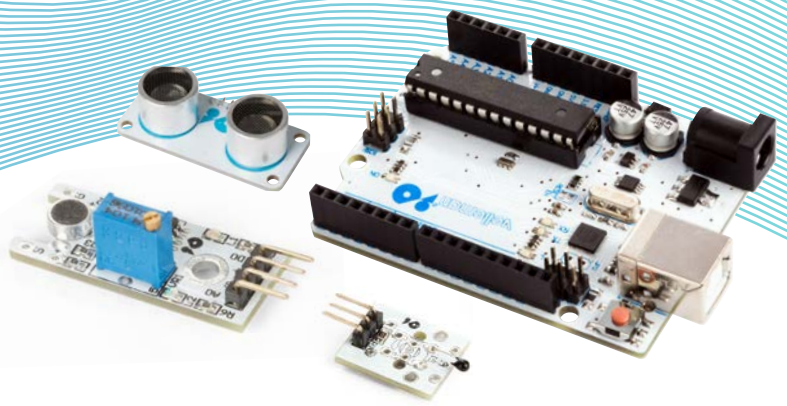


DEVELOPMENT BOARDS AND ACCESSORIES



Velleman IO specifically focusses on bringing you **unique and state-of-the-art** Arduino® compatible shields, sensors and other fun modules.

These modules will allow you to **enhance your Arduino®** in a safe and easy way while communicating with other devices, the environment or whatever you want to achieve with your projects.



Arduino®

Boards

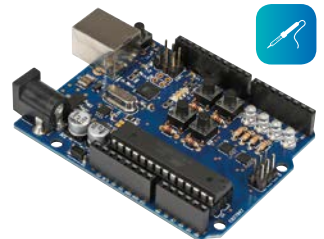
The Arduino® board, a credit card sized computer or micro controller, can receive inputs and turn them into outputs. An input can be the light on a sensor, the sound through a microphone or even a text message whereas the output can be lighting an LED, activating a buzzer, rotating a motor and so on.



