velleman®
for makers

NEW
3D PRINTERS
& FILAMENTS

WEARABLE
PROJECTS

DIY
ELECTRONICS
FOR MAKERS

NEW
PRODUCTS
INSIDE

BOLDPORT STUDIO

Limited Edition

07I0

05

WHAT'S INSIDE?

HI THERE, FELLOW MAKER!

Thanks for picking up a copy of our new catalog. In this edition, you can find an overview of our old and new **DIY electronics for makers**. Some items feature extra information and even **inspiration** for your next project. But be sure to check out our website for more in-depth info, **pictures, and videos** on everything. All manuals can be found online as well!

But before we start showing you all the goodies, we will start off by giving you some information about Velleman for Makers. We will explain all about our new labels, the skills that we focus on, and more! Be sure to check out the last pages as well! *(spoiler alert)* There, you will get a first glimpse of our coming soon projects!

Let your inner maker be inspired by the **unique and fun projects** in this catalog and **make something!**

![Velleman for makers logo]

Velleman for Makers develops and selects DIY electronics and equipment for makers like you.

Solder kits, robotics, 3D printers, development boards, shields and much, much more!

Bring your ideas to life and join our quest to learn about electronics, programming, mechanics and more useful skills!

Located in **Belgium**, Europe, Velleman for Makers' headquarters has over 40 years of experience in both development and production of maker electronics. Fun fact; with production sites across the globe, Velleman produces almost 400.000 units of in-house developed products per year!

Let your maker-self be inspired by the unique projects in this catalog and **make something!**

Solder kits, robotics, 3D printers, development boards, shields and much, much more!
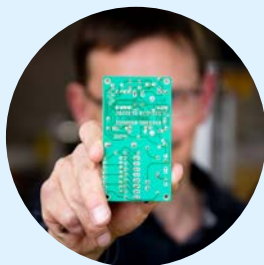
LABELS

The Velleman for Makers electronics are meant to inspire and challenge makers of all skill levels. And because we have a lot of different items, we came up with four labels to indicate whether an item is suited for your needs:

| play	use	experiment	create
PLAY labeled items are fun and visual projects that have basic functions.	USE labeled items are useful and functional projects like kits, modules or instruments that you can use to complete bigger projects.	EXPERIMENT labeled items can be shields, add-ons, sets, etc. that enable you to prototype with electronics, mechanics, programming and more.	CREATE labeled items give you the complete freedom to create something like a 3D print, a wearable project, and more!

The colored squares underneath each product in this catalog indicate the label of that product!

SKILLS

Aside from labels, the Velleman for Maker projects also focus on using and training different maker skills; mechanics, electronics, programming, and soldering. In most cases, you can't have one without the other.
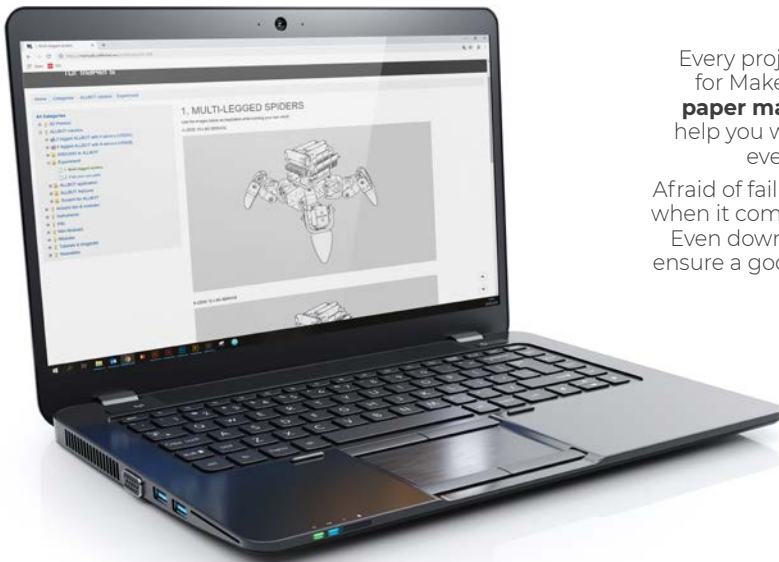
MANUALS

Every project that has been conjured up by the Velleman for Makers team is accompanied by a custom **online or paper manual.** Each manual contains a lot of pictures to help you with the assembly or usage of the project. Some even feature **exploded assembly views** or **videos**.

Afraid of failure? No need! There are tips & tricks galore, and when it comes to safety instructions, we've got you covered. Even downloadable example codes are at your disposal to ensure a good experience! You can find all new manuals on

manuals.velleman.eu

And if that is not enough to help makers on their way, the R&D engineers also moderate an active **online forum**. Ain't no problem they can't handle!

Start a conversation and ask your questions on

forum.velleman.eu
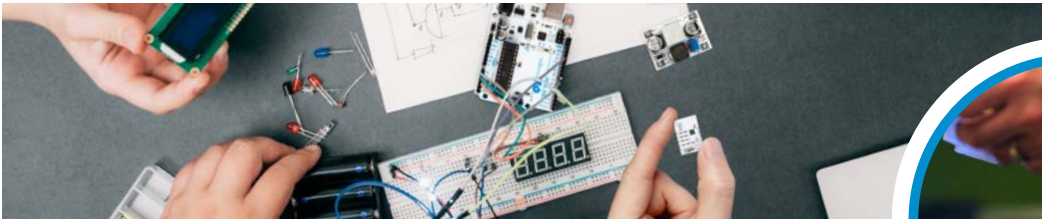
TUTORIALS & PROJECTS

Stuck in maker rut? If you want to be inspired or learn about new projects, be sure to keep a close eye on the **Velleman for Makers website** and social media.

Fun projects for all kinds of makers are created with Velleman for Makers products and are shared weekly. Don't miss out on all the fun and check out our socials:
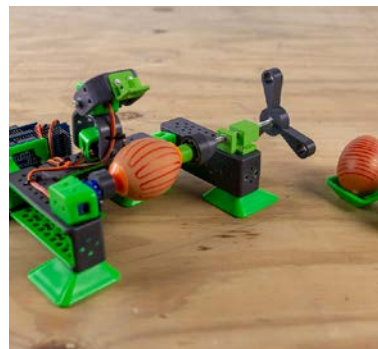
 Velleman for Makers

 @Vel_Makers
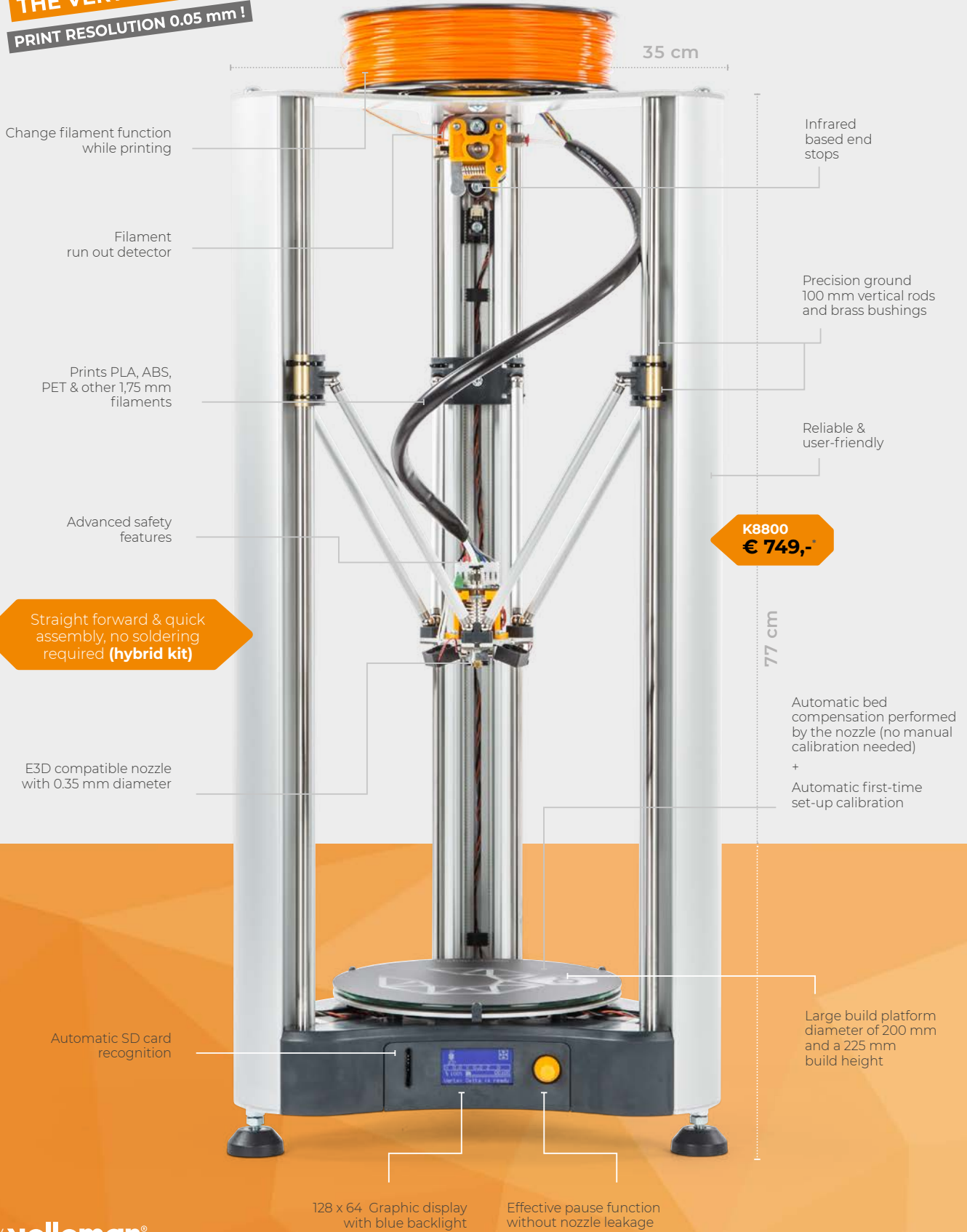
 vel_makers

 Velleman for Makers

 Velleman for Makers

WWW.VELLEMANFORMAKERS.COM

VERTEX

3D PRINTING

USER FRIENDLY & RELIABLE: THE VERTEX DELTA

PRINT RESOLUTION 0.05 mm !

35 cm

77 cm

Change filament function while printing

Filament run out detector

Prints PLA, ABS, PET & other 1,75 mm filaments

Advanced safety features

Straight forward & quick assembly, no soldering required **(hybrid kit)**

E3D compatible nozzle with 0.35 mm diameter

Automatic SD card recognition

Infrared based end stops

Precision ground 100 mm vertical rods and brass bushings

Reliable & user-friendly

K8800
€ 749,-

Automatic bed compensation performed by the nozzle (no manual calibration needed)
+
Automatic first-time set-up calibration

Large build platform diameter of 200 mm and a 225 mm build height

128 x 64 Graphic display with blue backlight

Effective pause function without nozzle leakage

by **Velleman**
for makers

Designed in Belgium

▷ SPARE PARTS FOR VERTEX DELTA - K8800

PU TIMING BELT SPARE PART SET
FOR VERTEX DELTA 3D PRINTER - 3 PCS

K8800-BELT/SP
€ 44,90*

BUILDTAK 3D PRINT BED SURFACE
FOR VERTEX DELTA (Ø 210 MM)

K8800-BT
€ 14,90*

COOLING FAN SPARE PART SET 1
FOR VERTEX DELTA 3D PRINTER (PRINT HEAD)

K8800-FANSET1
€ 24,90*

COOLING FAN SPARE PART SET 2
FOR VERTEX DELTA 3D PRINTER (ASSEMBLED BASE AND PRINT HEAD)

K8800-FANSET2
€ 14,90*

VERTEX DELTA

The Vertex Delta is an all-round and **reliable 3D printer** designed to print refined objects to complete your projects.

Aside from the **excellent print quality and user-friendliness**, the Vertex Delta also comes with a lot of innovative perks to make your 3D printing experience more engaging and pleasant. Advanced safety features, a **filament run out detector**, a mid print filament replacement function and **automatic calibration** and bed compensation are only a few of the latest technological additions.

This Vertex comes as a **hybrid kit** which means that after a straightforward and quick assembly, your Delta 3D printer is ready to serve you. And don't worry about a precise build, because this device will take care of all necessary procedures to ensure a perfect first print.

Choose for reliability and for making quality 3D projects, choose Vertex and make it happen!

PIEZO SENSOR SPARE PART SET
FOR VERTEX DELTA 3D PRINTER - 3 PCS

K8800-PIEZO/SP
€ 9,90*

HEATER CARTRIDGE AND THERMISTOR ASSEMBLY SPARE PART SET
FOR VERTEX DELTA 3D PRINTER

K8800-TC/SP
€ 14,90*

COMING SOON:
0.4 MM STAINLESS STEEL NOZZLE
0.5 MM BRASS NOZZLE

SPARE NOZZLE
FOR VERTEX NANO (K8600) AND VERTEX DELTA (K8800) - 2 PCS

NOZ8800/SP
€ 7,90*

METAL HOT-END SPARE PART SET
FOR VERTEX DELTA 3D PRINTER

K8800-HOT/SP
€ 14,90*

LINEAR BRASS BUSHING SPARE PART SET
FOR VERTEX DELTA 3D PRINTER - 6 PCS

K8800-LB10/SP
€ 19,90*

MAGNETIC BALL SPARE PART SET
FOR VERTEX DELTA 3D PRINTER (M5 ND-35 Ø 10 MM)

K8800-MAGNET/SP
€ 19,90*

MAGNET CUP SPARE PART SET
FOR VERTEX DELTA 3D PRINTER - 12 PCS

K8800-MC/SP
€ 19,90*

ROUND GLASS PANEL
FOR 3D PRINTER
(Ø 210 X 4 MM / Ø 8.27" X 0.16")

GP8800
€ 12,90*

VERTEX

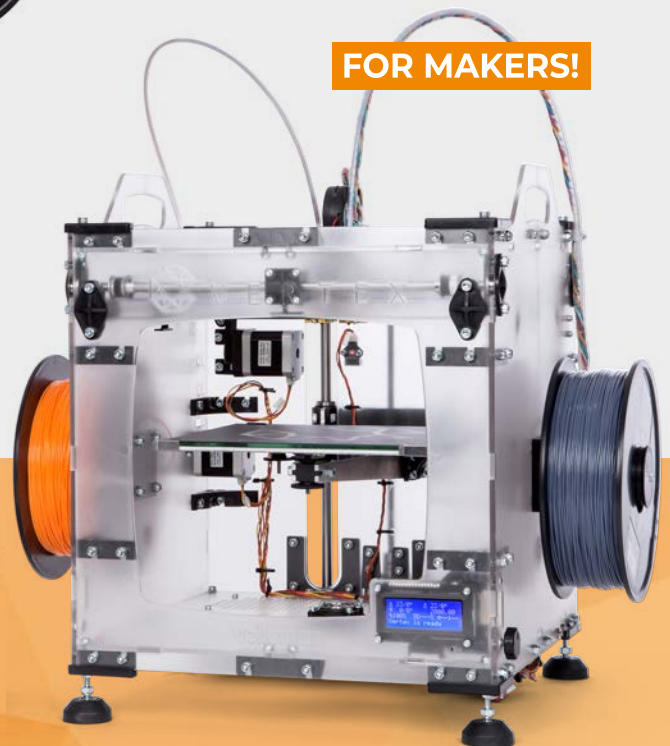## Easy, accurate, affordable & open source 3D printing

OUR MOST HACKABLE PRINTER

FOR MAKERS!

TINY SIZE, GREAT RESULTS

3D PRINTER KIT

This DIY 3D printer kit prints objects of maximum 20 x 20 x 20 cm by using different kinds of filament with a diameter of 3 mm. The K8200 is compatible with all free RepRap software and firmware.

K8200
€ 399,-*

VERTEX NANO 3D PRINTER KIT

The Vertex Nano is Velleman Projects' 3rd generation 3D printer. Thanks to our experience, we have managed to keep this new 3D printer accurate and open source but in a compact and affordable design.

K8600 - KIT   **VM8600 - ASSEMBLED**
€ 279,-*   **€ 299,-***

VERTEX 3D PRINTER

The Vertex is the next generation Velleman 3D printer kit.

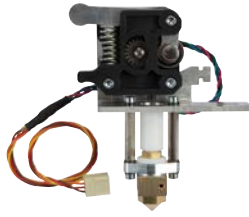Easy, accurate, affordable & Open Source.

K8400
€ 599,-*

SPARE PARTS FOR 3D-PRINTER - K8200

BEST SELLER!

