https://www.digikey.be/nl/products/detail/pycom-ltd./SIGFOX%2FLORA%2520ANTENNA%2520KIT/7721843?utm_adgroup=&utm_source=google&utm_medium=cpc&utm_campaign=PMax%20Shopping_Product_Medium%20ROAS&utm_term=&productid=7721843&gclid=Cj0KCQjw06-oBhC6ARIsAGuzdw0quU4vBBvcwUWUPu1ohaDuoyhi4YIcPcKDr1nE_Ml7SZSHsvy-O_UaAuszEALw_wcB	5
Zonnepaneel	110X80	Aanwezig op school	10
Solar power manager DF robot	DFR0559	https://www.dfrobot.com/product-1712.html + stand offs	5
Batterij 3,7V	45F2232	https://www.sossolutions.nl/lithium-ion-batterij-3-7v-1200mah?gclid=Cj0KCQjw06-oBhC6ARIsAGuzdw1UnPXiduS0PeR8wvGpTGsoqaWtrCjvV7uu_FQs_o4fSVID3qY53XXMaApUvEALw_wcB	5
Kabel – 2 draads	(E1052S.41.10) EN50306-3-RAIL-2X0.75	(https://www.digikey.be/nl/products/detail/prysmian-group/E1052S-41-10/618558) https://www.digikey.be/nl/products/detail/te-connectivity-raychem-cable-protection/EN50306-3-RAIL-2X0-75/13590732	2m
Milieu sensor	SEN55	https://www.sensirion.com/products/catalog/SEN55	5
JST connector SEN55	BM06B-GHS-TBT	https://www.digikey.nl/nl/products/detail/jst-sales-america-inc/BM06B-GHS-TBT-LF-SN-N/807850 https://jlcpcb.com/partdetail/207057-BM06B_GHS_TBT_LF_SN_N/C189892	5
Stikstof sensor	SGP41	https://sensirion.com/products/catalog/SGP41 https://jlcpcb.com/partdetail/Sensirion-SGP41_DR4/C9900005629	5
JST connectie kabel	JST GH6	https://www.adafruit.com/product/5754	5
Wartel (voor zonnepaneel kabel)	12002100	https://be.farnell.com/bopla/12002100/metric-cable-gland-mbf-m12-x-1/dp/3216813	5
Installatie doos	Z74H	https://www.tinytronics.nl/shop/en/tools-and-mounting/enclosures/universal/kradex-enclosure-176x126x57mm-ip65-red-transparent-z74h	5

Backplate		Zelf maken	5
Standoffs			40
Testboard	ESP32-dev-board	https://www.tinytronics.nl/shop/en/development-boards/microcontroller-boards/with-wi-fi/esp32-wifi-and-bluetooth-board-cp2102	

Legende:

- PCB
- Voeding
- Behuizing
- Sensoren

Nog te bestellen:

- 4X SEN55
- 5X SEN55 JST connectie kabel
- 5X Wartel
- 2m Kabel – 2 draad
- 4 X behuizing

Gateway

<https://github.com/Jappie3/zanzi-doc/blob/master/gateway/BOM.md>

The gateway board uses a CM4-POE-UPS-BASE KIT board as base with a Raspberry PI 4 Compute module. This board has a buildin UPS which uses 3 18650 Li-ion batteries, furthermore the board can be powered from POE (802.3af).

BOM

[CM4-POE-UPS-BASE KIT](#)

3X 18650 batteries

[Raspberry PI Compute module 4 with 32GB MMC \(CM4104032\)](#)

Antennas voor LoRaWAN

2x Pigtail SMA-MHF

CR2032 batterij

USB SDR + antenna

[IC880A LoRaWAN board](#)

Adapter bord IC880A (see below)

[Metal housing](#)

Metal Housing adapter, lasercut from custom design [housing_adapter.dxf](#)