ATMEGA328P MCU IC WITH ARDUINO® UNO BOOTLOADER AND 16 MHZ CRYSTAL
VMA416



ASSEMBLED VELLEMAN NIBBLE MODULE
VMA0



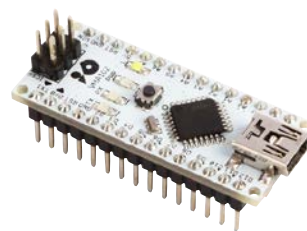
VELLEMAN NIBBLE KIT
KA0



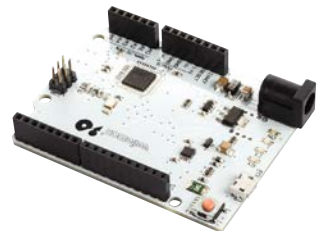
ATMEGA328 UNO DEVELOPMENT BOARD
VMA100



ATMEGA2560 MEGA DEVELOPMENT BOARD
VMA101



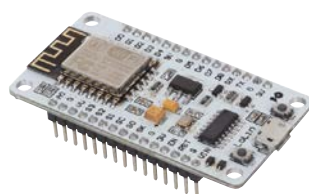
ATMEGA328 NANO DEVELOPMENT BOARD
VMA102



ATMEGA32U4 LEONARDO DEVELOPMENT BOARD
VMA103



ATMEGA32U4 WEARABLE DEVELOPMENT BOARD
VMA105



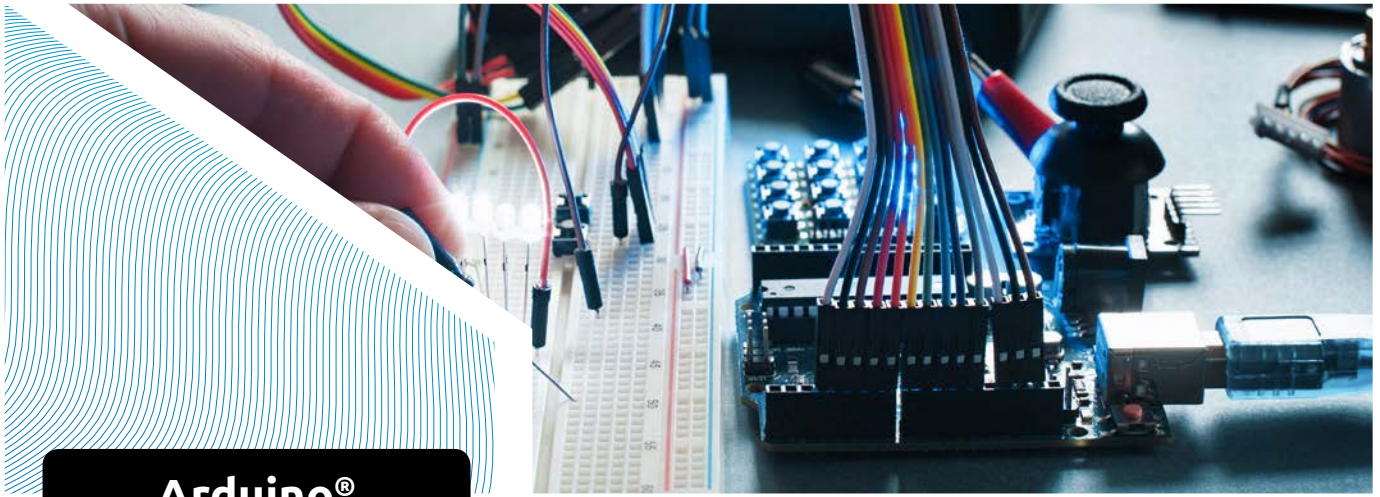
NODEMCU V2 LUA BASED ESP8266 DEVELOPMENT BOARD
VMA107



ATTINY85 ARDUINO® COMPATIBLE MICRO DEVELOPMENT BOARD
VMA108



TEENSY V3.2 - 32 BIT ARDUINO® COMPATIBLE MICROCONTROLLER BOARD
TEENSY3.2



Arduino®

Kits



2 WHEEL DRIVE MOTOR CHASSIS ROBOTICS KIT
VMA500



DIY STARTER KIT FOR ARDUINO®
VMA501



BASIC DIY KIT WITH ATMEGA2560 FOR ARDUINO®
VMA502



ELECTRONIC PARTS PACK FOR ARDUINO®
VMA503



BASIC ARDUINO® COMPATIBLE EXPERIMENTER'S KIT
VMA504



ACCESSORIES KIT + CLEAR PLASTIC BOX
VMA505



PROJECT HOLDER FOR ARDUINO® UNO DEVELOPMENT BOARD + BREADBOARD
VMA508

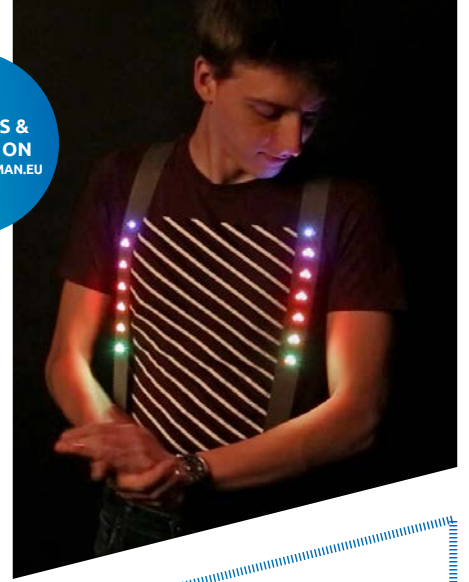


STEM SHIELD FOR ARDUINO®
KAEDU

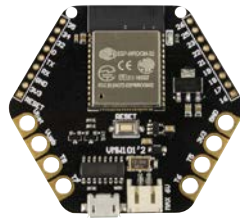
KAEDU: STEM shield for Arduino®

Use the KAEDU: STEM shield to explore the world of Arduino®, sketches, electronics and many more. This is the perfect beginners shield to use when following a STEM education.

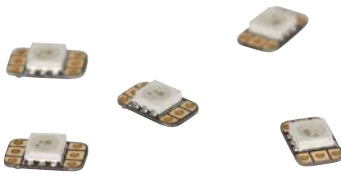
- Buttons and switch**
4 Tactile buttons and a switch to experiment with
- Trimmer**
Learn how to read an analog value
- Temperature sensor**
Use the NTC as a temperature sensor
- Servo motor output**
Control a servo motor, just plug and play
- Speaker**
Create loopy tunes or a simple synth with the built-in speaker
- ON/OFF**
All modules can be connected and disconnected by means of a shunt
- Detachable modules**
Line-tracker and 7 segment module are detachable for easy prototyping
- Line-Tracker**
An infrared emitter and a phototransistor can become a line-tracker module with the right software
- 7 segment display**
Learn how to control a 7 segment display
- 2 redlight simulators**
Simulate real-life redlight situations