GLASS PANEL
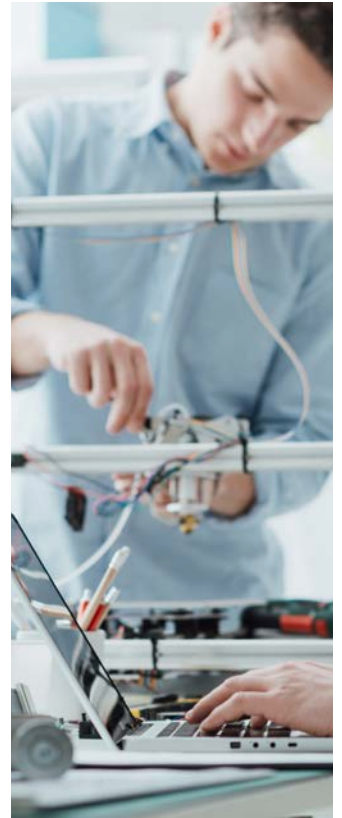FOR 3D PRINTER
(215 X 215 X 3 MM)
GP8200
€ 6,⁹⁰*

0.35MM DIRECT DRIVE EXTRUDER
FOR K8200
K8203
€ 98,⁹⁰*

STAND-ALONE CONTROLLER
FOR 3D PRINTER
VM8201
€ 68,⁹⁰*

3D PRINTER HEAD LED RING
VOOR K8200
VM8202
€ 16,⁹⁰*

EXTRUDER
FOR K8200 - 3D PRINTER
(SPARE PART)
7350-31/SP
€ 69,-*

STEPPER MOTOR DRIVER
FOR K8200 - 3D PRINTER
(SPARE PART)
A4988/SP
€ 12,⁹⁰*

Z AXIS UPGRADE ROD AND COUPLER
FOR K8200
K8204
€ 59,⁹⁰*

LINEAR BEARING Ø8MM
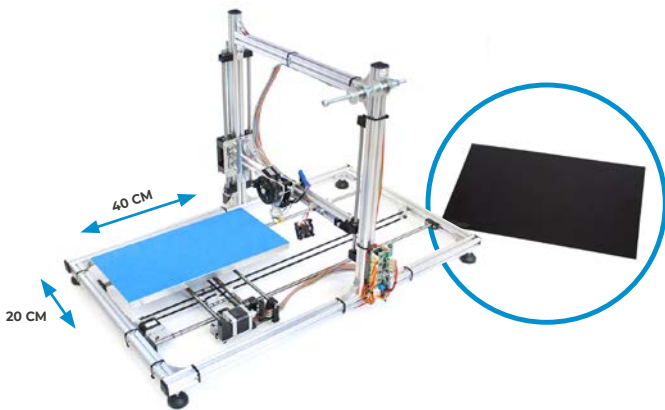FOR K8200 - 3D PRINTER
(SPARE PART)
LM8UU/SP
€ 2,⁹⁰*

SPARE NOZZLE ASSEMBLY
FOR K8200
NOZ8200/SP
€ 14,⁹⁰*

PASTE EXTRUDER SET
FOR K8200
(K8200 NOT INCL.)
K8205
€ 68,⁹⁰*

40 CM

20 CM

EXTENSION SET
FOR K8200
(K8200 NOT INCL.)
K8206
€ 149,⁹⁰*

BUILDTAK 3D PRINT BED SURFACE
FOR K8206 - 215 MM X 400 MM
K8206-BT
€ 21,⁹⁰*

▷ SPARE PARTS FOR VERTEX - K8400

GLASS PANEL
(240 X 215 X 4 MM / 9,45" X 8,46" X 0,16")
GP8400
€ 9,90*

HOTEND ASSEMBLY SPAREPART SET
FOR K8400 VERTEX 3D PRINTER
HOT8400/SP
€ 59,90*

SPAREPART FOR K8400:
DISPLAY & CONNECTOR ASSEMBLY
K8400-DSP/SP
€ 34,90*

HEATER ELEMENT & SENSOR ASSEMBLY
FOR K8400
K8400-TC/SP
€ 24,90*

BED PLATE FOR 3D PRINTING
(240 X 215 X 4 MM / 9,45" X 8,46" X 0,16")
K8400-BP
€ 19,90*

BUILDTAK 3D PRINT BED SURFACE
FOR K8400 - 215 MM X 240 MM
K8400-BT
€ 14,90*

ATMEGA 3D-PRINTER
MAINBOARD
VM8400MB
€ 129,90*

FLEXIBLE Z-AXIS COUPLING
FOR K8200 AND K8400
ZC3DJT16
€ 13,90*

TOOLSET
FOR VERTEX 3D-PRINTER (K8400)
VTSET8400
€ 89,-*

▷ SPARE PARTS FOR VERTEX NANO - K8600

BUILDTAK 3D PRINT BED SURFACE
FOR VERTEX NANO (K8600) - 85 MM X 85 MM
K8600-BT
€ 3,90*

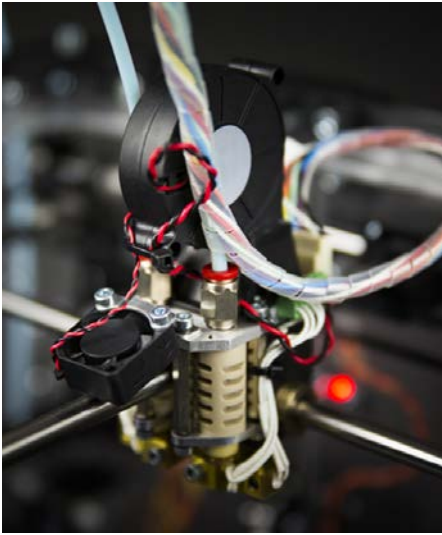**HOTEND ASSEMBLY SET**
FOR 3D PRINTING
K8601
€ 59,90*

MORE SPAREPARTS WILL BE AVAILABLE SOON!
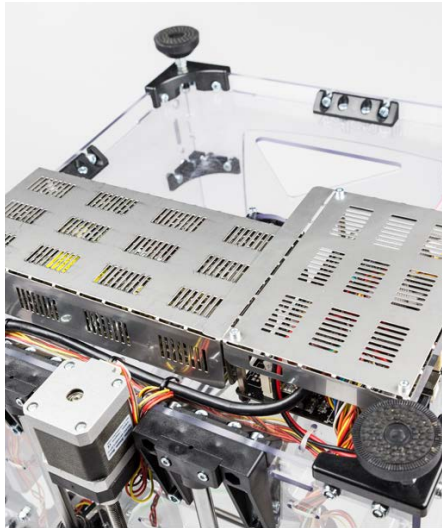

VERTEX STARTER
PACK
VERTEXSTART
€ 39,90*

SECOND NOZZLE
FOR K8400 - VERTEX 3D PRINTER
Contains all necessary parts to convert your single extruder Vertex 3D Printer into a dual extruder printer.
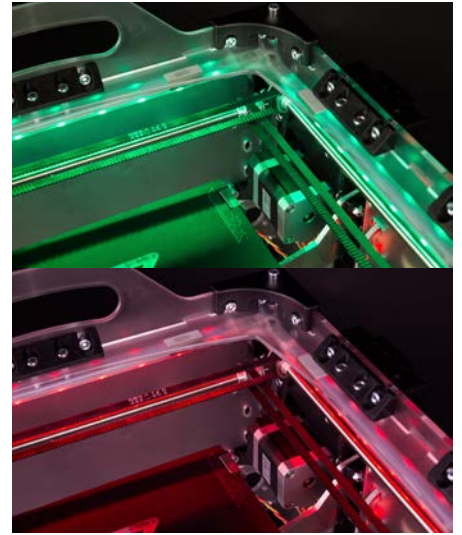
C **K8402**
€ 129,90*

ADD-ON COVER SET
FOR VERTEX 3D PRINTER
Stainless steel covers for both PSU and motherboard. Protects your precious board e.g. when you take your Vertex on the road.

C **K8405**
€ 19,90*

RGB LED ADD-ON
FOR K8400 - VERTEX 3D PRINTER
Tweak your Vertex K8400 3D printer with these easy to install RGB LED strips. This kit includes everything you need.

C **K8403**
€ 34,90*
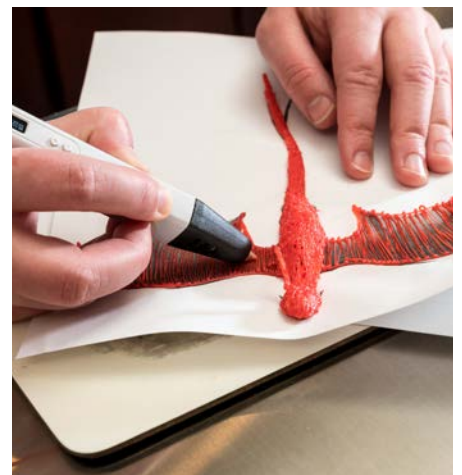
▷ **3D PRINTING PENS**

3D PRINTING PEN

C **3DPEN1**
€ 69,90*

3D PRINTING PEN WITH OLED DISPLAY

C **3DPEN3**
€ 79,90*

3D PRINTING PEN WITH STAND

C **3DPEN4**
€ 29,90*

Did you just make or buy your first 3D printer? Great! But you have no idea what material to use for your prints? We get that! Here are some answers to your questions;

WHICH MATERIAL IS USED FOR 3D PRINTING?

Filament is a general name for the raw material that we use to 3D print objects. It looks like a long funny colored spaghetti string that can fit through the tube and nozzle of your 3D printer. And just like spaghetti, you have a lot of different types of filament. The most common filaments are wound onto a spool of 750 grams to 1 kilo because this increases stability and practicality. The filament diameter can differ from 1,75mm to 3mm and the one you need is dependent on your 3d printer. The Vertex and Vertex Nano are compatible with 1,75mm but for the K8200, it's 3mm.
Tip: if you purchase other filaments than the Velleman filaments, check whether the spool opening fits the spool holder of your Vertex. This should be a bit bigger than 52mm.
Aside from the thickness of the filament

string, you also have different types of filament material. You can find sturdy filament, flexible filament, recyclable filament and so on. Currently, the most common and affordable types of filament are PLA and ABS.

PLA

PLA or polylactic acid is made from dextrose (sugar) which is extracted from biodegradable materials. Plus, it's the most popular bioplastic or biopolymer and the only plastic that is currently produced globally. In short, it's bio and it's good!

PLA - MATT

This esthetic material reflects less light, causing a mattening finish.This effect also contributes to the quality of the 3D print, because the print lines are less noticable and the surface is a little rougher.

PLA - SATIN

Tougher and less brittle than regular PLA
· easy to print at low temperature · low warping · biodegradable · limited smell

PLA - GLITTER

Little particles were added to the PLA filament to create a glitter effect, but they are not harmful to standard messing nozzles. This effect also contributes to the quality of the 3D print, because the print lines are less noticeable.

PLA - WOOD

WOOD is a modified PLA based type of filament, that smells and feels like wood. The different wood-types enable us to manufacture this wide range of natural wood colours. The filament is tough enough for supplies on reels up to 2,3 kg and prints very easy, even with common 0,4mm nozzles as the wood particles don't block the nozzle.

PLA - ULTRA DIAMOND

Ultra Diamond is a game changing material. It's a PLA filament mixed with industrial nano-diamonds! This results in an ultra-strong ridged material for your heavy duty 3D models and prototypes.

PLA

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
PLA175B07	PLA	1.75 mm (1/16")		black	750 g	€ 19,90*
PLA175BG07	PLA	1.75 mm (1/16")		bronze	750 g	€ 19,90*
PLA175BR75	PLA	1.75 mm (1/16")	N	brown	750 g	€ 19,90*
PLA175D07	PLA	1.75 mm (1/16")		light blue	750 g	€ 19,90*
PLA175G07	PLA	1.75 mm (1/16")		green	750 g	€ 19,90*
PLA175H07	PLA	1.75 mm (1/16")		grey	750 g	€ 19,90*
PLA175L07	PLA	1.75 mm (1/16")		luminous	750 g	€ 24,90*
PLA175LG07	PLA	1.75 mm (1/16")	N	light grey	750 g	€ 24,90*
PLA175M07	PLA	1.75 mm (1/16")		magenta	750 g	€ 19,90*
PLA175N07	PLA	1.75 mm (1/16")		natural	750 g	€ 19,90*
PLA175O07	PLA	1.75 mm (1/16")		orange	750 g	€ 19,90*
PLA175P07	PLA	1.75 mm (1/16")		pink	750 g	€ 19,90*
PLA175PAB07	PLA	1.75 mm (1/16")	N	pastel blue	750 g	€ 19,90*
PLA175PAG07	PLA	1.75 mm (1/16")	N	pastel green	750 g	€ 19,90*
PLA175PAP07	PLA	1.75 mm (1/16")	N	pastel pink	750 g	€ 19,90*
PLA175PG07	PLA	1.75 mm (1/16")		pine green	750 g	€ 19,90*
PLA175PW07	PLA	1.75 mm (1/16")	N	pearl white	750 g	€ 19,90*
PLA175R07	PLA	1.75 mm (1/16")		red	750 g	€ 19,90*
PLA175S07	PLA	1.75 mm (1/16")		silver	750 g	€ 19,90*
PLA175U07	PLA	1.75 mm (1/16")		dark blue	750 g	€ 19,90*
PLA175V07	PLA	1.75 mm (1/16")		light green	750 g	€ 19,90*
PLA175W07	PLA	1.75 mm (1/16")		white	750 g	€ 19,90*
PLA175Y07	PLA	1.75 mm (1/16")		yellow	750 g	€ 19,90*
PLA175Z07	PLA	1.75 mm (1/16")		purple	750 g	€ 19,90*
PLA175SET6	PLA	1.75 mm (1/16")		black, white, red, silver, light blue, yellow	6 x 50 g	€ 19,90*

	TYPE	DIAMETER			COLOUR	WEIGHT	MSRP
PLA285B07	PLA	2.85 mm (1/8")		■	black	750 g	€ 19,90*
PLA285D07	PLA	2.85 mm (1/8")		■	light blue	750 g	€ 19,90*
PLA285G07	PLA	2.85 mm (1/8")		■	green	750 g	€ 19,90*
PLA285H07	PLA	2.85 mm (1/8")		■	grey	750 g	€ 19,90*
PLA285L07	PLA	2.85 mm (1/8")		■	luminous	750 g	€ 24,90*
PLA285N07	PLA	2.85 mm (1/8")		■	natural	750 g	€ 19,90*
PLA285O07	PLA	2.85 mm (1/8")		■	orange	750 g	€ 19,90*
PLA285P07	PLA	2.85 mm (1/8")		■	pink	750 g	€ 19,90*
PLA285R07	PLA	2.85 mm (1/8")		■	red	750 g	€ 19,90*
PLA285U07	PLA	2.85 mm (1/8")		■	blue	750 g	€ 19,90*
PLA285V07	PLA	2.85 mm (1/8")		■	light green	750 g	€ 19,90*
PLA285W07	PLA	2.85 mm (1/8")		■	white	750 g	€ 19,90*
PLA285Y07	PLA	2.85 mm (1/8")		■	yellow	750 g	€ 19,90*
PLA285Z07	PLA	2.85 mm (1/8")		■	purple	750 g	€ 19,90*
PLA175B07M	PLA - MATT	1.75 mm (1/16")	N	■	black	750 g	€ 24,90*
PLA175MG07M	PLA - MATT	1.75 mm (1/16")	N	■	moss grey	750 g	€ 24,90*
PLA175BS07S	PLA SATIN	1.75 mm (1/16")	N	■	blue	750 g	€ 24,90*
PLA175CG07S	PLA SATIN	1.75 mm (1/16")	N	■	champagne gold	750 g	€ 24,90*
PLA175GG07S	PLA SATIN	1.75 mm (1/16")	N	■	grass green	750 g	€ 24,90*
PLA175IS07S	PLA SATIN	1.75 mm (1/16")	N	■	ivory	750 g	€ 24,90*
PLA175OF07S	PLA SATIN	1.75 mm (1/16")	N	■	fluo orange	750 g	€ 24,90*
PLA175PIS07S	PLA SATIN	1.75 mm (1/16")	N	■	pink	750 g	€ 24,90*
PLA175YF07S	PLA SATIN	1.75 mm (1/16")	N	■	fluo yellow	750 g	€ 24,90*
PLA175MG07GL	PLA - GLITTER	1.75 mm (1/16")	N	■	metallic gold	750 g	€ 24,90*
PLA175MGR07GL	PLA - GLITTER	1.75 mm (1/16")	N	■	metallic green	750 g	€ 24,90*
PLA175MIG07GL	PLA - GLITTER	1.75 mm (1/16")	N	■	metallic grey	750 g	€ 24,90*
PLA175MR07GL	PLA - GLITTER	1.75 mm (1/16")	N	■	metallic copper	750 g	€ 24,90*
PLA175MS07GL	PLA - GLITTER	1.75 mm (1/16")	N	■	metallic silver	750 g	€ 24,90*
PLA17MBL07GL	PLA - GLITTER	1.75 mm (1/16")	N	■	metallic blue	750 g	€ 24,90*
PLA175NW05	PLA - WOOD	1.75 mm (1/16")		■	wood	500 g	€ 39,90*
PLA175B05UD	PLA ULTRA DIAMOND	1.75 mm (1/16")	N	■	black	500 g	€ 64,90*
PLA175IG05UD	PLA ULTRA DIAMOND	1.75 mm (1/16")	N	■	grey	500 g	€ 64,90*
PLA175N05UD	PLA ULTRA DIAMOND	1.75 mm (1/16")	N	■	natural	500 g	€ 64,90*

✳ Did you know that all filaments by Velleman contain A-grade colorants? These colorants ensure that your 3D print's color will not change or fade after being exposed to UV-light! Caution: the more color additives your filament contains, the harder it is it print with. For example, printing with white filament is more prone to stringing or oozing.

ABS: Acrylonitrile-butadiene-styrene is a polymer that is formed by the emulsion or mass polymerization of acrylonitrile and styrene in the presence of polybutadiene. Say what?! This basically means that ABS is formed by a highly chemical process. Because of this process, the most important characteristics of ABS are its impact resistance and toughness but also its toxic vapor when melted.

