## Kosten teus

			prijs incl
datum omschrijving	leverancier	ex btw	verzending
3-05-17 Micro SD kaart 32 GB	TinyTronics	€ 9,92	•
1-05-17 Grove dust sensor PPD42NS	Kiwi Electronics	€ 18,95	
Arduino Uno Rev3 ATmega328	Kiwi Electronics	€ 23,95	
Grove Mega Shield V1.2 Arduino	Kiwi Electronics	€ 11,95	
10-04-17 Accu 12V HJB-12680	Fijnstofmeter	€ 35,35	
3-04-17 Grove proto shield 2X	Kiwi Electronics	€ 5,00	
grove relay	Kiwi Electronics	€ 4,95	€ 9,90
Grove Green wrapper 4 pack	Kiwi Electronics	€ 2,95	
4-channel I2C logic converter BSS138 2X	Kiwi Electronics	€ 4,95	
3-04-17 5V fan	Ben's Electronics	€ 3,99	
krimpkous	Ben's Electronics	€ 3,45	
DC jack kabel 2X	Ben's Electronics	€ 0,70	
DC power jack	Ben's Electronics	€ 0,45	
I2C logic converter	Ben's Electronics	€ 1,49	€ 2,98
KIS3R33S USB buck converter 3A	Ben's Electronics	€ 3,00	
3-04-17 mini USB board	Ben's Electronics	€ 1,25	€ 18,98
23-03-17 Grove temp/hum/baro BME280	Kiwi Electronics	€ 19,50	€ 21,50
weerstanden 1K/100/33K	Kiwi Electronics	€ 3,00	
15-03-17 Grove led 2X	Kiwi Electronics	€ 4,50	€ 12,45
15-03-17 Pushbutton/led 2X	Sossolutions	€ 7,95	
SMA uFL/u RF Adapter cable	Sossolutions	€ 6,95	
Through-Hole resisters 22K	Sossolutions	€ 3,75	
16-03-17 rooster 2X	Karwei	€ 22,63	€ 27,38
8-03-17 Grove button	Kiwi Electronics	€ 2,50	
3-weg JST SM female/male connector	Kiwi Electronics	€ 1,90	€ 3,80
waterdichte kabel set	Kiwi Electronics	€ 2,95	
weerstanden 33K 15K	Kiwi Electronics	€ 2,00	
Grove 4 pin female conv cable	Kiwi Electronics	€ 4,95	
24-02-17 GrovePI+ Raspberry Pi shield	Kiwi Electronics	€ 34,95	•
Grove green wrapper 4 pack	Kiwi Electronics	€ 2,95	
Grove 4 pin cable 5 pack	Kiwi Electronics	€ 3,50	
6-02-17 USB-TTL cable CP2102	Kiwi Electronics	€ 11,95	
40-pin GPIO header ADA-1979	Kiwi Electronics	€ 2,95	
5-02-17 RP-SMA uFl RF cable ADA-852	Kiwi Electronics	€ 4,95	
Grove 4-pin 10-pack connectors	Kiwi Electronics	€ 1,75	
Grove green wrapper 4 pack	Kiwi Electronics	€ 2,95	
Grove loudness	Kiwi Electronics	€ 7,95	
Grove relay	Kiwi Electronics	€ 4,95	
Grove 4-pin cables 4-pack	Kiwi Electronics	€ 3,50	
Grove dust sensor PPD42NS	Kiwi Electronics	€ 17,95	
Grove Pi+ Raspberry Pi shield	Kiwi Electronics	€ 34,95	
Grove I2C hub	Kiwi Electronics	€ 3,50	
Grove protoshield	Kiwi Electronics	€ 2,50	
13-02-17 Grove GPS	Kiwi Electronics	€ 35,95	
Arduino Uno wifi	Kiwi Electronics	€ 39,95	
Grove Mega Shield V1.2 Arduino	Kiwi Electronics	€ 39,95 € 11,95	
Raspberry Pi 3 + behuzing/voeding 16GB		€ 11,95 € 64,95	
13-02-17 32 GB micro SD card	Kiwi Electronics		
		€ 16,95	
3-01-17 Raspberry Pli3 incl voeding/16 GB	Kiwi Electronics	€ 53,68	