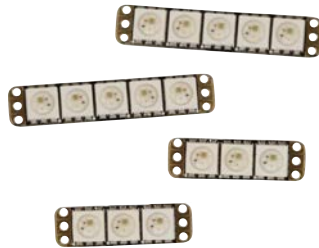
**BRIGHTDOT WEARABLE
DEVELOPMENT BOARD**
VMW100



ESP32 WEARABLE DEVELOPMENT BOARD
VMW101



SMALL BRIGHTDOT PACK
VMW102



MEDIUM BRIGHTDOT PACK
VMW103



LARGE BRIGHTDOT PACK
VMW104



CORNER BRIGHTDOT PACK
VMW105



ARC BRIGHTDOT PACK
VMW106



64 LED RGB MATRIX
VMW207



SMALL BRIGHTDOT CIRCLE PACK
VMW107



MEDIUM BRIGHTDOT CIRCLE
VMW108



LARGE BRIGHTDOT CIRCLE
VMW109



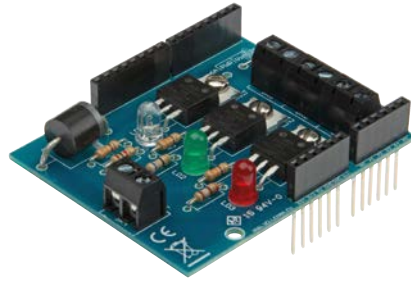
**BRIGHTDOT SEWING KIT FOR
ELECTRONIC WEARABLES**
VMW110



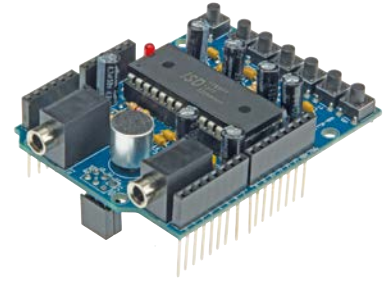
**BRIGHTDOT POWER & FUSE PACK
FOR ELECTRONIC WEARABLES**
VMW111

Arduino®

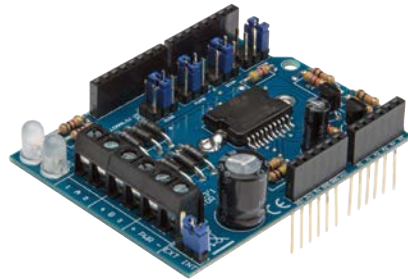
Shields



RGB SHIELD FOR ARDUINO®
VMA01



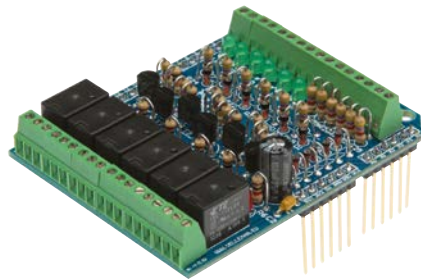
AUDIO SHIELD FOR ARDUINO®
VMA02



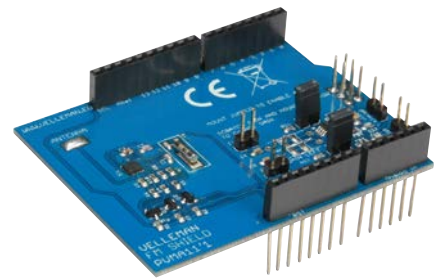
MOTOR & POWER SHIELD FOR ARDUINO®
VMA03



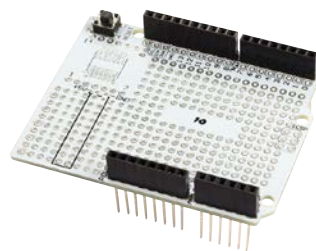
ETHERNET SHIELD FOR ARDUINO®
VMA04



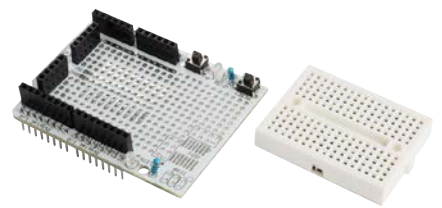
I/O SHIELD FOR ARDUINO®
VMA05



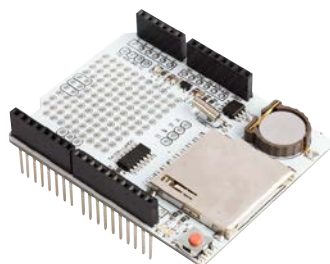
STEREO FM RADIO SHIELD FOR ARDUINO®
VMA11



EXPANSION BOARD FOR ARDUINO® UNO R3
VMA200



**PROTOSHIELD PROTOTYPING BOARD WITH
MINI BREADBOARD FOR ARDUINO® UNO**
VMA201



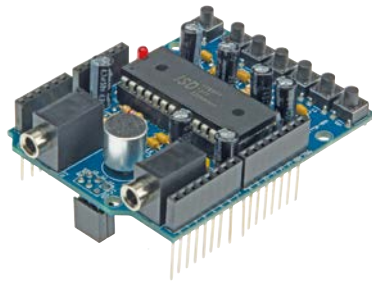
**ARDUINO® COMPATIBLE DATA
LOGGING SHIELD**
VMA202



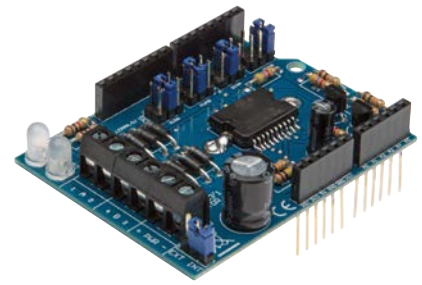
**LCD & KEYPAD SHIELD FOR
ARDUINO® - LCD1602**
VMA203



RGB SHIELD FOR ARDUINO®
KA01



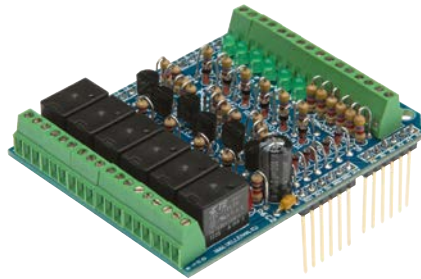
AUDIO SHIELD FOR ARDUINO®
KA02



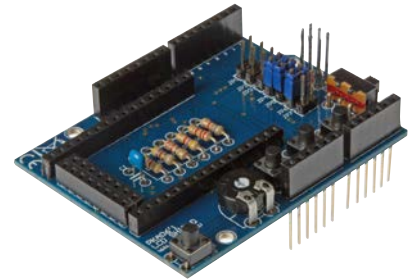
MOTOR & POWER SHIELD FOR ARDUINO®
KA03



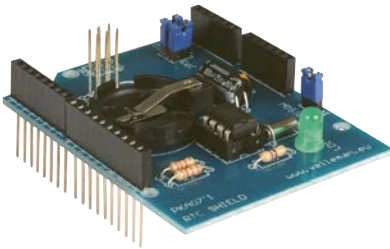
ETHERNET SHIELD FOR ARDUINO®
KA04



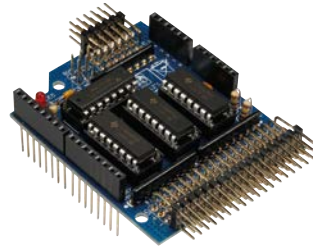
I/O SHIELD FOR ARDUINO®
KA05



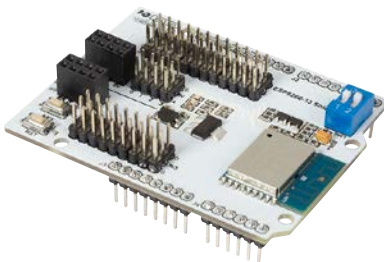
LCD SHIELD FOR ARDUINO®
KA06



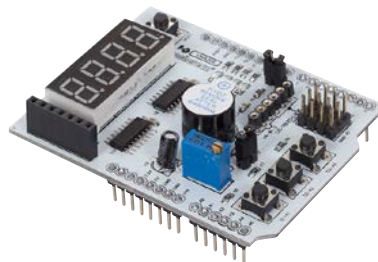
RTC SHIELD FOR ARDUINO®
KA07



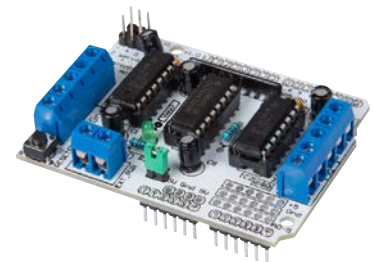
**ANALOG INPUT EXTENSION
SHIELD FOR ARDUINO®**
KA12



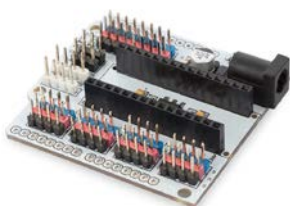
WIFI ESP-WROOM-02 SHIELD
VMA205



MULTI-FUNCTION SHIELD EXPANSION BOARD
VMA209



**L293D MOTOR DRIVE EXPANSION
SHIELD FOR ARDUINO®**
VMA207



**MULTIFUNCTION EXPANSION BOARD
FOR ARDUINO® NANO/UNO**
VMA210



RECONFIGURABLE ARDUINO® SHIELD
VMA900

NEW



HM-10 WIRELESS SHIELD FOR ARDUINO® UNO
VMA338

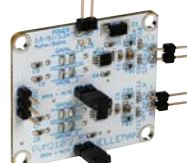
Interfaces



FM/RDS RECEIVER MINI MODULE
MM100



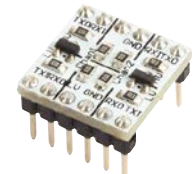
CLASS D AUDIO AMPLIFIER - MONO 2.8 W
MM209