PET G: has high optical clarity and high resistance to acids, bases, water and oils. Absorbs little to no water and is semi-flexible.

PP: Polypropylene is light, stretchable up to 600% and offers excellent resistance to alkalis and acids. Can withstand temperatures of > 100°C and is suitable for microwaves and dishwashers.

SKULPT: a type of 3D printing filament for FDM printers that you can sculpt afterwards to add more detail to your object or to remove print lines and imperfections.

TPU: flexible and easy to print on bowden tube and direct drive printers. It has excellent resistance to high temperatures and is stretchable up to 450%.

HIPS: (High Impact Polystyrene) is a support material for ABS filament. It looks like ABS and dissolves in limonene, which does not damage the ABS filament.

CLN: This filament can prevent the nozzle from choking by removing residual material out of the nozzle.
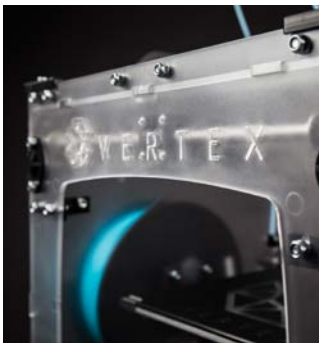
ABS

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
ABS175B07	ABS	1.75 mm (1/16")		black	750 g	€ 19,90*
ABS175N07	ABS	1.75 mm (1/16")		natural	750 g	€ 19,90*
ABS175SET6	ABS	1.75 mm (1/16")		black, white, red, silver, light blue, yellow	6 x 50 g	€ 19,90*
ABS175W07	ABS	1.75 mm (1/16")		white	750 g	€ 19,90*
ABS285B07	ABS	2.85 mm (1/8")		black	750 g	€ 19,90*
ABS285W07	ABS	2.85 mm (1/8")		white	750 g	€ 19,90*

PET G

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
PET175AG07	PET	1.75 mm (1/16")	N	apple green	750 g	€ 24,90*
PET175B07	PET	1.75 mm (1/16")		black	750 g	€ 24,90*
PET175N07	PET	1.75 mm (1/16")		natural	750 g	€ 24,90*
PET175R07	PET	1.75 mm (1/16")	N	red	750 g	€ 24,90*
PET175S07	PET	1.75 mm (1/16")	N	silver	750 g	€ 24,90*
PET175SB07	PET	1.75 mm (1/16")	N	ligth blue	750 g	€ 24,90*
PET175W07	PET	1.75 mm (1/16")		white	750 g	€ 24,90*
PET285B07	PET	2.85 mm (1/8")		black	750 g	€ 24,90*
PET285N07	PET	2.85 mm (1/8")		natural	750 g	€ 24,90*
PET285W07	PET	2.85 mm (1/8")		white	750 g	€ 24,90*

PP

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
PP175BL05	PP	1.75 mm (1/16")	N	black	500 g	€ 39,90*
PP175CL05	PP	1.75 mm (1/16")	N	transparent	500 g	€ 39,90*
PP175W05	PP	1.75 mm (1/16")	N	white	500 g	€ 39,90*

SKULPT

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
SKU175B05	SKU	1.75 mm (1/16")	N	black	500 g	€ 49,90*
SKU175GL05	SKU	1.75 mm (1/16")	N	gold	500 g	€ 54,90*

TPU

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
TPU175B05	TPU	1.75 mm (1/16")		black	500 g	€ 44,90*
TPU175DB05	TPU	1.75 mm (1/16")	N	blue	500 g	€ 39,90*
TPU175N05	TPU	1.75 mm (1/16")		natural	500 g	€ 44,90*
TPU175R05	TPU	1.75 mm (1/16")	N	red	500 g	€ 39,90*
TPU175SP05	TPU	1.75 mm (1/16")	N	pink	500 g	€ 39,90*
TPU175W05	TPU	1.75 mm (1/16")		white	500 g	€ 44,90*

HIPS

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
HIPS175W05	HIPS	1.75 mm (1/16")		white	500 g	€ 19,90*
HIPS285W05	HIPS	2.85 mm (1/8")	N	white	750 g	€ 19,90*

CLN

	TYPE	DIAMETER		COLOUR	WEIGHT	MSRP
CLN175N01	CLN	1.75 mm (1/16")		natural	100 g	€ 6,90*
CLN285N01	CLN	2.85 mm (1/8")		natural	100 g	€ 6,90*

PLA GLITTER

①
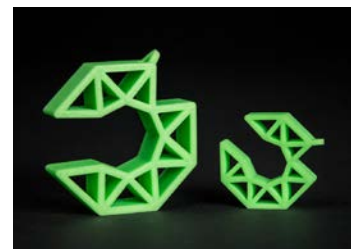
CREDITS FOR THE DESIGNERS!

1. Twisted 6-sided Vase Basic by MaakMijnIdee

2. Odanata by pitiflo

3. #3DBenchy by CreativeTools.se

4. SpiderBot by Modio3d

5. Cheshire Cat - MMU, The Caterpillar, White Rabbit & Mad Hatter by reddadsteve

Find all designs on **thingiverse.com**

②

PLA WOOD

③

▷ **3D PRINTED ALICE IN WONDERLAND DESIGNS BY REDDADSTEVE ON THINGIVERSE**

If you're looking for a fun but long-term 3D printing project, these 3D models by reddadsteve are the answer!

We came across reddadsteve's work when we were looking for a 3D model of Cheshire, the crazy cat from Alice in Wonderland. To our amazement, Cheshire was very well detailed and is accompanied by not one but four more models from the Alice in Wonderland animation film! You can check out all of reddadsteve's work on his Thingiverse profile: https://www.thingiverse.com/reddadsteve/designs

The figurines are made up of all separate parts and pieces that are easy to print. Most of them can be printed without support, which makes the slice and print process really enjoyable. We used our Vertex Delta for this job and printed the parts at a resolution of 0.1 mm with 10% infill. No rafts, no supports.

Before you start 3D printing, we really advise you to make a list of all the different parts and their color. This way, you will have a nice overview of all the parts that need to be in the same color so you don't have to change the filament of your printer each time you start a new piece. When the printing part is done, all pieces assemble quite nicely into a beautiful figure. We used transparent hot glue to glue together the larger parts and transparent instant glue for the smaller, more delicate pieces. Be sure to use transparent glue at all times, you don't want to stain the parts after all the hour of precious printing.

Enjoy and share your results!

④

⑤

ALLBOT®

EXPANDABLE ROBOT SYSTEM

Meet the ALLBOTS!

Build and enhance the robot, learn how to program, use the app and have fun!

TWO LEGGED ALLBOT®
e **VR204**
€ 99,⁹⁰*

FOUR LEGGED ALLBOT®
e **VR408**
€ 149,⁹⁰*

ALLBOT® OPTION: SMARTPHONE IR TRANSMITTER
VR001
€ 19,⁹⁰* e

MADE FOR
➕☑➖™
Genuino | **ARDUINO**

FIND THE ALLBOTS ON Thingiverse AND You Tube

Scratch

The **Scratch plugin** makes it possible to operate your ALLBOT very easily by using the scratch graphical programming software. The user can utilize all standard scratch function blocks, and custom blocks to control the ALLBOT in order to let it walk, chirp, turn and so on.

Scratch is known to be a very **educational tool for children** and young adults to take

the first steps towards programming. Using the ALLBOT in combination with Scratch will also help visualize what you have created in Scratch. This way, children will understand how very applicable programming just is.
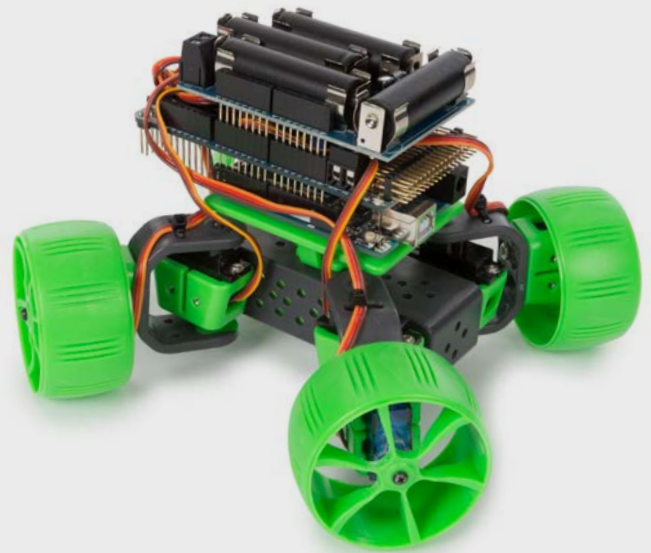Scratch for ALLBOT is available in **English, Dutch, French, German and Spanish**!

Go to **manuals.velleman.eu** to download the plugin and get started!
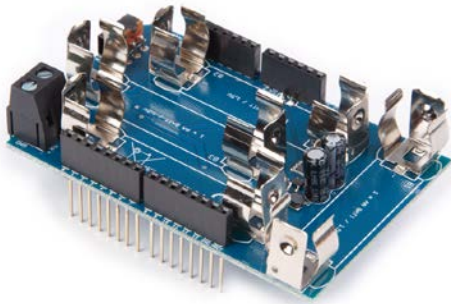
ALLBOT® BATTERY SHIELD

Use this battery shield to power up your VR408: four legged allbot® VR006: allbot® 2 x 9g servo pack and arduino-UNO-R3: arduino® UNO REV.3 Or ARD-A000067: arduino® mega2560 REV3 .
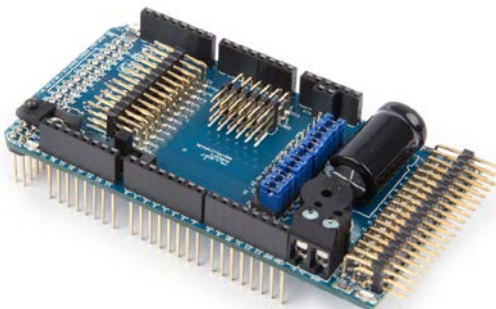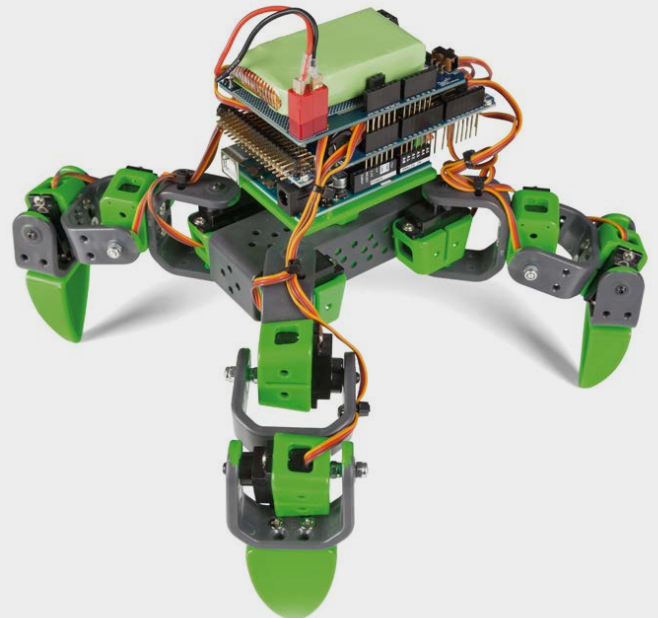
E **VRBS1**
€ 14,90*

ALLBOT® LI-ION BATTERY PACK

Make your ALLBOT creations stronger and last longer with this Arduino® compatible Li-Ion 2-cell battery pack of 1300 mAh (7.4 V). ➔ Optional: li-ion/polymer balance charger - **VLE8**

E **VRBS2**
€ 49,90*

SERVO SHIELD FOR ARDUINO®

This SERVO SHIELD allows you to connect 12 VR006: Allbot® 2 X 9G SERVO PACK when the shield is plugged into an Arduino-UNO-R3: Arduino® UNO REV.3 or 36 VR006: Allbot® 2 X 9G SERVO PACK when plugged into an ARD-A000067: Arduino® MEGA2560 REV3 . Aside from VR006: Allbot® 2 X 9G SERVO PACK you can connect sensors or other actuators as well.

The SERVO SHIELD can also receive an IR signal from the VR001: Allbot® option: smartphone IR transmitter and has a beeper that you can program to make all kind of noises.

E **VRSSM**
€ 29,90*
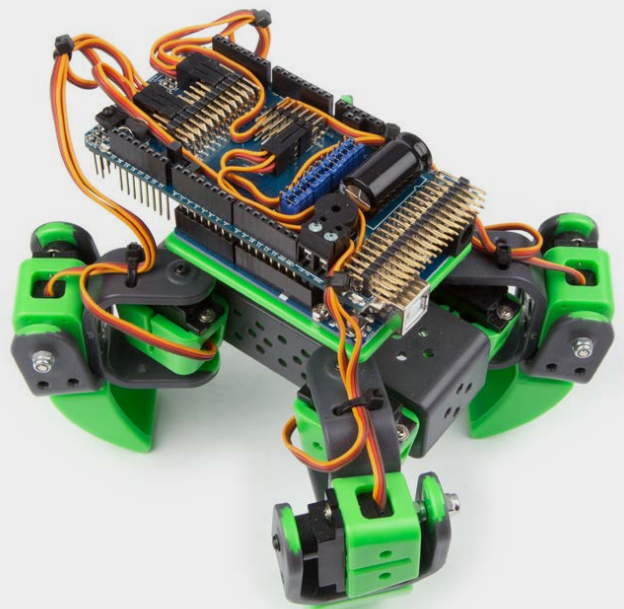
▷ ALLBOT - ADD-ONS

ALLBOT® 2 X 9G SERVO PACK

VR006
€ 14,⁹⁰*

ALLBOT® OPTION: SENSOR PACK

VR002
€ 49,⁹⁰*

ALLBOT® OPTION: LED PACK

VR004
€ 29,⁹⁰*

ALLBOT® OPTION: INPUT PACK

VR005
€ 24,⁹⁰*

ALLBOT® OPTION: 2 SERVO LEG

VR012
€ 29,⁹⁰*

ALLBOT® OPTION: 3 SERVO LEG

VR013
€ 39,⁹⁰*

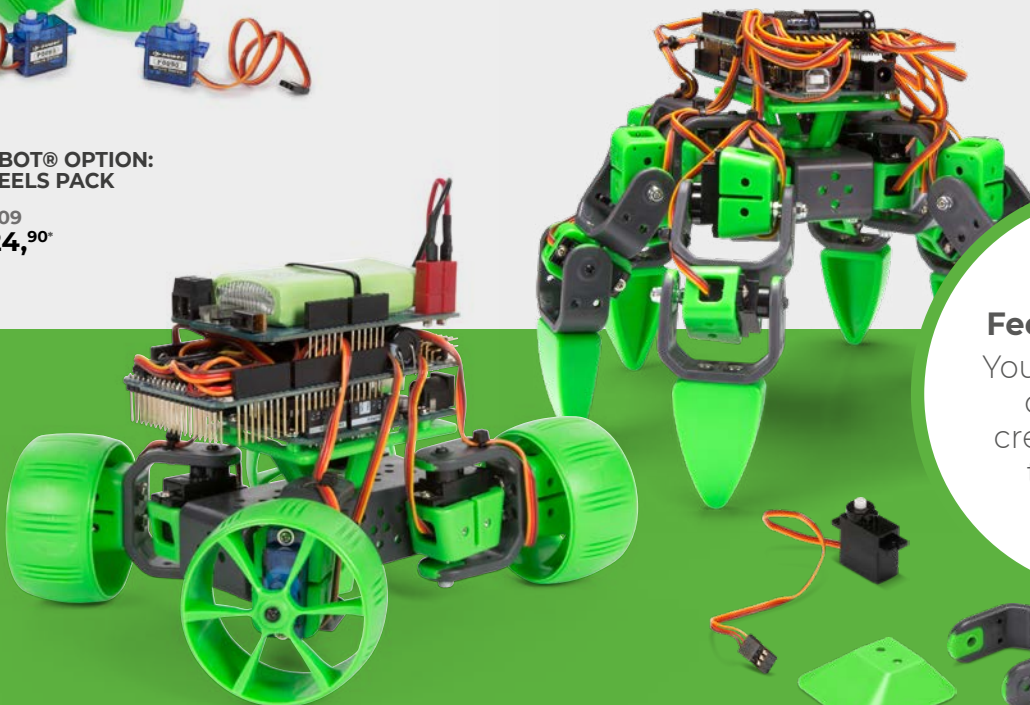**ALLBOT® OPTION: PLASTIC PARTS PACK B**

VR008
€ 19,⁹⁰*

ALLBOT® OPTION: PLASTIC PARTS PACK A

VR007
€ 19,⁹⁰*

ALLBOT® OPTION: WHEELS PACK

VR009
€ 24,⁹⁰*

Feeling creative?
You can build your own ALLBOT creation by using the add-ons!

▷ ELECTRONIC ROBOT KITS

▷ TOBBIE THE ROBOT

Tobbie is an intelligent six legs robot and provides great interaction with children. Tobbie has two programmed modes to follow or avoid objects. In "Follow Me" mode, Tobbie follows whichever object that approaches him and makes it feel like an obedient pet. Thanks to IR auto detect, Tobbie can avoid obstacles in the "Explore" mode and find a new route to keep moving. The little robot offers nice sound and light effect which develops its own emotions and gestures, just like a living pet.

