Kosten teus

datum	omschrijving	leverancier	ex btw	prijs incl verzending
3-05-17	Micro SD kaart 32 GB	TinyTronics	€ 9,92	€ 14,50
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	€ 59,80
10-04-17	Accu 12V HJB-12680	Fijnstofmeter	€ 35,35	€ 42,35
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	€ 26,30
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	€ 2,95
	weerstanden 33K 15K	Kiwi Electronics	€ 2,00	
	Grove 4 pin female conv cable	Kiwi Electronics	€ 4,95	€ 19,25
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	€ 49,30
6-02-17	USB-TTL cable CP2102	Kiwi Electronics	€ 11,95	
	40-pin GPIO header ADA-1979	Kiwi Electronics	€ 2,95	€ 17,40
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	€ 84,95
13-02-17	Grove GPS	Kiwi Electronics	€ 35,95	
	Arduino Uno wifi	Kiwi Electronics	€ 39,95	
	Grove Mega Shield V1.2 Arduino	Kiwi Electronics	€ 11,95	
	Raspberry Pi 3 + behuizing/voeding 16GB	Kiwi Electronics	€ 64,95	
13-02-17	32 GB micro SD card	Kiwi Electronics	€ 16,95	€ 169,75
3-01-17	Raspberry PIi3 incl voeding/16 GB	Kiwi Electronics	€ 64,95	
	Adafruit DHT22 temp/hum	Kiwi Electronics	€ 10,95	€ 75,90
5-01-17	Adafruit GPS mini kit	Kiwi Electronics	€ 49,95	

Kosten teus

Datum	Omschrijving	Leverancier	Prijs	Totaal
	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	DHT22 temp/hum	Miniinthebox	€ 9,79	
	DHT11 hum/temp	Miniinthebox	€ 2,93	
	Raspberry Pi breakout board	Miniinthebox	€ 19,59	€ 34,15
24-02-17	RS232 verloopsteker	Alle Kabels	€ 8,22	€ 9,95
13-09-16	LoRaWan Things Network gateway	Things Network	€ 250,00	
	LoRaWan temp node	Things Network	€ 70,00	€ 395,07
23-12-16	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	Soldeerstation + soldeerbenodigdheden	Conrad		€ 39,07
6-07-17	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
	Totaal	Hagen		**€ 1.609,86**
	gassensor	AlphaSense		€ 40,00
	Nova SDS011 dust sensor	AliExpress		€ 30,00
	verzend kosten			€ 15,00
	kabels etc.			€ 10,00
	kast			€ 50,00
	Schatting totaal			
	Pro memorie Fontys GreenTechLab	Coenders		€ 2.040,25

Kosten teus

Centrale node nr 1	Centrale node nr 2	LoRaWan	Lorawan node
€ 9,92	€ 9,92		
€ 2,95	€ 2,95		
€ 0,86	€ 0,86		
€ 19,50	€ 19,50	€ 19,50	€ 19,50
€ 7,95	€ 7,95		
€ 22,63	€ 22,63		
€ 0,50	€ 0,50		
€ 4,95	€ 4,95		
€ 34,95	€ 34,95		
€ 2,95	€ 2,95		
€ 3,50	€ 3,50		
€ 7,95			
€ 35,95		€ 35,95	€ 35,95
€ 64,95	€ 64,95		

€ 22,50	€ 22,50		
		€ 250,00	
			€ 70,00
		€ 800,00	
€ 17,95	€ 17,95		
		€ 19,00	
€ 22,36			
		€ 40,90	
€ 292,83	€ 239,71	€ 1.337,59	€ 151,79
€ 40,00	€ 40,00		
€ 30,00	€ 30,00	€ 30,00	€ 30,00
€ 15,00	€ 15,00	€ 15,00	€ 15,00
€ 10,00	€ 10,00	€ 10,00	€ 10,00
€ 50,00	€ 50,00	€ 15,00	€ 30,00
€ 468,28	€ 415,16	€ 1.422,29	€ 254,64

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Naam	Prijs per stuk	Aantal
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 €**	

Link

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

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

ɔdule-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
SPEC 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