CLASS D AUDIO AMPLIFIER - STEREO 2.8 W
MM210



FT232 USB TO TTL ADAPTOR 3.3/5 V
VMA440



3.3 V / 5 V TTL LOGIC LEVEL CONVERTER MODULE
VMA410



SUPER-MINI DIGITAL AMPLIFIER BOARD
VMA408



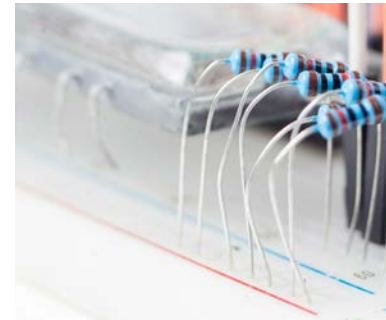
NEW
SI4703 FM TUNER EVALUATION BOARD
VMA444



NEW
PAM8610 DIGITAL POWER AMPLIFIER MODULE 2 X 10 W
VMA446



NEW
A/D D/A CONVERTER MODULE PCF8591
VMA344



3 X 4 MATRIX MEMBRANE KEYPAD
VMA300



NEW
NFC / RFID SHIELD FOR ARDUINO®
VMA211



ARDUINO® COMPATIBLE RFID READ AND WRITE MODULE
VMA405



RFID CARD (10 PCS)
VMA417



RFID TAG (5 PCS.)
VMA418



2-CHANNEL POWER MODULE FOR BREADBOARDS 3.3V/5V
VMA424



1 A LITHIUM BATTERY CHARGING BOARD (2 PCS)
VMA321



DC-DC BOOST MODULE / (2.5 V-5 V) 600 MA TO USB 5 V (2 PCS)
VMA403



DC-DC ADJUSTABLE VOLTAGE STEP DOWN MODULE LM2596S
VMA404



LM2577 DC-DC VOLTAGE STEP-UP (BOOST) MODULE
VMA402



GPS MODULE U-BLOX NEO-7M FOR ARDUINO®
VMA430



RED LASER DIODE MODULE
VMA434



MINI ANALOG SERVO - 9 G
VMA600



270° ROBOT DIGITAL DOUBLE SHAFT SERVO KIT
VMA601



NEW
2-AXIS FPV CAMERA CRADLE & 2 PIECES VMA600 SERVO
VMA602



5 VDC STEPPER MOTOR WITH ULN2003 DRIVER BOARD
VMA401



L298N DUAL BRIDGE DC STEPPER CONTROLLER BOARD
VMA409



TB6560 3A STEPPER MOTOR DRIVER BOARD
VMA333



WATER HOSE & ACCESSORIES
VMA420



WATER PUMP
VMA421



WATER VALVE
VMA422

NEW

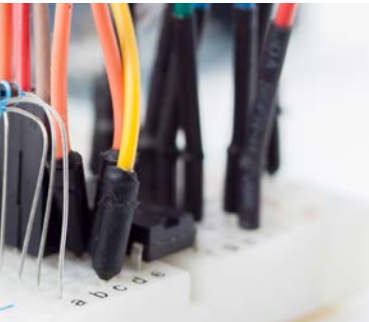


MINI PERISTALTIC PUMP 6 V
VMA447

NEW



SILICONE TUBE FOR VMA447
VMA448



NEW



TEMPERATURE PROBE / SENSOR 600°C + MAX6675 INTERFACE
VMA339



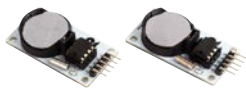
ARDUINO® COMPATIBLE 5 V RELAY MODULE
VMA406



1 CHANNEL LATCHING RELAY MODULE WITH TOUCH BISTABLE SWITCH
VMA331



4 CHANNEL RELAY MODULE
VMA400



DS1302 REAL-TIME CLOCK MODULE WITH BATTERY CR2032 (2 PCS)
VMA301



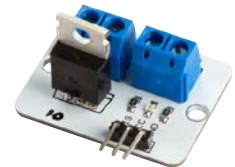
SD CARD LOGGING SHIELD (2 PCS)
VMA304



8 CHANNEL RELAY MODULE
VMA436



1 CHANNEL SOLID STATE RELAY MODULE
VMA332



ARDUINO® COMPATIBLE MOS DRIVING MODULE
VMA411



1.3 INCH OLED SCREEN FOR ARDUINO® (SH1106 DRIVER, SPI)
VMA437



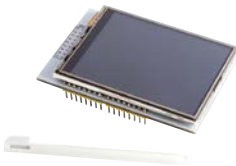
0.96 INCH OLED SCREEN WITH I2C FOR ARDUINO®
VMA438



DIGITAL ROTARY ENCODER MODULE
VMA435



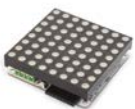
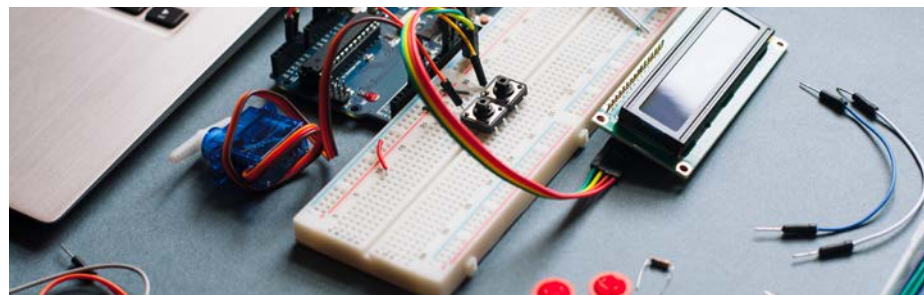
ELECTROMAGNET MODULE
VMA431