Try to challenge Tobbie and figure out what it can do. Create a maze for it or allow it to follow you. Most of all, do not treat it as a normal robot, but as an adorable smart friend.

KSR18
€ 37,⁹⁰*

N

play

CALCULATOR

SINGING & DANCING

ROCK-PAPER-SCISSORS

experiment

STEM

BBC micro:bit

TOBBIE II MICRO:BIT KIT

Tobbie II - your coolest and cleverest robot friend ever .

Tobbie II is a construction robot, designed of 6 legs and a rotation-free body, possessing all necessary electronics, including motor, IR sensor, buzzer to make it active and interactive for fun. It is ideal to combine with Micro:bit, using your creation and imagination to make it code and program easily by Javascript Blocks Editor or Python Editor on your computer, laptop or smartphone . No need to download more coding software and driver at all. Thanks to this pocket programmable board, coding and programming becomes simple, accessible and interesting for children to learn and practice.

With the main features of BBC Mirco:bit below, Tobbie II sparkles huge potential and brings you all the fantasy and excitement .

KSR20
€ 79,⁹⁰*

N

experiment

HYDRAULIC ROBOTIC ARM

Children will have total command and visual manipulation using the science principles of a hydraulic system and its application. Easy to follow instructions with detailed graphic illustrations pave the way for successful and satisfying kit building (229 pieces in total). Complement your engineering, maths, science and technology learning strategy.

No battery or motor required: it is entirely powered by water; hence, the "Hydraulic" feature and how it manipulates axes movement via lever controllers. The Hydraulic Robot Arm is recommended for ages 14 and up, but with its 229 assembly parts, it will challenge the beginner engineering enthusiast.

KSR12
€ 49,⁹⁰*

ROBOTIC HEDGEHOG

Have fun learning and playing with your Robotic Hedgehog. The roly-poly Hedgehog robot has a built-in sound sensor which responds to claps. When a clap sound is detected, the hedgehog goes into the programmed mode and carries out funny movements. Depending on the clapping commands, the Hedgehog will extend its spines, curl its body, or perform a perfectly executed backward roll.

KSR21
€ 34,⁹⁰*

5-IN-1 MECHANICAL CODING ROBOT

This mission-based, entry level STEM (Science - Technology - Engineering - Mathematics) coding robot is designed to inspire users to learn about mechanical engineering and coding basics. It encourages children to think while also developing their problem-solving skills when faced with different tasks and difficulties. Engage in the coding world and beyond by challenging yourself with your very first coding robot.

The mechanical coding wheel is placed into the heart of the robot to steer its coded courses and tasks. Coding is easily implemented by snapping the coding buttons onto the wheel and having the robot perform its basic functions - go forward, go backward, right/left turn, spin or pause. Thanks to this easy to follow approach, coding and performing the tasks (such as throwing, lifting, kicking or drawing) become more interesting and challenging as the user's skills increase.

KSR19
€ 34,⁹⁰*
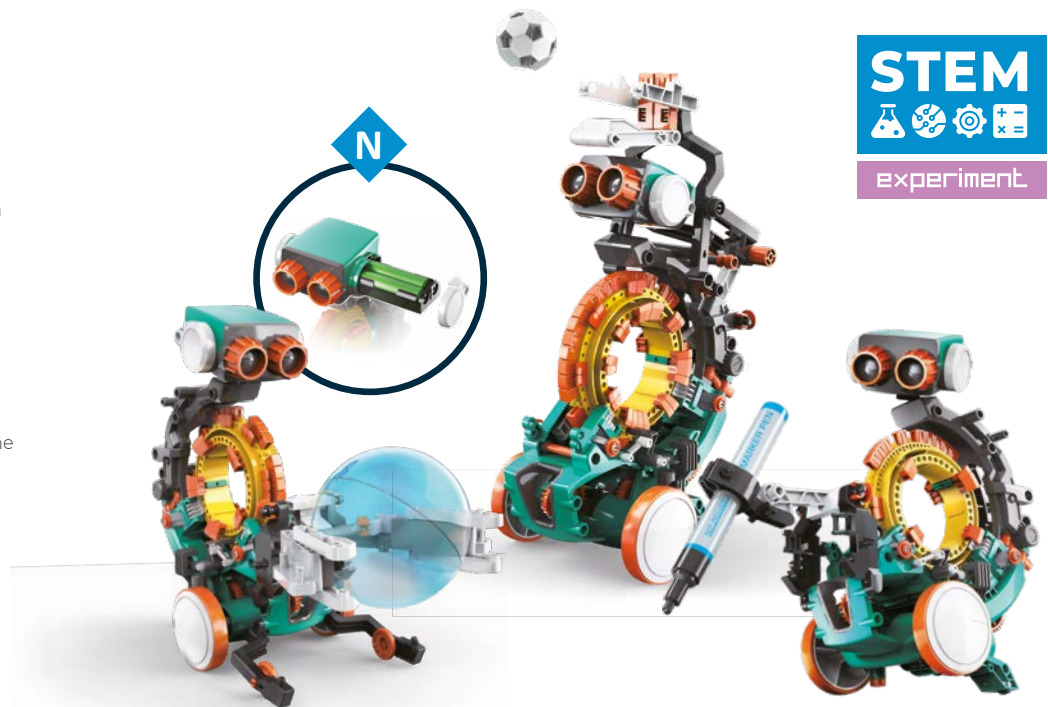
STEM
experiment
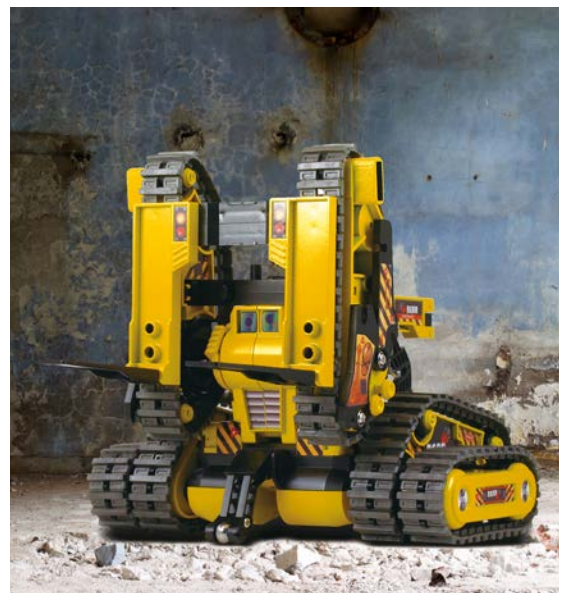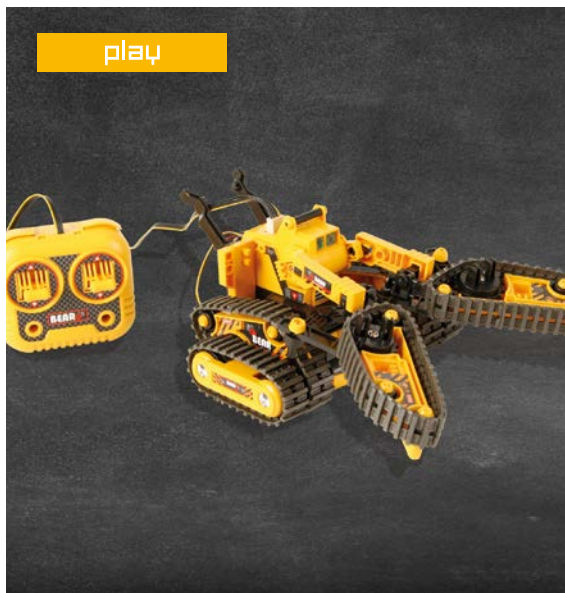
3 IN 1 ALL TERRAIN ROBOT

The three-in-one All Terrain Robot is a multi-function tracked mobile robot.

Use different track modules to transform your robot into 3 amazing models: Forklift, Rover and Gripper.

The wired controller commands the robot to make it move forward, backward, turn, grip or lift.

KSR11
€ 63,⁹⁰*

12 IN 1 SOLAR HYDRAULIC CONSTRUCTION KIT

The solar and hydraulic powered robot can be transformed into twelve different animals and mechanic robots (monkey, T-Rex, scorpion, excavator, etc). The robots can move easily and provide great interaction with kids.

P KSR17
€ 29,⁹⁰*

14 IN 1 EDUCATIONAL SOLAR ROBOT KIT

A series of Robot Kits for the future engineer. Build this kit and find out how much fun electronics, mechanics or hydraulics can be!

P KSR13
€ 29,⁹⁰*

AIR ENGINE CAR KIT

Build an air powered car. A cool construction kit that introduces your children to clean energy through hands-on learning.
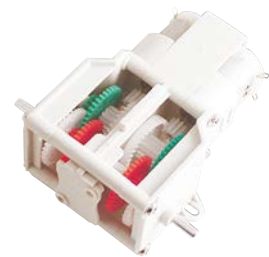
P KSR16
€ 24,⁹⁰*

SKY WALKER ROBOT KIT
(PRE-SOLDERED)

Sky Walker is a striking little robot with two sensors. The first sensor reacts to light intensity changes, the other one reacts to sound.

P ARX004
€ 34,⁹⁰*

TWIN-MOTOR GEARBOX KIT

2 motor and 3 gear sets to have wheels running in different directions · 3 kinds of gear ratio and output · wheels, tires and all other necessary parts included · easy to follow instruction manual included

P KNS15
€ 19,⁹⁰*

ROBOTIC ARM

Enter the world of basic robotic technology and build your own robotic arm with five motors and five joints. The arm features a five-switch hard-wired control unit, a rotating base, elbow and wrist articulations, and a functional gripper. The built-in searchlight brings more fun when operated in the dark.

KSR10
€ 69,⁹⁰*

USB INTERFACE KIT
FOR ROBOTIC ARM KSR10

KSR10/USBN
€ 39,⁹⁰*
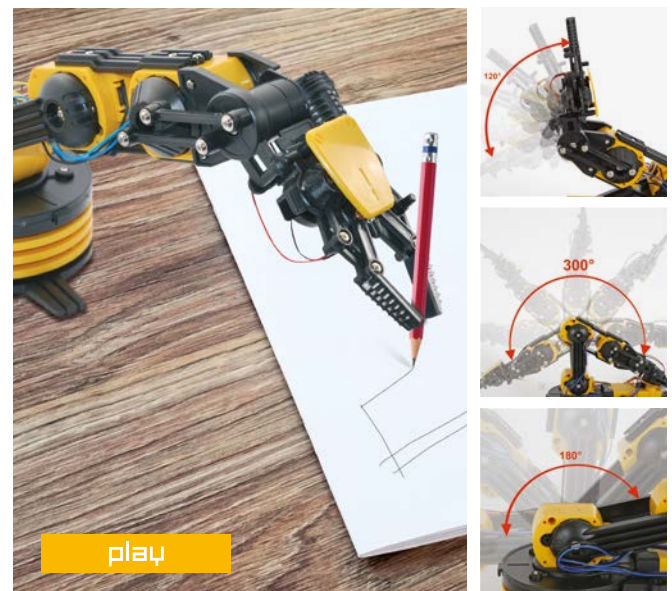
play

◁ ARDUINO ORIGINAL BOARDS

ARDUINO® BOARD

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.

ARDUINO® SOFTWARE

You can tell the Arduino® what it needs to do by writing a set of instructions in the Arduino® programming language and by using the Arduino® development environment. Don't worry about your first Arduino® experience, you can find great tutorials and starter projects on arduino.cc!

ARDUINO® PRODUCTS

Arduino® has different boards, modules, shields and kits that fit the needs of every kind of makers. Be sure to check out each one in our Arduino® product range!
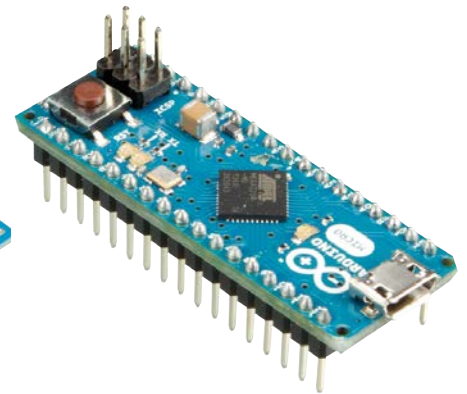
COMMUNITY

Because the Arduino® platform is accessible and open-source, a lot of different makers around the world have formed a community that shares its knowledge and projects that can inspire you.
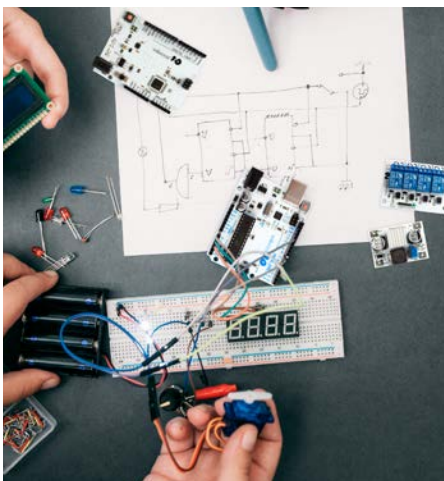
ARDUINO® LEONARDO
The Arduino Leonardo is a microcontroller board based on the ATmega32u4.

ARD-A000052
€ 24,⁹⁰*

ARDUINO® MICRO
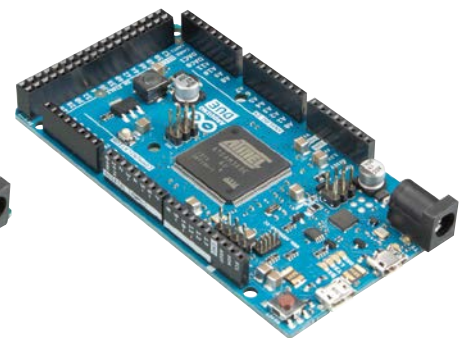The Arduino Micro is a small microcontroller board based on the ATmega32u4.

ARD-A000053
€ 26,⁹⁰*

ARDUINO® LEONARDO (+ HEADERS)
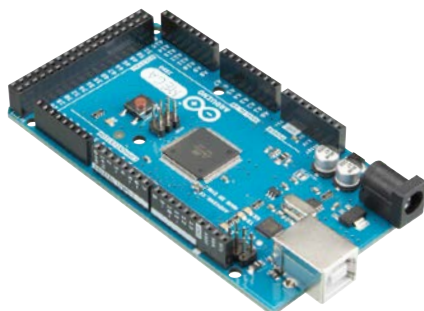The Arduino Leonardo is a microcontroller board based on the ATmega32u4.

ARD-A000057
€ 26,⁹⁰*

ARDUINO® DUE
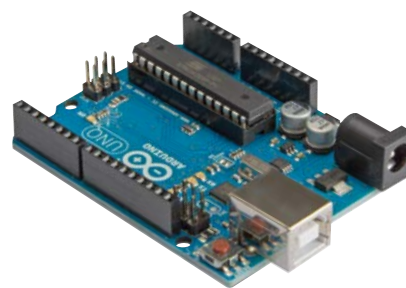A microcontroller board based on the 32-bit Atmel SAM3X8E ARM Cortex-M3 CPU.

ARD-A000062
€ 47,⁹⁰*

ARDUINO® MEGA2560 REV3
The Arduino Mega 2560 is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button.

ARD-A000067
€ 47,⁹⁰*

ARDUINO® UNO REV.3
The Arduino Uno is a microcontroller board based on the ATmega328. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started.

ARDUINO-UNO-R3
€ 26,⁹⁰*

ARDUINO® ATMEGA 328 PRE-LOADED MICROCONTROLLER
ATMega328 with pre-loaded Arduino UNO boot loader

ARD-A000048
€ 9,⁹⁰*

▷ ARDUINO® COMPATIBLE BOARDS

ASSEMBLED VELLEMAN NIBBLE MODULE

Build your own - fully Arduino® compatible - microcontroller and enhance it with 4 built-in buttons and blue LEDs. The nibble only requires through hole soldering skills and is preprogrammed with a working memory game.

KIT **KA0**
€ 34,⁹⁰*

e **VMA0**
€ 19,⁹⁰*

No compromises!
All the pins are normal Arduino I/O, even the ones with a button or LED.

Quick and easy prototyping
Use the built-in buttons and LEDs to start exploring the world of coding.

Build your own Arduino!
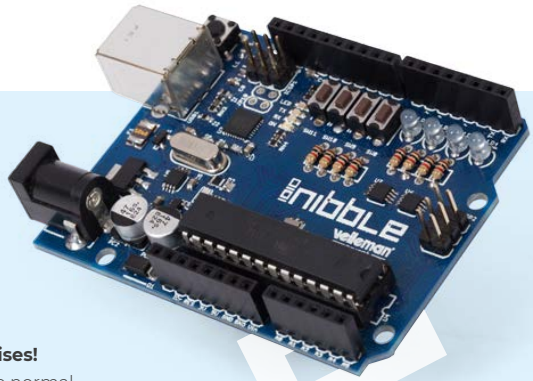Complete the PCB by soldering the through-hole components.

Enjoy the GAME!
This Arduino comes preprogrammed with a memory game so you can start having fun right away.

Fully Arduino compatible!
Compatible with the Arduino ecosystem, use all the available shields, sketches and software.