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	Adafruit DHT22 temp/hum	Kiwi Electronics	€ 10,95	€ 75,90
5-01-17	7 Adafruit GPS mini kit	Kiwi Electronics	€ 49,95	
	GPS antenne sma	Kiwi Electronics	€ 14,95	
	40-pin GPIO header ADA-1979	Kiwi Electronics	€ 2,95	
	Adafruit Feather ESP8266 wifi	Kiwi Electronics	€ 18,95	
	GPS accu CR1220	Kiwi Electronics	€ 1,95	
	Adafruit BME280 temp/hum/baro	Kiwi Electronics	€ 22,50	€ 111,25
1-01-17	7 DHT22 temp/hum	Miniinthebox	€ 9,79	
	DHT11 hum/temp	Miniinthebox	€ 2,93	
	Raspberry Pi breakout board	Miniinthebox	€ 19,59	€ 34,15
24-02-17	7 RS232 verloopsteker	Alle Kabels	€ 8,22	€ 9,95
13-09-16	S LoRaWan Things Network gateway	Things Network	€ 250,00	
	LoRaWan temp node	Things Network	€ 70,00	€ 395,07
23-12-16	5 Dylos DC1100 150+280 US\$	Amazon USA		€ 400,00
21-06-17	Grove OLED display 2X I2C-bus	Kiwi Electronics	€ 14,83	
	Grove proto shield 2X	Kiwi Electronics	€ 2,07	
	Grove 4 pin female cable 5 pack	Kiwi Electronics	€ 3,93	
	Grove 4 pin male cable 5 pack	Kiwi Electronics	€ 2,89	€ 51,15
9-07-17	7 soldier station + soldier mate5rials	Conrad		€ 39,07
6-07-17	7 Grove GPS module GY-NE6MV2	Tiny Electronics	€ 15,70	€ 19,00
14-07-17	Plantower PMS7003 dust sensor	Alibaba		€ 22,36
16-07-17	PL2303TA 3.3v-5v TTL USB Serial 2X	Tiny Electronics	€ 8,68	€ 10,50
14-08-17	Grove GPS + antenne	Kiwi Electronics	€ 33,80	€ 40,90
	Plantower PMS7003 dust sensor	AliExpress	,	€ 20,50
	Nova SDS011 dust sensor	Miniinthebox		€ 30,00
	gutter collect case 70mm	Praxis		€ 24,90
	gutter end piece 2*100mm + 4*65mm	Praxis		€ 14,60
	PVC glue, white paint, RvS screws	Praxis		€ 18,10
	PVC air sprout 70mm	Praxis		€ 14,70
31-08-17	7 Pi adapter + cable (small sized)	Hema		€ 19,00
	7 Pi Zero V1.3 + sd mem card + HDMI plug	Sossolutions		€ 24,90
	7 Grove BME280 temp/rv/pres sensor	Kiwi Electronics		€ 20,50
0 11 1	passieve GPS antenne 1 Dbi ADA-2461	Kiwi Electronics		€ 4,95
	Grove GPS SS-113020003	Kiwi Electronics		€ 35,95
5-09-17	7 Antenne 868 Mhz 5 dBi omni LoRaWan	Domotica		€ 12,95
	7 Marvin LoRa dev. Board	Conrad		€ 84,70
	7 PyCom LoPy wifi,ble module	PyCom	€ 35,95	0 04,70
22 03 11	PyCom LoRa SigFox antennakit	PyCom	€ 9,00	€ 65,94
2-09-17	7 LoRaWan Lite Gateway	IMST Gmbh	C 3,00	€ 248,65
2-09-11	Totaal	Hagen		€ 2.433,18
	Gas sensor (NO2/)3/H2S/CO2) 20 US\$ +	•		€ 2.433,18
	Alpha Sense NH3 ISB	Mouser		€ 150,00
	transport costs	IVIOUSCI		€ 150,00 € 15,00
	Cables,			€ 10,00
	other materials			€ 10,00 € 50,00
	estimated total			€ 50,00
	Pro memorie Fontys GreenTechLab	Coenders		€ 2.040,25
2017/11/22	Last date of update	Coenacis		C 2.040,23
201111122	Last date of apacie			