2.8 INCH TOUCH SCREEN FOR ARDUINO® UNO/MEGA
VMA412



LARGE DOT MATRIX LED DISPLAY - WHITE LEDS
VMA419



RGB DOT MATRIX BOARD & DRIVER BOARD BASED ON ATMEGA328
VMA439



4-DIGIT DISPLAY WITH DRIVER MODULE (TM1637 DRIVER)
VMA425



2.4 GHZ NRF24L01 WIRELESS TRANCEIVER MODULE (2PCS)
VMA322



HC-05 TRANSMISSION MODULE
VMA302



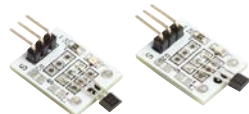
DMX512 MODULE
VMA432

Arduino®

Sensors



MINI MAGNETIC REED
MODULE (2 PCS)
VMA308



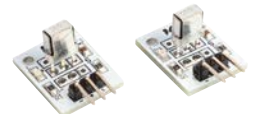
HALL (HOLZER) MAGNETIC
SWITCH MODULE (2 PCS)
VMA313



CAPACITIVE TOUCH
SENSOR SWITCH
VMA305



INFRARED TRANSMITTER
MODULE (2 PCS)
VMA316



1838 IR INFRARED 37.9
KHZ RECEIVER (2 PCS)
VMA317



VL53L0X TIME-OF-FLIGHT
RANGING AND GESTURE
DETECTION SENSOR
VMA337



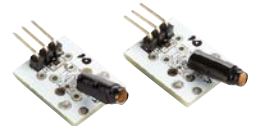
LINE TRACKING SENSOR
TCRT5000 MODULE
VMA326



IR OBSTACLE AVOIDANCE
SENSOR MODULE
VMA330



3-AXIS DIGITAL
ACCELERATION SENSOR
MODULE - MMA8452
VMA208



VIBRATION / SHOCK
SWITCH MODULE (2 PCS)
VMA312



TACTILE SWITCH SENSOR
MODULE (2 PCS)
VMA310



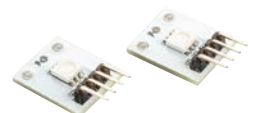
XY JOYSTICK
MODULE (2 PCS)
VMA315



END-STOP SWITCH
MODULE (2PCS)
VMA327



RGB LED MODULE
(2 PCS)
VMA307



3 COLOUR RGB SMD
LED MODULE (2 PCS)
VMA318



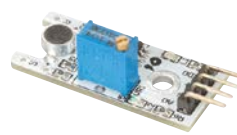
ANALOGUE TEMPERATURE
SENSOR MODULE (2 PCS)
VMA320



DHT11 DIGITAL
TEMPERATURE HUMIDITY
SENSOR MODULE
VMA311



TEMPERATURE PROBE
DS18B20 & ADAPTER
VMA324



MICROPHONE SOUND
SENSOR MODULE
VMA309



ACTIVE BUZZER
MODULE (2 PCS)
VMA319



Do you want to know what you
can do with these products?
Go to
www.vellemanformakers.com
to get inspired!