ATMEGA 328P
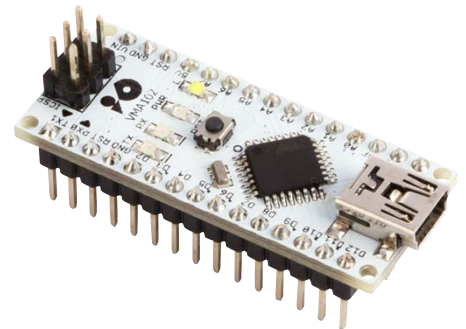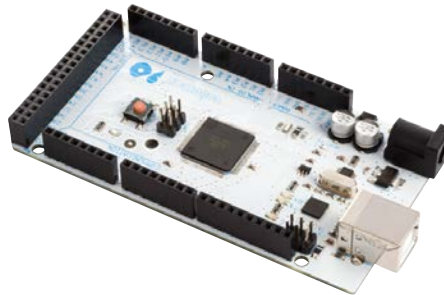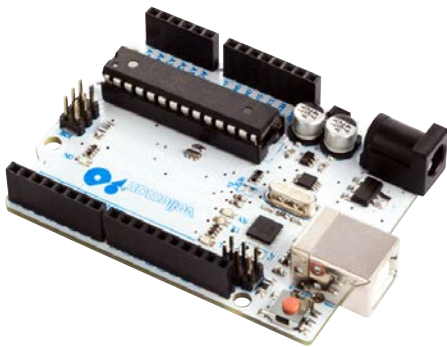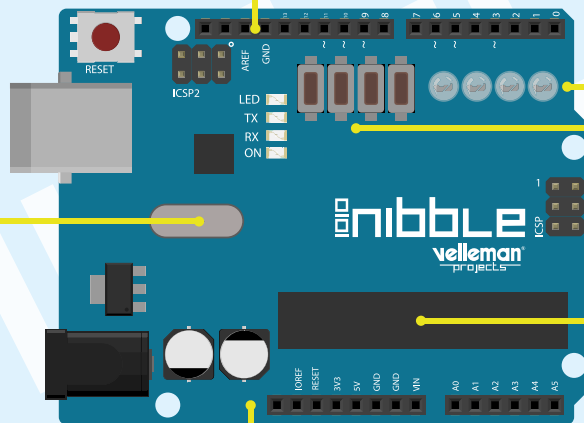
ATMEGA328 UNO DEVELOPMENT BOARD

The VMA100 is the perfect development board if you want to create your own projects. It is built around an ATmega 328 microcontroller and comes with multiple outputs: 14 digital input/output pins, 6 analog inputs, ICSP-header, USB connection and a power jack. If these outputs are not enough, there are lots of shields you can use to extend the board's possibilities or outputs. You can program the board with a graphical user interface. This system is freely available for download and is also easy to understand for beginners.

e **VMA100**
€ 14,⁹⁰*

ATMEGA2560 MEGA DEVELOPMENT BOARD

VMA101 is a development board based on the ATmega2560 microcontroller.

The board has 54 digital input/output pins, 16 analog inputs, 4 UARTs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header and a reset button. You can connect the board to your computer using a USB cable or power it with an adapter.

e **VMA101**
€ 29,⁹⁰*

ATMEGA328 NANO DEVELOPMENT BOARD

The tiny Nano board is especially designed for breadboards and very handy to just try out new ideas and projects.

While small in size, its functions are similar to those of the VMA100 thanks to the powerful ATmega328 microcontroller, which is already featured on several other boards. Use a mini-USB cable for power supply and data transfer to the microcontroller.
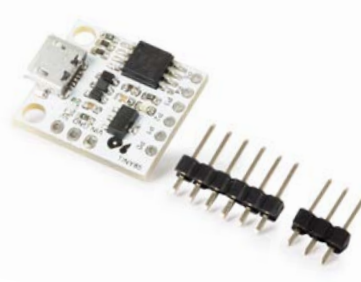
e **VMA102**
€ 19,⁹⁰*
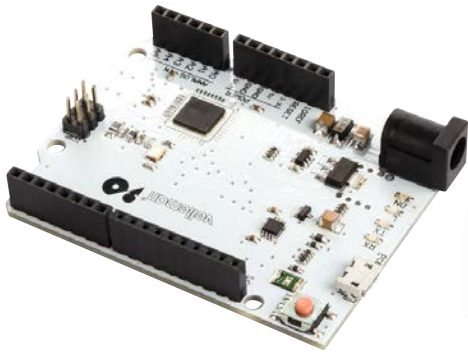
ATMEGA32U4 LEONARDO DEVELOPMENT BOARD

The integrated USB on the VMA103 gives you have access to several code libraries. Ideal for projects requiring the board to behave like a keyboard, mouse or any other USB HID device. The board has 20 digital input/output pins, a 16 MHz crystal oscillator, a micro USB connection, a power jack, an ICSP header and a reset button. Just use a USB cable to connect the board to your computer.
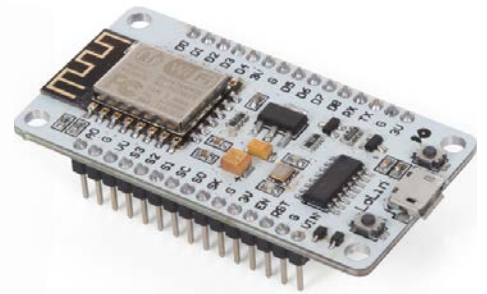
VMA103
€ 19,⁹⁰*

ATTINY85 ARDUINO® COMPATIBLE MICRO DEVELOPMENT BOARD

The VMA108 (ATtiny85) is a great option for running simple Arduino programs, it's small, cheap and relatively easy to use. If your project requires only a few simple inputs or outputs, you're probably fine using a VMA108.

VMA108
€ 9,⁹⁰*

NODEMCU V2 LUA BASED ESP8266 DEVELOPMENT BOARD

The NodeMcu is an open-source firmware and development kit that helps you to prototype your IOT product within a few Lua script lines. · low-cost WiFi solution programmable with the Lua scripting language · on-board USB-serial adaptor

VMA107
€ 14,⁹⁰*

STEM

STEM SHIELD FOR ARDUINO

Use the 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 (STEM: Science, Technology, Engineering and Mathematics.) Learn how to program a microcontroller with this interactive Arduino® compatible STEM shield kit. It enables you to get immediate feedback of what you have programmed, be it lighting up LEDs, making sounds or playing a memory game. The STEM shield even has sensors so the possibilities are endless.

KAEDU
€ 19,⁹⁰*

Buttons and switch
Speaker
ON/OFF
Detachable modules
Trimmer
Temperature sensor
Line-tracker
7 segment display
Servo moter output
2 redlight simulators
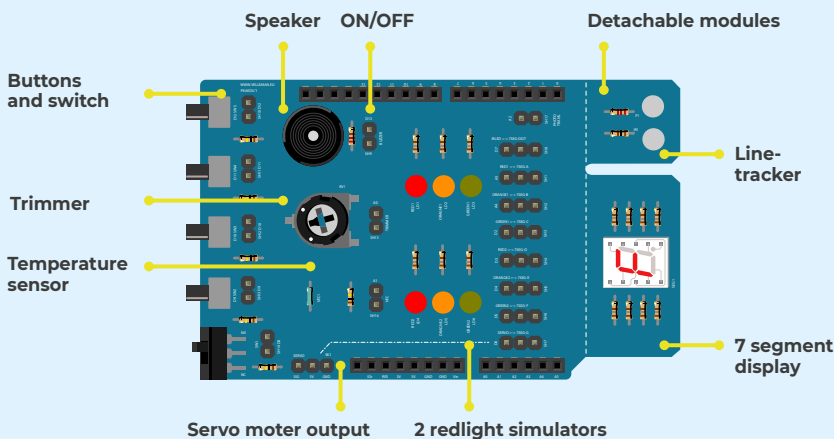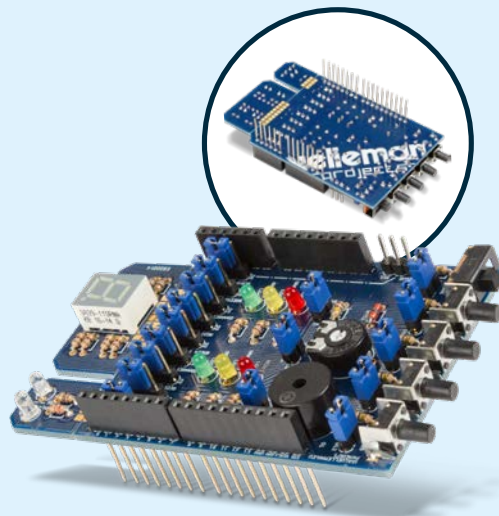
TEENSY V3.2 - 32 BIT ARDUINO COMPATIBLE MICROCONTROLLER BOARD

De Teensy is a small development board with lots of features. You can use your own editor in C to create programs or use Arduino sketches if you prefer.

TEENSY3.2
€ 29,⁹⁰*
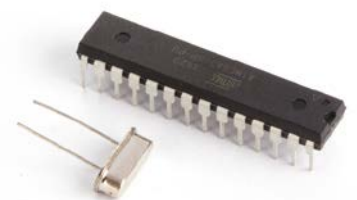
ATMEGA328P MCU IC WITH ARDUINO® UNO BOOTLOADER AND 16 MHZ CRYSTAL

VMA416
€ 7,⁹⁰*

▷ ARDUINO® COMPATIBLE KITS
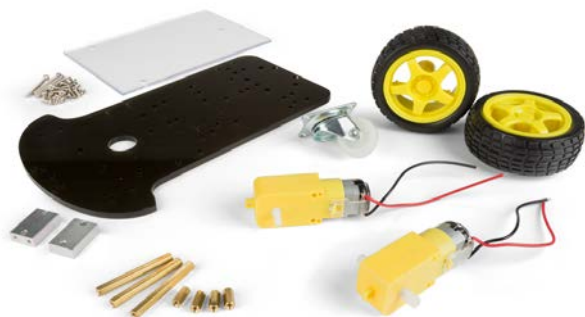
**2 WHEEL DRIVE MOTOR CHASSIS
ROBOTICS KIT**

E | VMA500
€ 24,⁹⁰*

**DIY STARTER KIT
FOR ARDUINO®**

E | VMA501
€ 44,⁹⁰*

BASIC DIY KIT WITH ATMEGA2560 FOR ARDUINO®

E | VMA502
€ 49,⁹⁰*

ELECTRONIC PARTS PACK FOR ARDUINO®

E | VMA503
€ 39,⁹⁰*

BASIC ARDUINO® COMPATIBLE EXPERIMENTER'S KIT

E | VMA504
€ 39,⁹⁰*

ACCESSORIES KIT + CLEAR PLASTIC BOX

E | VMA505
€ 7,⁹⁰*

ARDUINO® STARTER KIT

This kit walks you through the basics of Arduino and electronics in a hands-on way. You will be able to build 15 projects using components that let you control the physical world through different kinds of sensors and actuators.

Once you have mastered this knowledge, you will have a palette of code and circuits to create something beautiful, and make someone smile with what you invent. So build, hack and share!

e ARD-K020007 - FRECNH
ARD-K000007 - ENGLISH
€ 109,⁹⁰*

▷ ARDUINO® COMPATIBLE SHIELDS

RGB SHIELD
downloadable example sketch · stackable design: the shield can be stacked with other shields · large user community · requires 1 Arduino UNO™ (not included)

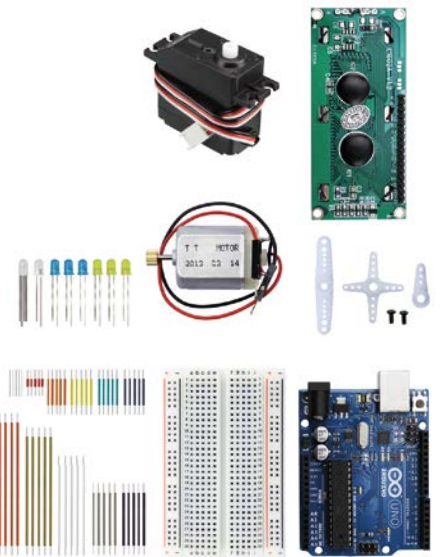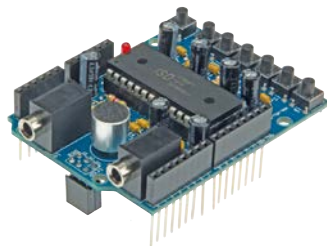**KIT** KA01
€ 14,⁹⁰*

e VMA01
€ 21,⁹⁰*

AUDIO SHIELD
60 second recording time · start playback, record,... via on-board buttons or via Arduino® UNO · playback via a speaker or a line output

KIT KA02
€ 19,⁹⁰*

e VMA02
€ 27,⁹⁰*

MOTOR & POWER SHIELD
2 channels · choose between an external or internal (Vin) power supply · based on the dual full bridge driver L298P · downloadable sample sketch

KIT KA03
€ 19,⁹⁰*

e VMA03
€ 29,⁹⁰*

ETHERNET SHIELD
based on a Microchip ENC28J60 chip · downloadable sample sketches and library · stackable design: the shield can be stacked with other shields

KIT KA04
€ 24,⁹⁰*

e VMA04
€ 37,⁹⁰*
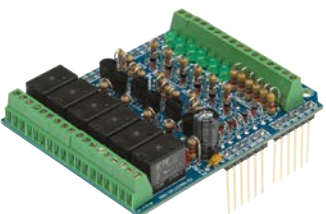
I/O SHIELD
6 relay outputs: 0.5A max 30V (*) · 6 analog inputs · 6 digital inputs · downloadable sample sketch

KIT KA05
€ 24,⁹⁰*

e VMA05
€ 37,⁹⁰*
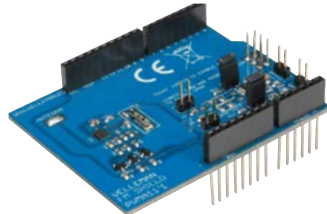
STEREO FM RADIO SHIELD
worldwide FM support · RDS/ RBDS support · volume control · automatic frequency control · automatic gain control · Arduino® library available · class D 2.8 W amplifier

e VMA11
€ 29,⁹⁰*

LCD & KEYPAD SHIELD
blue background / white backlight · screen contrast adjustment · uses 4 bit Arduino LCD library · reset button · the Up, Down, Left, Right buttons use only one analogue input

e VMA203
€ 9,⁹⁰*

WIFI ESP-WROOM-02 SHIELD
802.11 b / g n wireless standards · STA / AP modes support · TCP / IP protocol stack, One socket · supports standard TCP / UDP server and client

e VMA205
€ 29,⁹⁰*

RECONFIGURABLE ARDUINO SHIELD

1Sheeld is a new easily configured shield for Arduino. It is connected to a mobile app that allow the usage of all of Android smartphones' capabilities such as LCD Screen, Gyroscope, Switches, LEDs, Accelerometer, Magnetometer, GSM, Wi-Fi, GPS, etc. into your Arduino sketch. Currently there are more than 40 shields in 1Sheeld.

VMA900
€ 79,90*

MULTIFUNCTION EXPANSION BOARD FOR ARDUINO® NANO/UNO

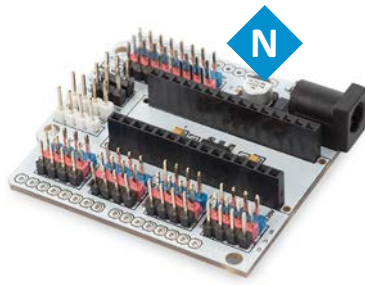The VMA210 expansion board is designed to allow easy access of the interface pins of an Arduino Nano. Each DIO pin or analogue pin of the Nano is brought out to a convenient header. If you add header pins, this board can also be used as expansion shield for VMA100 and VMA101 (UNO, Mega).
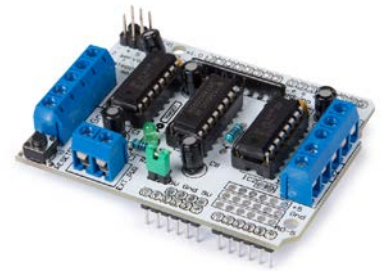
VMA210
€ 9,90*

HM-10 WIRELESS SHIELD FOR ARDUINO® UNO

extends 14 digital pins to 3pin · extends 6 analog pins to 3pin · on-board reset button · comes with a slide switch to power wireless communication on or off · jumper interface to control serial communication · integrated Texas Instruments® CC2541 Bluetooth v4.0 chip on board
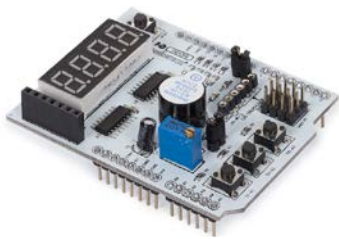
VMA338
€ 19,90*

L293D MOTOR DRIVE EXPANSION SHIELD

two L293D motor driver chips · four H-bridges · 0.6 A per bridge (1.2 A peak) · thermal shutdown protection · internal kickback protection diodes · up to 4 bi-directional DC motors · up to 2 stepper motors · pull down resistors to keep motors disabled during power-up · separate logic and motor power connections
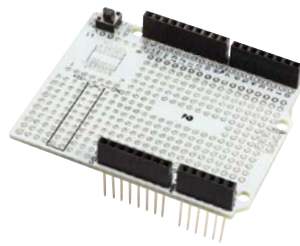
VMA207
€ 16,90*

MULTI-FUNCTION SHIELD EXPANSION BOARD

4 digit 7 segment LED display module · 4 x surface mount LEDs in a parallel configuration · 10 K adjustable precision potentiometer · 3 x independent push buttons · piezo buzzer · DS18B20 and LM35 interface · infrared receiver interface · serial interface header

VMA209
€ 11,90*

EXPANSION BOARD FOR ARDUINO® UNO R3

This stackable shield makes semi-permanent prototyping simple. When you want something more permanent than a breadboard, but don't want to make your own PCB, this shield is the answer. Provides solder-pads access to all of the Arduino's pins, and a large area of isolated pads.

