

Class 1MCT5 and 2MCT4-AI
 First Name: Thomas
 Name: De Decker
 Project Name : Smart Box
 Assembly Revision : 6/15/2020
 Approval Date : 3/11/2020
 Part Count : 15
 Total Cost : €173



Part #	Part Name	Description	Revision	Qty	Supplier	also available from	Units	Unit Cost	Max Cost	Real Cost
1	Raspberry Pi 3 Model B+	Low cost mini computer, the core of my project.	1.0	1	"Raspberry Pi 3 Model B+" Kiwi Electronics. [Online]. Available: https://www.kiwi-electronics.nl/raspberry-pi-3-model-b-plus/ . [Accessed: 11-Mar-2020].	"Raspberry Pi 3 Model B+ - Basisbord." [Online]. Available: https://www.gotron.be/raspberry-pi-3-model-b-basisbord.html . [Accessed: 11-Mar-2020].	each	€ 39.95	€ 39.95	€ 39.95
2	Raspberry Pi 3 Model B+ Case	This is to surround the Raspberry Pi.	1.2	1	"Officiële Behuizing voor Raspberry Pi 3". Kiwi Electronics. https://www.kiwi-electronics.nl/officiële-raspberry-pi-3-behuizing (accessed Jun. 15, 2020).	"Raspberry Pi Case for Raspberry Pi 3: Amazon.co.uk: Computers & Accessories". https://www.amazon.co.uk/Raspberry-Pi-Case/dp/B00ZS26ZJA (accessed Jun. 15, 2020).	each	€ 6.50	€ 6.50	€ 6.50
3	Breadboard Power Supply	Power for all main components.	1.2	1	"Breadboard Stroomvoorziening - 3V3/5V." Kiwi Electronics. https://www.kiwi-electronics.nl/breadboard-power-supply-3v3-5v/ (accessed Jun. 15, 2020).	"3.3V 5V Breadboard Power Supply Module for MB102: Amazon.co.uk: Electronics." https://www.amazon.co.uk/Breadboard-Power-Supply-Module-Solderless/dp/B008XWV2F6 (accessed Jun. 15, 2020).	each	€ 2.59	€ 2.59	€ 2.59
4	ATmega328 Arduino uno	Arduino Uno programming board to control the led strip.	1.0	1	"ATmega328 uno ontwikkeldbord." [Online]. Available: <a 65139="" arduino-board="" atmega328="" con"="" href="https://www.gi(C)2019 Conrad Electronic, " uno="" ="">https://www.gi(C)2019 Conrad Electronic, "Arduino-board UNO 65139 ATmega328 Con		each	€ 15.39	€ 15.39	€ 15.39
5	DHT22 temperature-humidity sensor	For measuring the humidity in my room.	1.0	1	"DHT22 temperature-humidity sensor." [Online]. Available: <a +="" [online].="" avail"="" dht22="" extras."="" href="https://w A. Industries, " sensor="" temperature-humidity="">https://w A. Industries, "DHT22 temperature-humidity sensor + extras." [Online]. Avail		each	€ 11.91	€ 11.91	€ 11.91
6	Hc-05 Bluetooth module	Send data from Raspberry Pi to Arduino through bluetooth.	1.0	1	"Hc-05 bluetooth transmissiemodule." [Online]. Available: <a (vma302)."="" [onlin"="" bluetooth="" bol.com="" hc-05="" href="https://wv " transmissiemodule="" ="">https://wv "bol.com BLUETOOTH HC-05 TRANSMISSIEMODULE (VMA302)." [Onlin		each	€ 14.90	€ 14.90	€ 14.90
7	LCD 2x16characters	Screen to display the time.	1.0	1	"LCD 2x16characters no backlight alphanumeric module." [Online] "HD44780 1602 LCD Module displays 2X16 characters: Amazon.co.uk: Ele		each	€ 9.18	€ 9.18	€ 9.18
8	Jumpwires	Connect components with each other .	1.0	1	"Jumper wire pairs Male - Male lengte: 15cm 10 stuks." [Online]. A	"Premium Jumperwires ribbon - 40 wires- M/M - 20cm." Kiwi Electronics. [O	each	€ 3.94	€ 3.94	€ 3.94
9	Speaker	Play sound for the alarm clock.	1.0	1	"Speaker - 3" Diameter - 4 Ohm 3 Watt." Kiwi Electronics. [Online]. A.	Industries. "Soaker - 3" Diameter - 4 Ohm 3 Watt." [Online]. Available: f	each	€ 1.95	€ 1.95	€ 1.95
10	Adafruit I2S 3W Class D Amplifier	Digital to Analog amplifier for the speaker.	1.0	1	A. Industries. "Adafruit I2S 3W Class D Amplifier Breakout - MAX981	"Adafruit I2S 3W Class D Amplifier Breakout - MAX98357A." Ooencircuit. (f	each	€ 9.95	€ 9.95	€ 9.95
11	Ledstrips	The leds that are controlled by the Arduino.	1.0	1	"2 meter WS2812b digitale RGB ledstrip Premium - losse strip." [O	"WS2812B Digitale 5050 RGB LED Strip - 60 LEDs 1m." TinyTronics. [Onli	each	€ 34.95	€ 34.95	€ 34.95
12	One Wire Temperature Sensor	For measuring the temperature in my room.	1.1	1	"Gotron Temperatuur sensor 9...12 Bit 1-Wire +-0.5°C TO92 -55..	"DS18B20+ - MAXIM INTEGRATED PRODUCTS - Temperature Sensor IC. DigiAl.	each	€ 2.11	€ 2.11	€ 2.11
13	Ultrasonic sensor	Used as pressbutton for the alarm clock, when you move above it. The clock will deactivate.	1.1	1	"Gotron Hc-sr05 ultrasonic sensor Elektronicspecialist". [Online].	"HC-SR04 Ultrasonic sensor - afstandsmeter - HobbyElectronica". [Online]. Beschikt	each	€ 5.93	€ 5.93	€ 5.93
14	Plastic box	The case for the general device.	1.2	1	"Plastic Behuizing -185 x 114 x 66mm". https://www.gotron.be/plast	"Ohmeron PCB Enclosure - 185 x 114 x 66mm Distributor consumer elec	each	€ 8.51	€ 8.51	€ 8.51
15	Small breadboard	The small breadboard is placed in the plastic box for connecting everything together.	1.2	1	"Soldeerloos breadboard met 400 ronde gaten - wit - 10GTR9". http	"Amazon.com: HLEtgo 3pcs 400 Ties Mini Solderless Breadboard Universal 400 Cc	each	€ 4.85	€ 4.85	€ 4.85
Total									€172.61	€ 172.61