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sensor kit nr s	sensor kit nr		Lorawan node
€ 12,00		€ 12,00	
€ 3,57	€ 3,57	€ 3,57	€ 3,57
€ 1,04	€ 1,04	€ 1,04	€ 1,04
€ 23,60	€ 23,60	€ 23,60	€ 23,60
€ 0,50	€ 0,50		
€ 5,99 € 34,95		€ 34,95	€ 34,95
		0 0 1,00	0 0 1,00
€ 4,24	€ 4,24		
€ 9,62			
€ 43,50			
€ 64,95	€ 64,95		

€ 9,79	€ 9,79		
€ 17,95	€ 17,95	€ 17,95	€ 17,95
€ 22,36		£ 10 50	£ 10 50
	€ 40,90	€ 10,50 € 40,90	€ 10,50 € 40,90
€ 20,30	€ 20,50 € 30,00	€ 20,50	€ 20,50
€ 36,15	€ 36,15	€ 36,15 € 19,00 € 24,90	€ 36,15 € 19,00 € 24,90
		€ 84,70	
			€ 65,94
€ 310,50	€ 306,13	€ 329,76	€ 311,00
€ 164,00 € 150,00	€ 164,00 € 150,00		
€ 15,00	€ 15,00	€ 15,00	€ 15,00
€ 10,00	€ 10,00	€ 10,00	€ 10,00
€ 5,00	€ 5,00	€ 5,00	€ 5,00
€ 726,74	€ 722,37	€ 366,06	€ 347,30

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Naam	Prijs per stukAantal	
SDS011	42 \$	2
824-HTU21D	10,48 €	2
Raspberry Pi 3 Model B	32,99 €	2
Raspberri PI Zero W	11 €	1
CO Sensor Pinned Package	20 \$	2
NO2 Sensor Pinned Package	20 \$	2
O3 Sensor Pinned Package	20 \$	2
H2S Sensor Pinned Package	20 \$	2
NO2 B43F	78 \$	2
CO B4	78 \$	2
OX A431	95 \$	2
NH3 B1	90 \$	2
4NH3-500	95,5 ₤	2

Total 1.164,93 €

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#### Link

https://de.aliexpress.com/store/product/nova-PM-sensor-SDS011-High-precision-laser-pm2-5-air-quality-detection-sensor-p

http://www.mouser.de/search/refine.aspx?Ntk=P\_MarCom&Ntt=%20143795740

http://uk.rs-online.com/web/p/processor-microcontroller-development-kits/8968660/

https://www.kiwi-electronics.nl/raspberry-pi-zero/raspberry-pi-zero-w

https://www.spec-sensors.com/product/co-carbon-monoxide-sensor-1000-ppm/

https://www.spec-sensors.com/product/no2-nitrogen-dioxide-sensor-20-ppm-pinned-package/

https://www.spec-sensors.com/product/ozone-o3-sensor-20-ppm-pinned-package/

https://www.spec-sensors.com/product/h2s-hydrogen-sulfide-sensor-50-ppm-pinned-package/

http://www.isweek.com/product/no2-b43f-nitrogen-dioxide-sensor-4-electrode-no2-b43f\_1901.html

http://www.isweek.com/product/co-b4-carbon-monoxide-sensor-4-electrode-co-b4\_1791.html

http://www.isweek.com/product/ox-a431-oxidising-gas-sensor-ozone-nitrogen-dioxide-4-electrode-ox-a431\_1904.html

http://www.isweek.com/product/nh3-b1-ammonia-sensor-nh3-b1\_1712.html

http://euro-gasman.com/ammonia-nh3-ss-gas-sensor-816.html

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odule-Super-dust/421570\_32317805049.html

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Product	Price per Piece [€]	Pieces	Price total [€]
SPECK Pinned Package Sensors	17,76	8	142,08
SPECK Digital Sensors	67,11	4	268,44
Alphasense 4-electrode ISB	86,00	1	86,00
Alphasense Ammonia Sensor NH3-B1	64,00	1	64,00
DHT22	6,00	2	12,00
SDS011	39,95	2	79,90
Raspberry Pi	39,50	2	79,00
SD Karten	8,00	2	16,00
Arduino UNO	12,00	2	24,00
GPS Modul	23,99	1	23,99
Cabels	6,89	1	6,89
Wood	25,00	1	25,00
Screw	9,45	2	18,90
Hinge	6,18	2	12,36
Fly Screen	1,79	2	3,58
Totaal			862,14
RN2483	13,18	1	13,18
Totaal			875,32