VMA200
€ 9,90*
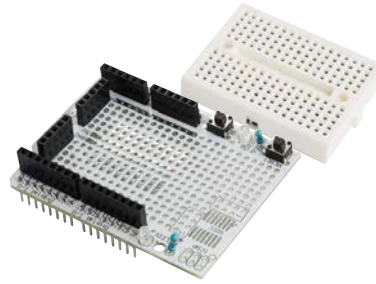
PROTOSHIELD PROTOTYPING BOARD WITH MINI BREADBOARD

1.0 Arduino Pinout · reset button · free to use button + LED circuit · ICSP connector location · 14 pin SMD footprint · 20 pin through-hole footprint · 170 holes self-adhesive breadboard included · compatible with: Leonardo, Uno, Mega, Classic

VMA201
€ 5,90*
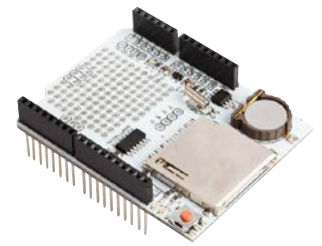
DATA LOGGING SHIELD

stackable headers · reset button · prototyping area (102 solder pads) for soldering connectors, circuitry or sensors · back-up battery for RTC included · uses the Arduino SD and RTC libraries · with onboard 3.3 V regulator to run SD cards that require a lot of power

VMA202
€ 9,90*
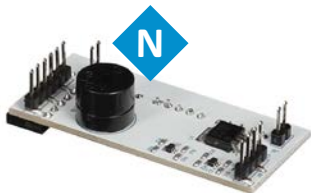
SENSOR SHIELD FOR ARDIUNO® ATMEGA

4 x 3V3 outputs · 1 x 5V output · built-in logic converter · add up to 3 I2C sensors via dedicated ports · 2 x interrupt pins · easy access to five analog sensors · built-in buzzer

VMA212
€ 9,90*
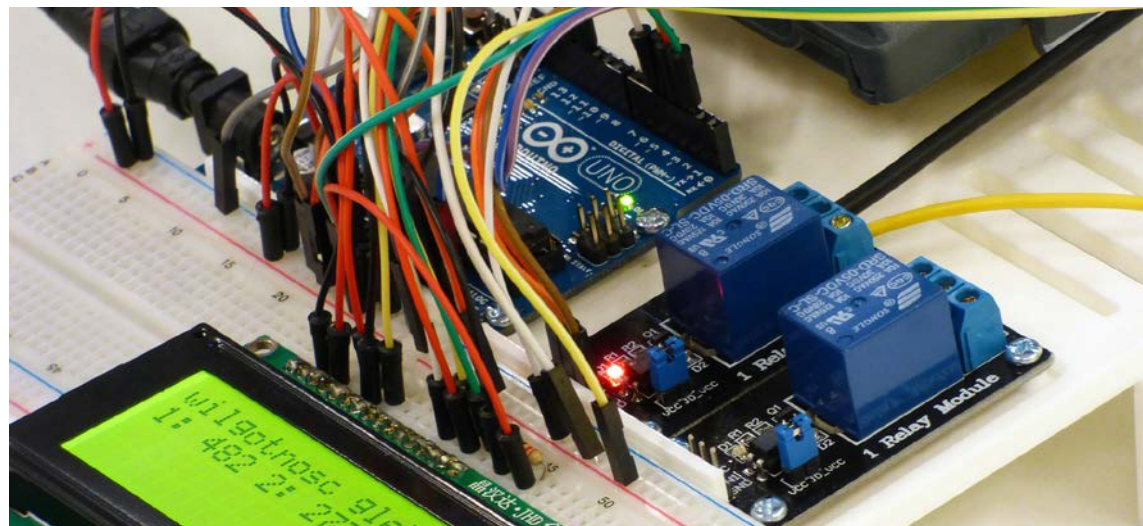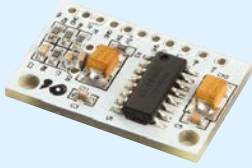
SUPER-MINI DIGITAL AMPLIFIER BOARD

high amplification efficiency 85% · can directly drive 4 ohm/8 ohm small speakers · good sound quality & noise suppression · unique without LC filter class D digital power board · can use computer USB power supply directly · low THD+N · short circuit protection · thermal shutdown

e VMA408
€ 5,90*
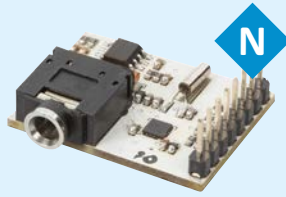
SI4703 FM TUNER EVALUATION BOARD

worldwide FM band support · digital low-IF receiver · automatic frequency control (AFC) · automatic gain control (AGC) · volume control · RDS/RBDS support · Arduino® library available · 150 mW amplifier stereo amplifier · level shifters 5 V -3.3V on board

e VMA444
€ 12,90*
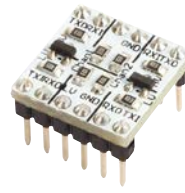
3.3 V / 5 V TTL LOGIC LEVEL CONVERTER MODULE

This module allows you to use 3.3 V sensors on a 5 V microcontroller. · breadboard compatible · low side (3.3 V): 2 inputs and 2 outputs · high side (5 V): 2 inputs and 2 outputs · other connections: Vlow (3.3 V), VHigh (5 V) , pass-trough GND

e VMA410
€ 4,90*

3 X 4 MATRIX MEMBRANE KEYPAD

A keypad is a simple method of entering user input into your project. · dimensions: 7 x 7.7 x 0.1 cm · connection : 3 col - 4 row, 7 pin connection · cable length: 9 cm · weight: 6.25 g · library: keypad.h

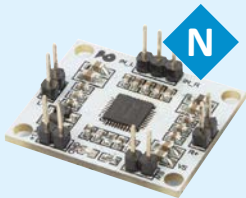**e** VMA300
€ 3,90*

PAM8610 DIGITAL POWER AMPLIFIER MODULE 2 X 10 W

10 W @ 10% THD/channel output into an 8 Ohm load at 13 V · low noise: -90 dB · over 90% efficiency · 32 step DC volume control from -75 dB to + 32 dB · shutdown/mute/fade function · over current, thermal and short-circuit protection

e VMA446
€ 5,90*
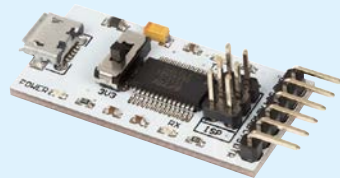
FT232 USB TO TTL ADAPTOR 3.3/5 V

single chip USB to asynchronous serial data transfer interface · data transfer rates from 300 baud to 3 Mbaud (RS422, RS485, RS232) at TTL levels · transmit and receive LED drive signals · USB 2.0 Full Speed compatible · switchable 3.3 VDC and 5 VDC operation

e VMA440
€ 10,90*

RFID READ AND WRITE MODULE

This module allows to both read and write RFID cards. · operating voltage: 3.3 VDC · working current: 13 to 26 mA · sleep current: < 80 uA · peak current: < 30 mA · working frequency: 13.56 MHz · supported card types: RFID

e VMA405
€ 11,90*
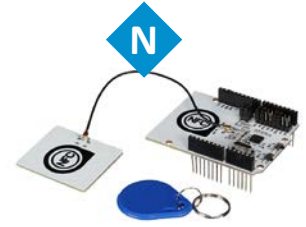
NFC / RFID SHIELD

chip: NXP PN532 · working voltage: 3.3 V · power voltage: 3.3 - 5.5 V · max. power current: 150 mA · working current (standby mode): 100 mA · working current (write mode): 120 mA · working current (read mode): 120 mA · communication distance: 2.5 cm

e VMA211
€ 24,90*

CLASS D AUDIO AMPLIFIER MONO 2.8 W

very efficient, ideal for battery powered applications · comes with board-to-wire connectors

e MM209
€ 12,90*
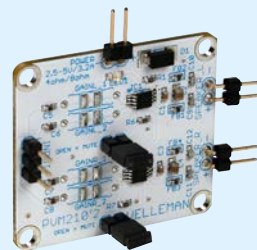
CLASS D AUDIO AMPLIFIER STEREO 2.8 W

very efficient, ideal for battery powered applications · comes with board-to-wire connectors

e MM210
€ 16,90*

RFID CARD (10 PCS)

resonance frequency: 13.56 MHz · memory: 1K Byte EEPROM · type: ISO14443 Type - A · operating temperature: -10 °C to +75 °C (14 to 167 °F) · identification distance: 0-5 cm (0 to 1.97") · service time: 100.000 re-writes · dimensions: 5.4 x 8.5 x 0.1 cm (0.21 x 0.33 x 0")

e VMA417
€ 4,90*

RFID TAG (5 PCS.)

resonance frequency: 13.56 MHz · memory: 1K Byte EEPROM · type: ISO14443 Type - A · operating temperature: -10 °C to +75 °C (14 to 167 °F) · identification distance: 0-5 cm (0 to 1.97") · service time: 100.000 re-writes · dimensions: 3.5 x 2.8 cm (1.38 x 1.1") · thickness: 6 mm (0.24")

e VMA418
€ 4,90*

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

This breadboard 3.3V / 5V power supply module fits the power rails on most breadboards. It also features a mini USB power port to supply power to external devices. · input voltage: 7-12 VDC or USB 5 V power supply

VMA424
€ 4,90*
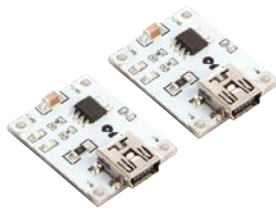
1 A LITHIUM BATTERY CHARGING BOARD (2 PCS)

The TP4056 based VMA321 module is a complete constant-current/constant-voltage linear charger for single cell lithium-ion batteries. · input voltage: 4.5 to 5.5 VDC (by on-board USB connector) · charging current: 1 A adjustable

VMA321
€ 4,90*

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

This module provides a stable 5 V from a single Li-Po or two alkaline cells. · input voltage range: 2.5 to 5 VDC · output voltage: 5 VDC · connection: solder pads · dimensions: 34 x 16 x 8 mm

VMA403
€ 4,90*

RED LASER DIODE MODULE

This laser module produces a small intense light beam (650 nm, red). · operating voltage: 5 V · operating current: 20 mA · wavelength: 650 nm · colour: red · dimensions: 18.5 mm x 15 mm [0.728 in x 0.591 in] · output power: 1 mW

VMA434
€ 5,90*

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

This module converts the microcontroller's power supply into a higher, adjustable voltage. · input voltage: 3.5 to 35 VDC · output voltage: 5 to 55 VDC (adjustable) · max. input current: 3 A · continuous input current: 2 A · chip: LM2577

VMA402
€ 11,90*

DC-DC ADJUSTABLE VOLTAGE STEP DOWN MODULE LM2596S

input voltage: 3 to 40 VDC · output voltage: 1.25 to 35 VDC · max. output current: 2.5 A · chip: LM2596S · dimensions: 49 x 26 x 12 mm

VMA404
€ 6,90*
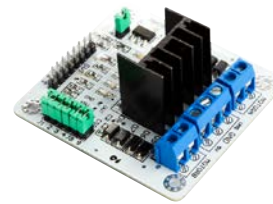
L298N DUAL BRIDGE DC & STEPPER MOTOR CONTROLLER BOARD

driver: L298N · driver power supply: + 5 V to + 35 V · driver output current (max.): 2A · logic power output Vss: +5 V to +7 V (internal supply +5 V) · logic current: 0-36 mA

VMA333
€ 9,90*
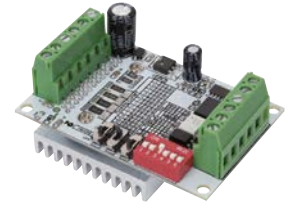
TB6560 3A STEPPER MOTOR DRIVER BOARD

6N137 high-speed OptoCouple to ensure high speed without losing steps · for 42,57,86 Stepper within 3A 2/4 -phase / 4 wire / 6 wire stepper motor · automatic half-decay · excitation mode: synchronizing, half step, 1/8 step, 1/16 step

VMA333
€ 14,90*

MINI ANALOG SERVO - 9 G

dimensions: 21.5 x 12 x 22.7 mm · voltage: 4.8 to 6 VDC · weight: 9 g · speed: 0.09 sec. for 60° at 6 V · torque: 1.4 kg.cm at 6 V · working temperature: -15° C to 50 °C · connection type: 3 wires: brown (gnd) - red (+) - orange (signal) · rotation: 180°

VMA600
€ 4,90*

270° ROBOT DIGITAL DOUBLE SHAFT SERVO KIT

operating speed (at no load): 0.14 sec/ 60° at 7.2 V · running current (at no load): 100 mA at 7.2 V · stall torque (at lock): 15 kg at 7.2 V · stall current (at lock): 1.5 A at 7.2 V · idle current (at stopped): 5 mA · operating frequency: 50 - 330 Hz

VMA601
€ 24,90*
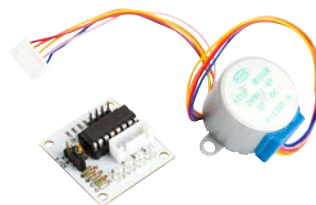
5 VDC STEPPER MOTOR WITH ULN2003 DRIVER BOARD

with LED step indicators · included: 5 V stepper motor · ULN2003 controller module cable · operating voltage: 5 VDC · steps / revolution: 64 · controller: ULN2003 · motor diameter: 28 mm · reduction ratio: 1:64

VMA401
€ 5,90*
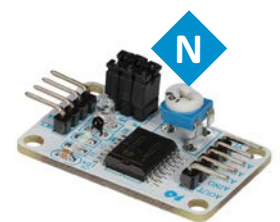
A/D D/A CONVERTER MODULE PCF8591

single power supply · operating supply voltage 2.5 V to 6.0 V · low standby current · serial input and output via I2C-bus · max sampling rate given by I2C-bus speed · 4 analog inputs configurable as single ended or differential inputs

VMA344
€ 7,90*

WATER HOSE & ACCESSORIES

Set of a water hose and connection / fixation accesories, ideal to be used with VMA421, VMA422 and VMA423 · hose: length: 2 m - inside ø: 8 mm - outside ø: 10 mm - material: clear plastic

VMA420
€ 4,⁹⁰*

WATER PUMP

Create your own plant watering system or build an automatic aquarium refill system by using your Arduino and this small yet powerful water pump · working voltage range: 5 VDC to 12 VDC · max. load current: 0.35 A at 12 VDC · power consumption: 4.2 W at 12 VDC

VMA421
€ 14,⁹⁰*

WATER VALVE

inlet - outlet diameter: 8 mm · working pressure: 0.02 to 0.8 MPa (0.2 to 8 bar) · working temperature: 1 °C to 60 °C · response time (open): 0.15 sec · response time (close): 0.3 sec · actuating voltage: 12 VDC · weight: 95 g · connection: 6.3 mm tab (for FBF6 or FBMI)

VMA422
€ 9,⁹⁰*

MINI PERISTALTIC PUMP 6 V

A peristaltic pump is a type of positive displacement pump used for pumping a variety of fluids. · ultra silent (< 40 dB) · maintenance free · positive inversion · non polluting · accurate repeatability · dry running, self priming · not for food contact

VMA447
€ 12,⁹⁰*

SILICONE TUBE FOR VMA447

not for food contact · tube dimensions: 2.0 x 4.0 mm · tube material: silicon · length: 2 m

VMA448
€ 4,⁹⁰*

5 V RELAY MODULE

operating voltage: 5 VDC · relay current rating: 10 A at 250 VAC, 10 A at 30 VDC (non inductive) · relay contact: C, NO, NC · connection : GND, +5 VDC, control input (5 to 12 VDC) · dimensions: 40 x 27 x 18 mm

VMA406
€ 5,⁹⁰*

1 CHANNEL LATCHING RELAY MODULE WITH TOUCH BISTABLE SWITCH

supply voltage: 12 VDC · supply current: 15 - 50 mA · trigger current: 0.5 mA · contact rating: 10 A 30 VDC · dimensions: 5 x 2.5 x 2 cm · weight: 25 g

VMA331
€ 9,⁹⁰*

1 CHANNEL SOLID STATE RELAY MODULE

power supply: 5 VDC · power current: max. 10 mA · input voltage: relay ON: 0 to 2.5 VDC - relay OFF: 3.3 to 5 VDC · max. load: 240 VAC 2 A 50/60 Hz · dimensions: 2.5 x 2.5 x 3.6 cm · weight: 6 g · protection: 2A Pico fuse on board

VMA332
€ 6,⁹⁰*

4 CHANNEL RELAY MODULE

standard interface that can be controlled directly by any microcontroller · opto-isolated inputs · indicator LEDs for relay output status · control input current (in1 to in4): 5 - 15 mA · control input voltage: 5 - 12 VDC · relay output: 250 VAC 10 A; 30 VDC 10 A (non-inductive)