Arduino®

Accessories



40 PINS 30 CM MALE TO MALE
JUMPER WIRE (FLAT CABLE)
VMA413

40 PINS 30 CM MALE TO FEMALE
JUMPER WIRE (FLAT CABLE)
VMA414

40 PINS 30 CM FEMALE TO FEMALE
JUMPER WIRE (FLAT CABLE)
VMA415

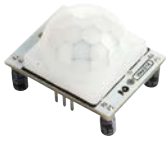


40 PINS 15 CM MALE TO MALE
JUMPER WIRE (FLAT CABLE)
VMA427

40 PINS 15 CM MALE TO FEMALE
JUMPER WIRE (FLAT CABLE)
VMA428

40 PINS 15 CM FEMALE TO FEMALE
JUMPER WIRE (FLAT CABLE)
VMA429

For all technical info, visit www.vellemanformakers.com



PIR MOTION SENSOR FOR ARDUINO®
VMA314



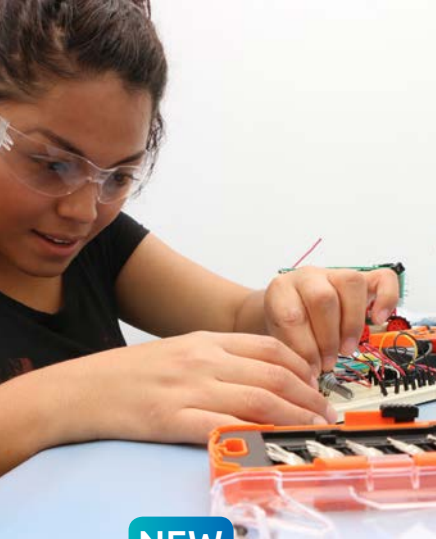
HC-SR05 ULTRASONIC SENSOR
VMA306



SOIL MOISTURE SENSOR + WATER LEVEL SENSOR MODULE
VMA303



CURRENT SENSOR ACS712 MODULE - 20 A
VMA323



NEW



PULSE / HEART RATE SENSOR MODULE FOR ARDUINO®
VMA340



FINGERPRINT SENSOR ZFM-708
VMA329



ARDUINO® COMPATIBLE PHOTOSENSITIVE SENSOR MODULE WITH 3 PIN CABLE
VMA407



BH1750 DIGITAL LIGHT INTENSITY SENSOR MODULE
VMA341



UV LIGHT SENSOR GVA-S12SD MODULE
VMA328



COLOR SENSOR TCS3200 MODULE
VMA325



FORCE-SENSING RESISTOR (FSR)
VMA334



BME280 TEMPERATURE HUMIDITY PRESSURE SENSOR
VMA335



AIR QUALITY SENSOR COMBO BOARD
VMA342



LIGHTNING SENSOR
VMA343



TRANSPARENT BOX CASE SHELL FOR ARDUINO® UNO R3
VMA506



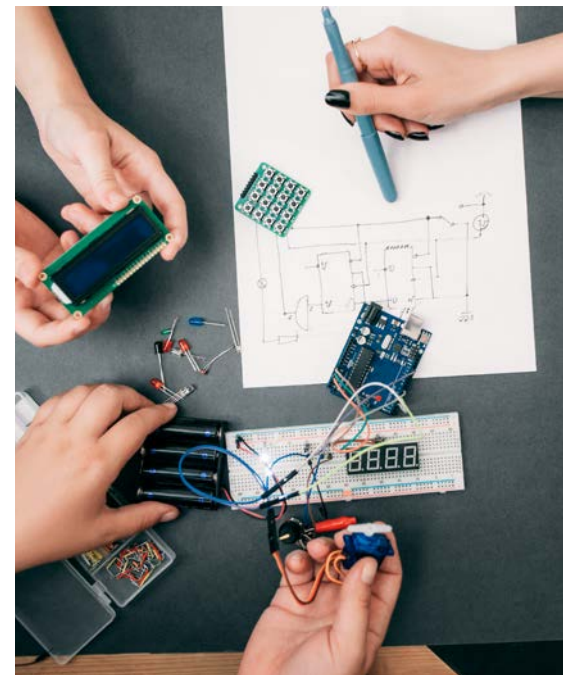
UNIVERSAL POWER SUPPLY WITH 6 INTERCHANGEABLE PLUGS - 9 VDC - 2 A - 18 W
PSSE0920

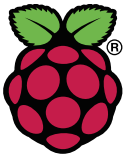


TRANSPARENT BOX CASE SHELL FOR ARDUINO® MEGA 2560R3
VMA507



COMPACT SWITCHING POWER SUPPLY - 12 VDC - 2 A - 24 W - CONNECTOR 2.1 X 5.5 MM
PSSE1220N





Raspberry Pi

A **Raspberry Pi**® is a deliciously small and inexpensive computer that anyone can use to learn programming or to use as an all-round computer for cool projects.

Velleman IO offers **starter sets** (with and without the Pi), giving you all the basic items needed to make your first steps in the Raspberry Pi® world. Furthermore we offer **a range of accessories** going from housings over touchscreens and power supplies. As always all these items were carefully selected to provide you with the best possible experience while building your Pi projects.

Raspberry Pi®

Starter sets



RASPBERRY PI® 3B+ STARTER KIT
PI3SETN



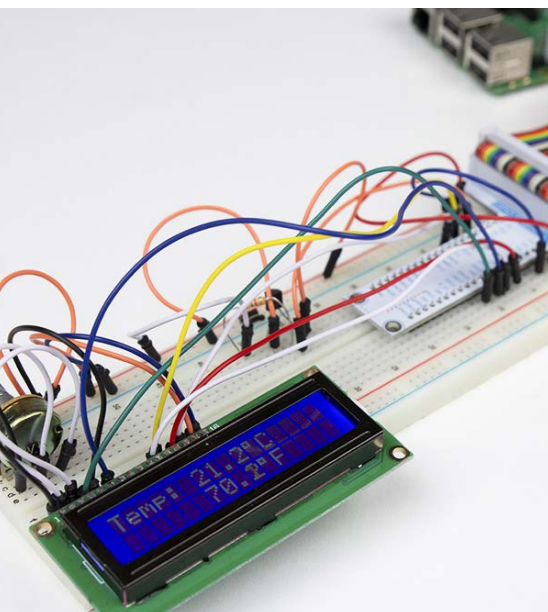
ELECTRONIC PARTS PACK FOR RASPERRY PI®
VMP500



DIY KIT FOR RASPERRY PI®
VMP501



BASIC LEARNING KIT FOR RASPERRY PI®
VMP502



Project

Display temperature on an LCD with Raspberry Pi®

This tutorial will explain how to **measure the temperature** with the DS18B20 temperature sensor and how to display its values on a 16x2 LCD display. We will use the Raspberry Pi®3 model B+ and our DIY kit for Raspberry Pi® including an LCD and a temperature sensor!

If this is the first time that you use a Raspberry Pi®, then please follow this tutorial to set up your Pi first!

Material Ingredients

- Raspberry Pi® 3 model B+
- Connector pins
- LCD module
- a temperature sensor (DS18B20)
- 50k Ω potentiometer
- 4.7k Ω resistor
- jumper wires
- breadboard

Tools

- soldering iron
- soldering tin

Check out the rest of the tutorial on www.vellemanformakers.com

Raspberry Pi®

Accessories



RASPBERRY PI® B CASE - BLACK
FOR RASPBERRY PI® B+, 2B AND 3B
PICASE1B - PICASE1C - PICASE1W



TRANSPARENT BOX WITH COOLING
FOR RASPBERRY PI® 3B & 3B+
VMP504



HOUSING FOR RASPBERRY PI® 2 & MODEL B+
TKBERRY2B



VESA HOUSING
FOR RASPBERRY PI3®
VMP503



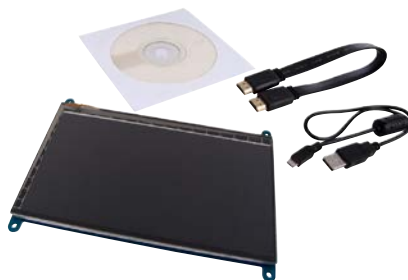
RASPBERRY PI® B+ CAMERA CASE
TKCAMBB - TKCAMWB



3.5" 320 X 480 TOUCHSCREEN FOR RASPBERRY PI®
VMP400



5" 800 X 480 HDMI-B TOUCHSCREEN
FOR RASPBERRY PI®
VMP401



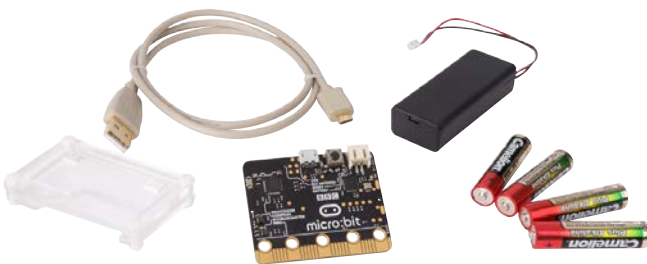
7" 800 X 480 HDMI-B TOUCHSCREEN
FOR RASPBERRY PI®
VMP402



The **micro:bit**® is an educational and creative tool to inspire a new generation of young people. It can be used across the curriculum, not just in STEM subjects. It can help give young people the knowledge and skills to move from being consumers of digital information, to being designers and creators of new tools to enhance learning, to solve problems or just to have fun, enabling them to make the most of 21st Century life and the economy.