VMA400
€ 9,⁹⁰*
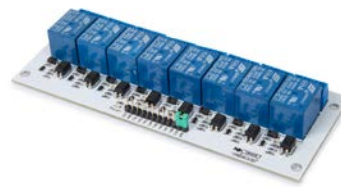
8 CHANNEL RELAY MODULE

standard interface that can be controlled directly by any microcontroller · opto-isolated inputs · indicator LEDs for relay output status · control input current (in1 to in4): 5 - 25 mA · control input voltage: 5 - 12 VDC · relay output: 250 VAC 10 A; 30 VDC 10 A (non-inductive) · dimensions: 57 x 138 mm

VMA436
€ 17,⁹⁰*
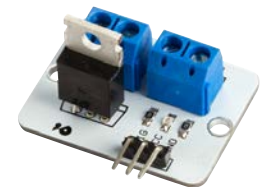
MOS DRIVING MODULE

operating voltage: 3 to 5 VDC · max. load voltage: 0 to 24 VDC · input: SIG pin, logic level 3 to 5 VDC · max. load current: 5 A (a heatsink is required for loads > 1 A) · used MOSFET: IRF520 · dimensions: 34 x 21 x 16 mm

VMA411
€ 5,⁹⁰*
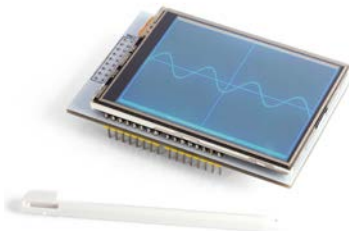
2.8 INCH TOUCH SCREEN FOR ARDUINO® UNO/MEGA

resolution: 240 RGB (H) x 320 (V) · display driver: ILI9341 V0.7 · colour depth: 262 000 colours · system interface: 8-bits, 9-bits, 16-bits, 18-bits interface with 8080-I /8080-II series MCU · 6-bits, 16-bits, 18-bits RGB interface with graphic controller

VMA412
€ 19,⁹⁰*

1.3 INCH OLED SCREEN (SH1106 DRIVER, SPI)

resolution: 128 x 64 dots · viewing angle: > 160° · working voltage: 3 - 5 V · recommended library: U8glib · interface: SPI · driver: SSH1106 · working temperature: -30°C - 70°C · OLED colour: blue · dimensions: 35 x 33.5 mm

VMA437
€ 19,⁹⁰*

0.96 INCH OLED SCREEN WITH I2C

resolution: 128 x 64 dots · viewing angle: > 160° · working voltage: 3 - 5 V · recommended library: U8glib · interface: I2C · driver: SSD1306 · working temperature: -30°C - 70°C · OLED colour: blue · I/O level : 3.3 V and 5 V · dimensions: 27 x 27 mm

VMA438
€ 14,⁹⁰*

4-DIGIT DISPLAY WITH DRIVER MODULE (TM1637 DRIVER)

serial 4 digit display module · uses just 2 pins to communicate with your microcontroller · 4 M2 mounting holes for easy mounting in your projects · seven segment displays with the : in between · pinout: GND = 0 V

VMA425
€ 4,⁹⁰*
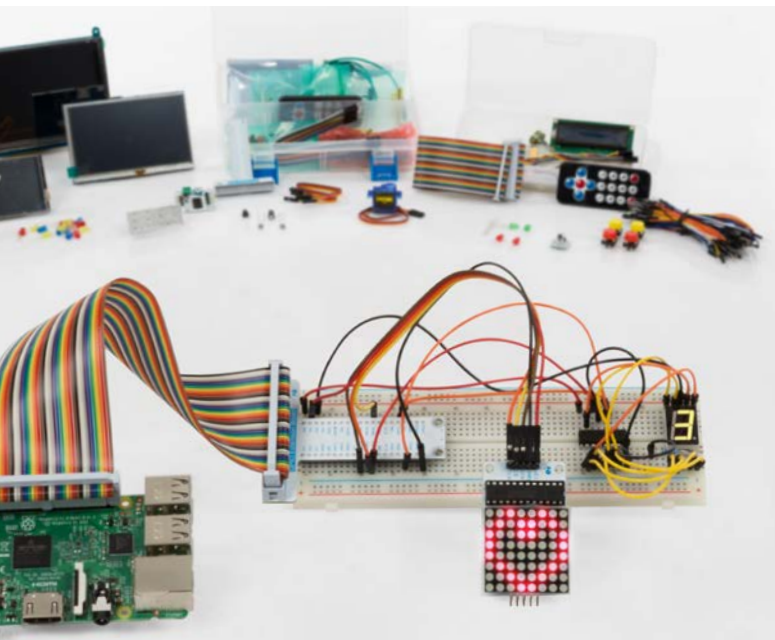
RGB DOT MATRIX BOARD & DRIVER BOARD BASED ON ATMEGA328

8 bits colours support with 6 bits correction for each colour in every dots · hardware 16 MHz PWM support · without any external circuits, play and shine · dedicated GPIO and ADC interface

VMA439
€ 34,⁹⁰*

GPS MODULE U-BLOX NEO-7M

U-BLOX NEO-7M module, compact and excellent performance · parameters can be set via serial port and saved in EEPROM · with SMA interface, you can connect a variety of antenna, strong adaptability

VMA430
€ 29,⁹⁰*

HC-05 TRANSMISSION MODULE

frequency: 2.45 GHz · asynchronous speed: max. 2.1 Mbps · security: authentication · profile: Bluetooth Serial Port · power supply: +3.3 VDC · working temperature: max. 60°C · chip: CSR (Cambridge Silicon Radio) BC417 bluetooth v2.0

VMA302
€ 14,⁹⁰*

2,4 GHZ NRF24L01 WIRELESS TRANCEIVER MODULE (2PCS)

worldwide license-free 2.4 GHz ISM band operation · 250 kbps, 1 Mbps and 2 Mbps on-air data-rate options · enhanced ShockBurst™ hardware protocol accelerator · ultra low power consumption - months to years of battery lifetime

VMA322
€ 9,⁹⁰*

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

manages all timekeeping functions: real-time clock counts seconds, minutes, hours, date of the month, month, day of the week, and year with leap year · 31 x 8 battery-backed general-purpose RAM · TTL compatible: VCC = 5 V

VMA301
€ 6,⁹⁰*

SD CARD LOGGING SHIELD (2 PCS)

Most Arduino® boards have limited onboard memory storage. The SD card logging shield allows expanding the storage to up to 2 GB. · voltage: 3.3 V - 5 V · protocol: SPI · dimensions: 52 x 30 x 12 mm · weight: 8 g · required library: SD.h

VMA304
€ 4,⁹⁰*

DIGITAL ROTARY ENCODER MODULE

flat top · push-button capability · unlimited rotations · pins are right-angle to the knob, but you can connect them to a breadboard using male-female jumper wires · standard pin spacing: 2.54 mm (0.1")

VMA435
€ 3,90*

ELECTROMAGNET MODULE

High Quality Electric lifting magnet · holding force: 25 N · working voltage: 5 V · working current: 400 mA · standby current: 200 uA · load weight: 1 kg · dimensions: 35 x 20 x 17 mm · weight: 25 g

VMA431
€ 24,90*

DMX512 MODULE

This Arduino add-allows you to use the Arduino as a DMX master device. This board is a simple circuit based around a driver chip. With XLR 3 pin male DMX output connector. Pin1 = Signal Common, Pin2 = Data-, Pin3 = Data+ The board converts the Arduino signal voltage according to DMX. Impedance is 100 Ohm.

VMA432
€ 14,90*

TEMPERATURE PROBE / SENSOR 600°C + MAX6675 INTERFACE

The VMA339 performs cold-junction compensation and digitizes the signal from a type-K thermocouple included in VMA339. The data is output in a 12-bit resolution, SPI™-compatible, read-only format.

VMA339
€ 14,90*

▷ SENSORS FOR ARDUINO® , RASPBERRY PI®, MICRO:BIT, ...

MINI MAGNETIC REED MODULE (2 PCS)

A Reed contact switch is a normally open contact which closes in the presence of a magnetic field. Each module contains a 10 Kohm pull-up resistor. voltage: 5 VDC · connection: 3 pins, +(middle pin), ground and DO (data out)

VMA308
€ 5,90*

HALL (HOLZER) MAGNETIC SWITCH MODULE (2 PCS)

voltage: 5 VDC · connection: 3 pins, +(middle pin), ground and S (data out) · output (S): Schmitt Trigger, Active Low · activation: 30 Gauss · deactivation: 10 Gauss · LED indicator: ON when activated
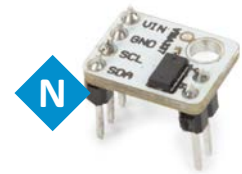
VMA313
€ 4,90*

CAPACITIVE TOUCH SENSOR SWITCH

A capacitive sensor is a touch sensor that requires little or no force to activate. Detects body capacitive touch, outputting analogue voltage. · connection: 3 pins, GND - VCC - Signal · voltage: 3 to 5 VDC · dimensions: 30 x 16 x 6 mm · weight: 5 g

VMA305
€ 4,90*

VL53L0X TIME-OF-FLIGHT RANGING AND GESTURE DETECTION SENSOR

The VMA337 is a breakout board for ST's VL53L0X laser-ranging sensor and measures the range to a target object up to 2 m away. · power supply: 3.3 - 5 VDC · infrared emitter: 940 nm · range: 30 to 2000 mm

VMA337
€ 14,90*

LINE TRACKING SENSOR TCRT5000 MODULE

sensor adopts TCRT5000, high sensitivity · sensitivity adjustable by potentiometer · working voltage: 3.3 V - 5 V · operating current: 20 mA · digital switch output (0 and 1) · has 2 fixed bolt holes, convenient installation

VMA326
€ 4,90*
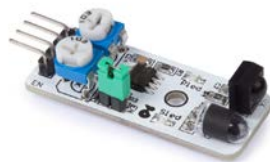
IR OBSTACLE AVOIDANCE SENSOR MODULE

operating voltage: 3.3 V to 5 V · output: digital (on/off) · detection threshold: adjustable by 2 trimmers · distance range: 2 to 10 cm · adjustment R6: frequency adjustment 38 KHz (already optimised)

VMA330
€ 4,90*
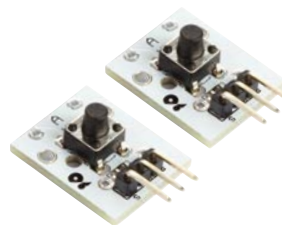
TACTILE SWITCH SENSOR MODULE (2 PCS)

This module contains a push button and a 10 K pull-up resistor. · voltage: 5 VDC · connection: 3 pins, +(middle pin), ground and DO (data out) · dimensions: 25 x 15 mm · weight: 2 g

VMA310
€ 4,90*

XY JOYSTICK MODULE (2 PCS)

This Joystick module provides X and Y axis control for your microcontroller projects. · It also includes a "push down" microswitch. · voltage: 3 to 5 VDC · contains : 2 trimmers 10K + 1 switch

VMA315
€ 5,90*

TEMPERATURE PROBE DS18B20 & ADAPTER

DS18B20 specs: unique 1-wire interface requires only one port pin for communication · multidrop capability simplifies distributed temperature sensing applications · requires no external components · can be powered from data line, power supply range is 3.0 V to 5.5 V

VMA324
€ 12,90*

INFRARED TRANSMITTER MODULE (2 PCS)

max. current: 20 mA · connection: 3 pins, only GND (-) and S is used · weight: 2 g · dimensions: 35 x 15 x 8 mm · note: there is no current limiting resistor on the module

VMA316
€ 4,90*

1838 IR INFRARED 37.9 KHZ RECEIVER (2 PCS)

photo detector and preamplifier in one package · internal filter for PCM frequency · inner shield, good anti-interference ability · high immunity against ambient light · improved shielding against electric field disturbance
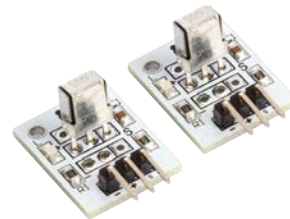
VMA317
€ 4,90*

3-AXIS DIGITAL ACCELERATION SENSOR MODULE - MMA8452

+-2g/+-4g/+-8g dynamically selectable full-scale · output data rates (ODR) from 1.56 Hz to 800 Hz · 12-bit and 8-bit digital output · I2C digital output interface (operates to 2.25 MHz with 4.7 kO pullup)

VMA208
€ 6,90*
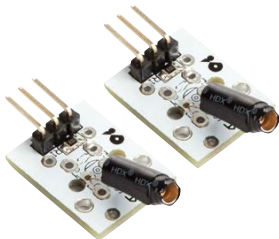
VIBRATION / SHOCK SWITCH MODULE (2 PCS)

This module contains a vibration switch and a 10 K pull-up resistor. · voltage: 5 VDC · connection: 3 pins, +(middle pin), ground and DO (data out) · dimensions: 25 x 15 mm · weight: 2 g

VMA312
€ 4,90*

RGB LED MODULE (2 PCS)

voltage: 5 VDC · connection: 4 pin male header · pins: GND, RED, GREEN, BLUE · dimensions: 24 x 16 x 16 mm · weight: 2 g

VMA307
€ 4,90*
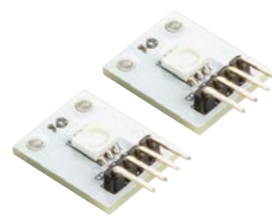
3 COLOUR RGB SMD LED MODULE (2 PCS)

power dissipation: R 60mW, G 95mW, B 95mW · peak forward current (0.1 ms pulse width): 100 mA for each colour · continuous forward current: 25 mA for each LED · max. reverse voltage: 5 V

VMA318
€ 4,90*

COLOR SENSOR TCS3200 MODULE

high resolution conversion of light intensity to frequency · programmable colour and full scale output frequency · communicates directly with a microcontroller · single supply operation (2.7 V to 5.5 V) · power down feature

VMA325
€ 14,90*
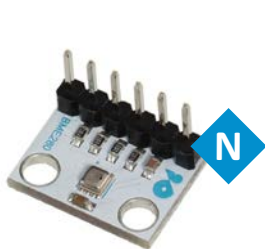
BME280 TEMPERATURE, HUMIDITY AND PRESSURE SENSOR

applications: measurement of volume and air flow · home automation control · control heating, ventilation, air conditioning · internet of things · weather forecast · fitness monitoring / well-being

VMA335
€ 9,90*

ANALOGUE TEMPERATURE SENSOR MODULE (2 PCS)

NTC type: NTC-MF52 3950 · temperature range: -55 °C to 125 °C · accuracy: +/- 0.5°C · pull-up resistor: provided, 10 KOhm · connection: 3 pin, (+) 5V , (-) ground, (S) analogue output · dimensions: 20 x 15 x 5 mm

VMA320
€ 5,90*

DHT11 DIGITAL TEMPERATURE HUMIDITY SENSOR MODULE

voltage: 5 VDC · temperature range: 0 - 50 °C , error of +/- 2 °C · humidity: 20 - 90% RH +/- 5% RH error · interface: digital · dimensions: 39 x 23 x 10 mm

VMA311
€ 4,90*

AIR QUALITY SENSOR COMBO BOARD

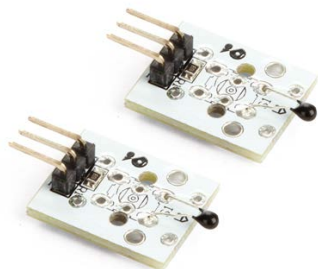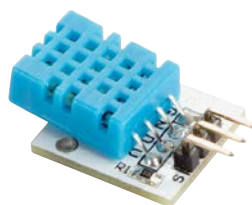This air quality combo board senses the atmospheric-quality by using the popular CCS811 and BME280 ICs. It provides a variety of environmental data including barometric pressure, humidity, temperature, TVOCs and equivalent CO2 (or eCO2) levels.

VMA342
€ 39,96*

SOIL MOISTURE SENSOR & WATER LEVEL SENSOR MODULE

This package includes a water level sensor and a soil moisture sensor. If the boards have water covering the sensor parts, an analogue value will be available at the "SIG" connection.