Micro:bit®

Kits



MICRO:BIT® - STARTER KIT
VMM001



MICRO:BIT® ADVANCED KIT
VMM002

NEW



MICRO:BIT® EDUCATION SMART ROBOT KIT
VMM500



MICRO:BIT® TINKER KIT
VMM502

NEW

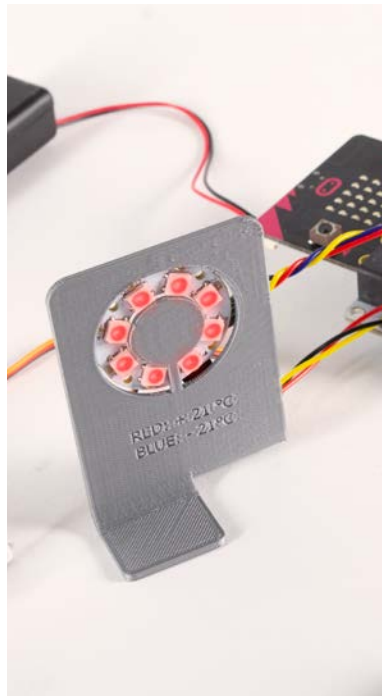


MICRO:BIT® STARTER KIT
VMM501

Project

Make different temperature displays

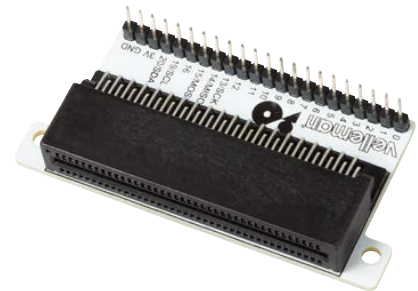
Keep a good eye on your room's temperature by using some simple I/O's from our micro:bit® starter kit! In this project you can display the temperature in two different ways. Either use the LED ring to burn red when the temperature exceeds +24°C and blue when it's colder. Or for a more precise display, you can use the servo shield and get creative with cardboard to make a scale. The servo's arrow will hence tell you what temperature it is. Find the sample code and all explanations on manuals.vellemanformakers.com and impress your teachers and parents with this cool science project.



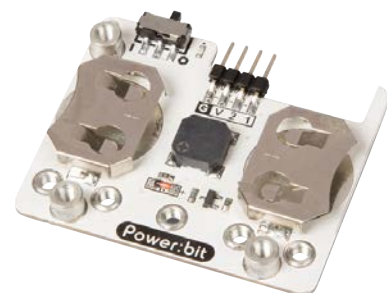
Check out the rest of the tutorial on www.vellemanformakers.com



PCB CONNECTOR FOR MICRO:BIT®
VMM003

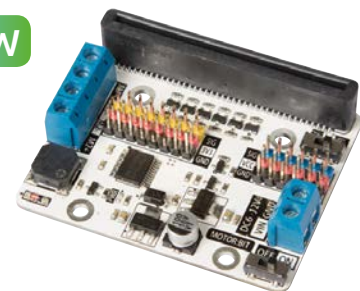


GPIO ADAPTOR BOARD FOR MICRO:BIT®
VMM004

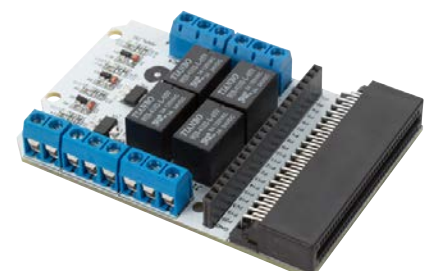


POWER:BIT SHIELD FOR MICRO:BIT®
VMM005

NEW



MOTOR SHIELD FOR MICRO:BIT®
VMM006



4 CHANNEL RELAY MODULE FOR MICRO:BIT®
VMM400

General accessories



CERAMIC CAPACITOR SET
K/CAP1



ELECTROLYTIC CAPACITOR SET
K/CAP2



SET OF 120 DIODES
K/DIODE1



SET OF 80 ASSORTED LEDES
K/LED1



SET OF 610 RESISTORS (E12-SERIES)
K/RES-E12



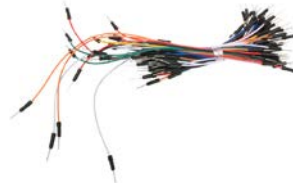
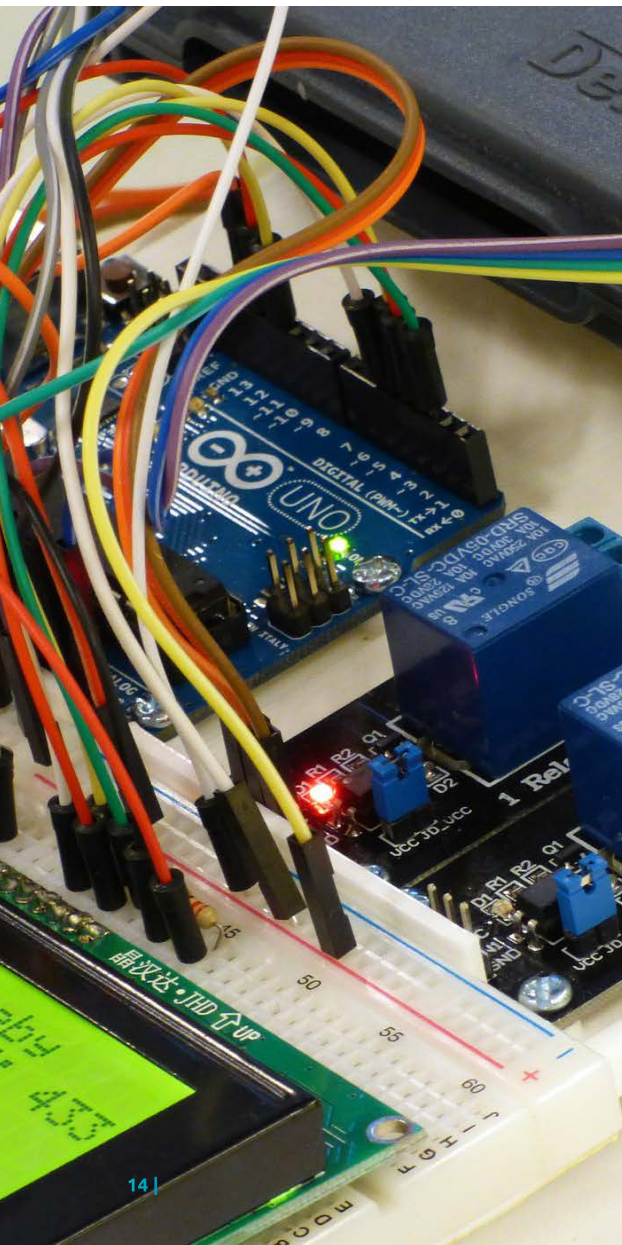
SET OF 480 RESISTORS (E3-SERIES)
K/RES-E3



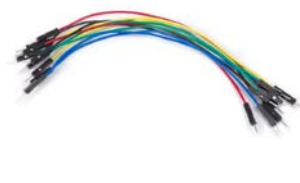
TRANSISTOR SET
K/TRANS1



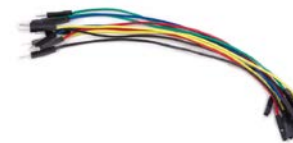
RESISTOR TRIMMER SET
K/TRIMSET1



SET OF AWG JUMPER WIRES
ONE PIN MALE TO MALE (65 PCS)
WJW009N



SET OF AWG BREADBOARD JUMPER WIRES
ONE PIN MALE TO MALE - 5.9" (15 CM) - 10 PCS
WJW010



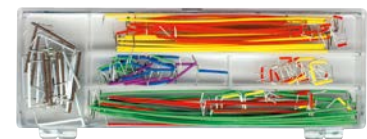
SET OF AWG BREADBOARD JUMPER WIRES
ONE PIN MALE TO FEMALE - 5.9" (15 CM) - 10 PCS
WJW011



SET OF AWG BREADBOARD JUMPER WIRES
ONE PIN FEMALE TO FEMALE - 5.9" (15 CM) - 10 PCS
WJW012



ASSORTED JUMPER WIRE SET (350 PCS)
WJW351



ASSORTED JUMPER WIRE SET (140PCS)
WJW70



COMPACT CHARGER WITH MICRO-USB CONNECTOR
5 VDC - 2.5 A MAX. - 12.5 W - BLACK
PSSEUSB26B



COMPACT CHARGER WITH MICRO-USB CONNECTOR
5 VDC - 2.5 A MAX. - 12.5 W - WHITE
PSSEUSB26W



SMD STORAGE BOX
SMDBOX14



HIGH SPEED HDMI® 2.0 WITH ETHERNET
PLUG TO PLUG CABLE - COPPER / BASIC / 1.5 M / GOLD PLATED / M-M
PAC415B015



USB 2.0 A PLUG TO USB 2.0 A PLUG
COPPER / BASIC / 1.8 M / GOLD PLATED / M-M
PAC600B018N



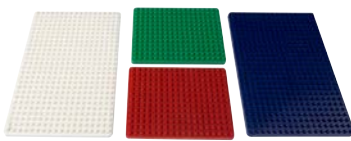
USB 2.0 A PLUG TO USB 2.0 B PLUG / COPPER
/ BASIC / 2.5 M / GOLD PLATED / M - M
PAC601B025N



SMD "E12" RESISTORS SET - 0603
K/RES0603



SET OF MINI BREADBOARDS
55 TIE-POINTS - 5 PCS
VTBB6



SET OF PLATES FOR MINI BREADBOARDS - 4 PCS
VTBB7



SET OF MINI BREADBOARDS
170 TIE-POINTS - 4 PCS
VTBB8



MINI BREADBOARD AND JUMPER WIRE PACK
SD09N



SOLDERLESS BREADBOARD
830 HOLES + JUMPER WIRES - 140 PCS
VTBB1N



Visit our new maker platform

www.vellemanformakers.com

And get inspired by tutorials & fun DIY projects!



Project

Make a BrightDot sparkling skirt



Make all your fairytale dreams come true by making this easy **DIY twinkling skirt** with the Arduino® compatible BrightDots.

The tutorial has two main parts; in the first part, we will show you how to make your own tulle skirt. If you're not up to making this yourself, you can also pick out a lovely skirt for yourself, preferably one with an underskirt. This way, you can sew the BrightDots onto the underskirt for a better effect.

In the second part of the tutorial, you will learn how to connect the BrightDots and how to attach them onto the skirt. You can learn how to program them in the manual on manuals.velleman.eu

Both the skirt as well as the BrightDot assembly are very easy to make because we kept the sewing to a minimum. It's amazing what you can do with scissors and a soldering iron as main tools!

Material Ingredients

- tulle fabric
- 2 x ribbon of about 1 cm / 0.40 inches in diameter
- 1 x ESP32 wearable development board
- 20 x single BrightDots
- 1 x power switch
- 3 x AA-batteries
- 1 x battery pack for 3 AA batteries
- soft electrical wires with a full core

Tools

- scissors
- ruler (preferably up to 1 meter / 40 inches)
- USB A to Mini B
- stripping pliers
- soldering iron
- solder
- shrink tubes
- heat gun or hair dryer
- double-sided tape

Check out the rest of the tutorial on www.vellemanformakers.com