VMA303
€ 4,90*
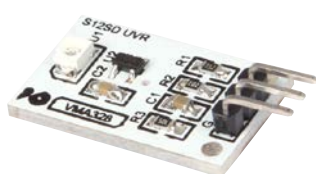
UV LIGHT SENSOR GUVA-S12SD MODULE

operating voltage: 3.3 V to 5 V · output voltage: 0 V to 1 V (0-10 UV index) · response time: 0.5 second · accuracy: +/- 1 UV index · radiation wavelength: 200-370 nm · operating temperature: -20 °C to +85 °C · current consumption: 5 mA

VMA328
€ 9,90*
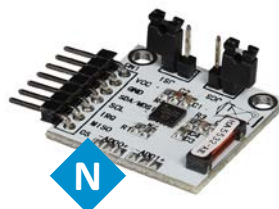
LIGHTNING SENSOR

detects both cloud-to-ground and cloud-to-cloud flashes · estimates distance to lightning strikes in a range of 40km in 14 steps · embedded 'man made' disturbance rejection algorithm · SPI or I2C interface · breakout board is fully calibrated

VMA343
€ 29,90*

END-STOP SWITCH MODULE (2PCS)

robot bump switch · end stop switch that can be used for many purposes · mounts on your robot project or 3d printer · mechanical limit switch acts as a bump stop sensor · 2 mounting holes on the board

VMA327
€ 7,90*
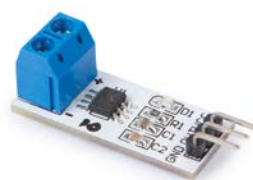
CURRENT SENSOR ACS712 MODULE - 20 A

supply voltage: 5 VDC · measurement range: -20 to +20 A · output voltage: VCC/2 at no load · scale factor: 100 mV per A · dimensions: 31 x 13 x 12 mm

VMA323
€ 7,90*

FORCE-SENSING RESISTOR (FSR)

sensor type: single point · shape of sensitive area: round · diameter of sensitive area: 10 mm (+/- 1 mm) · total lenght: 39 mm · sensor thickness: 0.2 mm · material: polyester · range: 100 g to 1 kg · terminal: male pinheader step 2.54 mm · principle: piezoresistive

VMA334
€ 10,90*
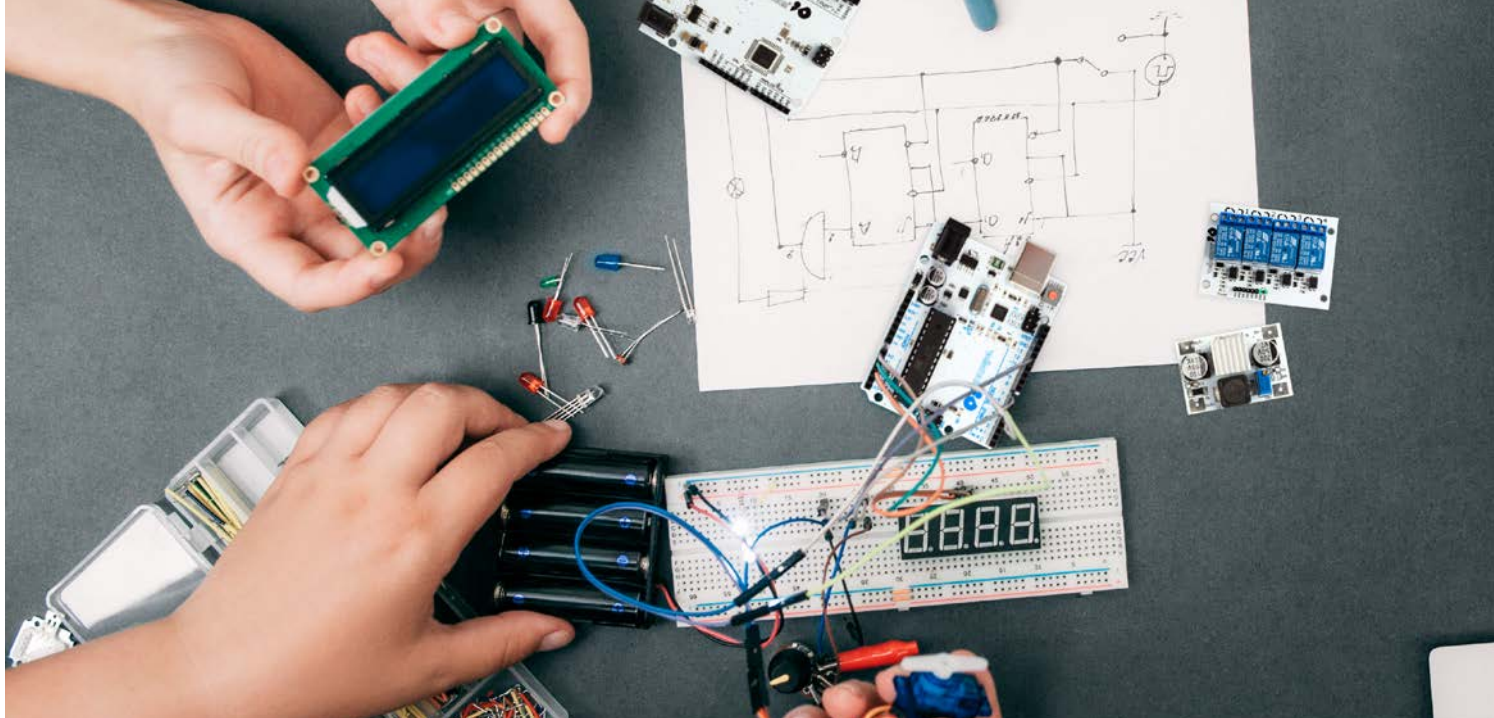
FINGERPRINT SENSOR ZFM-708

power: DC 3.8 V to 7.0 V · back light: green · baud rate: (9600 x N) bps, N=1-12 (default N=6) · image acquiring time: <0.5 s · finger prints storage capacity: 1000 · false acceptance rate: 0.001% (at security level 3) · false reject rate: 1.0% (security level 3)

VMA329
€ 39,90*

PULSE / HEART RATE SENSOR MODULE

VMA340 is a plug-and-play heart rate sensor for Arduino® and Arduino compatibles. It can be used by anyone who want to incorporate live heart rate data into their projects. NOT FOR MEDICAL USE!

VMA340
€ 9,90*

BH1750 DIGITAL LIGHT INTENSITY SENSOR MODULE

I2C bus interface · spectral responsibility is approximately human eye response · illuminance to digital converter · wide range and high resolution. (1 - 65535 lx) · low current by power down function · module contains 5V to 3.3V converter

VMA341
€ 9,90*

PHOTOSENSITIVE SENSOR MODULE WITH 3 PIN CABLE

operating voltage: 3.3 VDC or 5 VDC · output: analog voltage · pull-down resistor: 10 K. , on board · dimensions: 25 x 15 mm
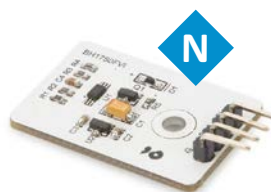
VMA407
€4,90
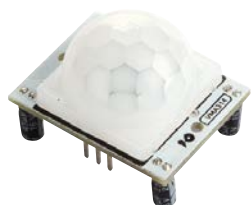
PIR MOTION SENSOR

voltage: 5 VDC · connection: 3 pin: GND, VCC and OUT · adjustments: sensitivity and delay (by trimmer) · delay on time: 3 to 200 s · output level: high = 3 V, Low = 0 V · max. sensor distance: 7 m · operating temperature: -15 to +70°C · detection angle : 120 ° · dimensions: 32 x 24 x 25 mm

VMA314
€ 5,90*

HC-SR05 ULTRASONIC DISTANCE SENSOR

voltage: 4.5 to 5.5 VDC · sound frequency: 40 KHz · measurement resolution: 0.3 cm / 0.01" · measurement angle: 15 ° · supply current: 10 to 40 mA · trigger pin format: 10 uS pulse · connector: 5 pin male · detection distance: 2-450 cm / 0.79-17.72"

VMA306
€ 5,90*

ACTIVE BUZZER MODULE (2 PCS)

operating voltage: 5 VDC · buzzer frequency: 1.5 to 2.5 KHz · connection : 3 pin, (-) and (S). (+) is not used · dimensions: 25 x 15 x 10 mm

VMA319
€ 4,90*
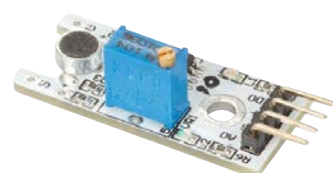
MICROPHONE SOUND SENSOR MODULE

voltage: 3.3 to 5 VDC · outputs: one analogue + one digital output · fixation: 1 mounting screw hole 3 mm · 2 indicator LEDs: 1 power indicator + 1 comparator output indicator · frequency response: 50 Hz - 20 KHz · impedance: 2.2 K Ohm · sensitivity: 48 - 66 dB

VMA309
€ 4,90*

▷ RASPBERRY PI®

GET PROGRAMMING WITH RASPBERRY PI®!

Since 2012, the Raspberry Pi® Foundation has developed several generations of products and multiple types of Raspberry Pi®s. Each new model has an improved design and includes extra features like more RAM or more processing power to broaden your project's capabilities.

And with the hardware comes the operating system named Raspbian, which is a Linux fork based on the popular Debian distribution. Raspbian makes it easy to use Python and Scratch as the main programming languages, with support of many other languages to keep it accessible.

You will have to use a micro SD card as a hard drive to store the OS as well as all the other files that you will create.

Just like any other computer, programming the Raspberry Pi® also requires a power source, a monitor, a keyboard and a mouse. You can buy all this stuff new or you can get creative and re-use old equipment like using an old TV as a monitor and a mobile phone charger as a power supply.

Once you've got everything in order, it is time to start experimenting and learning. Whether you are a skilled programmer writing in Python or a youngster taking your first steps in Scratch, there are a bunch of cool projects waiting for you on the Raspberry Pi® community website.
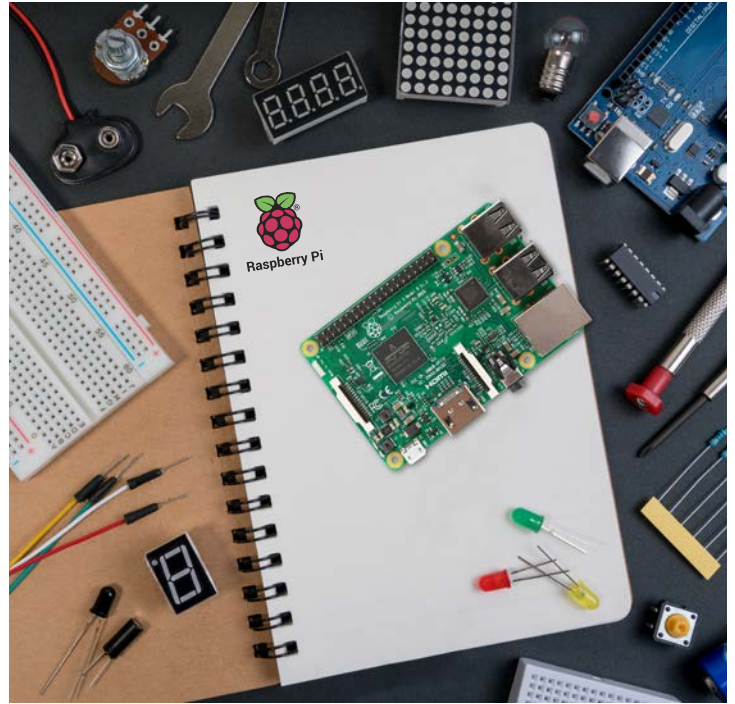
RASPBERRY PI® 3B+ STARTER KIT

The Raspberry Pi 3 Model B+ is the previous product in the Raspberry Pi 3 range with the same mechanical footprint as the earlier ones.

New for the Raspberry Pi® 3 Model B+: A 1.4 GHz 64-bit quad-core Cortex-A53 SoC · 802.11 b/g/n/ac Wireless LAN · Bluetooth 4.2 · Bluetooth Low Energy (BLE)

PI3SETN
€ 84,⁹⁰*
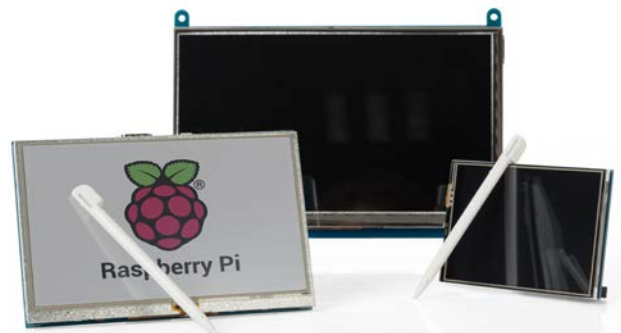
TOUCHSCREEN
FOR RASPBERRY PI®

VMP400	3.5" 320 x 480	**€ 24,⁹⁰***
VMP401	5" 800 x 480 hdmi-b	**€ 69,-***
VMP402	7" 800 x 480 hdmi-b	**€ 89,-***

ELECTRONIC PARTS PACK
FOR RASPBERRY PI®

830 points solderless breadboard · 10 x 10K resistors (RA10K0) · 10 x 560R resistors (RA560E0) · 1602 LCD module (LCD1602BLC) · 65 x breadboard jumper wire M-M · T-Shape GPIO expansion board · ribbon cable for GPIO board · infrared receiver module (VMA317) · mini remote control for VMA317 · DS18B20 Digital One Wire Temperature Sensor · 50K potentiometer (K047AM) · 4 x button with round cap 4-pin 12 x 12 mm · 2 x red LED 5 mm · 2 x green LED 5 mm · RGB LED 5 mm · 40 pin 2.54 mm single row male pin header · 3P F-F header connector wire cable - 20 cm · 3P F-F jumper cable - 20 cm · plastic clear box 186 x 90 x 45 mm

E **VMP500**
€ 37,⁹⁰*

DIY KIT
FOR RASPBERRY PI®

830 points solderless breadboard · 10 x 10K resistors (RA10K0) · 10 x 560R resistors (RA560E0) · 10 x 5.1K resistors · 1602 LCD module (LCD1602BLC) · T-shape GPIO expansion board · ribbon cable for GPIO board · infrared receiver module (VMA317) · mini remote control for VMA317 · 50K potentiometer (K047AM) · 4 x button with round cap 4-pin 12 x 12 mm · 2 x red LED 5 mm · 2 x green LED 5 mm · 2 x yellow LED 5 mm · RGB LED 5 mm · 40 pin 2.54 mm single row male pin header · PIR motion sensor (VMA314) · 5 V relay module (VMA406) · 5 V stepper motor with ULN2003 driver board · DHT11 digital temperature and humidity sensor · PL2303 USB-TTL serial converter cable · rain sensor module · 2 x photo sensitive transistor · temperature sensor (DS18B20) · plastic clear box 200 x 140 x 48 mm

E **VMP501**
€ 49,⁹⁰*

BASIC LEARNING KIT
FOR RASPBERRY PI®

830 points solderless breadboard · 5 x 10K resistors (RA10K0) · 5 x 2K resistors · 5 x 220R resistors (RA220E0) · 1602 LCD module (LCD1602BLC) · T-shape GPIO expansion board · ribbon cable for GPIO board · infrared receiver VS1838 · mini remote control for VMA317 · 50K potentiometer (K047AM) · 4 x button with round cap 4-pin 12 x 12 mm · 40 pin 2.54 mm single row male pin header · 3 x photo sensitive transistor · LM35 temperature sensor (LM35DZ) · active buzzer 5 V · passive buzzer 5 V · 30 x breadboard jumper wire M-M different length · 20P / 20 cm male to female jumper · micro servo 9 g (VMA600) · MAX7219 + 1088AS matrix 8 x 8 LED module · PCF8591 analog to digital converter module + 3p jumper · 5 mm RGB LED · flame sensor YG1006 (IR photodiode) · 2 x tilting sensor (MERS4) · shift register 74HC595N · 1 digit 7 segment display SMA42056 · 4 digit 7 segment display SMA420564 · plastic clear box 200 x 140 x 48 mm

E **VMP502**
€ 69,⁹⁰*

PROJECT: DISPLAY TEMPERATURE ON AN LCD

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!

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**
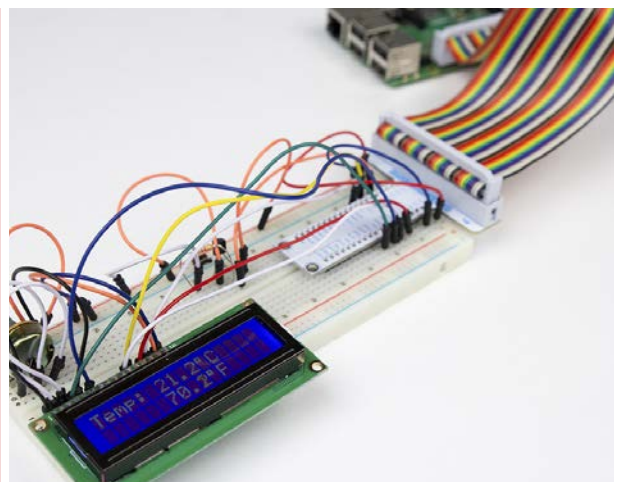
▷ MICRO:BIT - BBC

The **BBC micro:bit** is a must for everybody who wants to start programming.

It is compatible with different coding languages starting from Block Editor & mobile apps for starters to Python for the more advanced users. Plus, you can connect it to other devices such as Raspberry PI by using its 20 pin edge connector.

Because the possibilities with a micro:bit are endless, it is often difficult to know what project to start with. And that's where we come in! To help you out, we developed different types of projects sets and even included some fun tutorials which you can find on vellemanformakers.com!

KEEP YOUR PLANTS HEALTHY!

No more dead plants on our watch! With this ingeniuos project, you will be able to read whether or not your plant is moisty enough or if it is in need of some water! Use the soil moisture breakout board to inspect your plant's soil and make it report to your micro:bit. If the plant is not happy and in desperate need of water, the red LED from the breakout board will light up and the OLED breakout board will tell you what's wrong. If all is well, the green LED will shine bright. All these components can be found in the micro:bit tinker kit and the tutorial is available on manuals.velleman.eu!
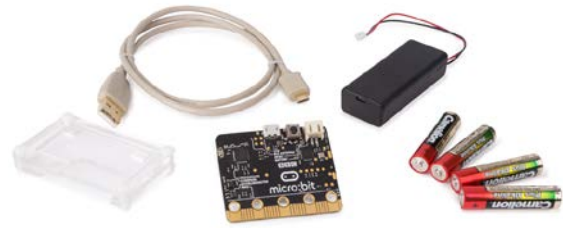
MICROBIT - STARTER KIT

The microbit is a must for everybody who wants to get started with or is inspired by programming. It has an ARM-based embedded system. It is compatible with different coding languages starting from Block Editor & mobile apps for the starters to Python for the more advanced users.

It's possible to connect it to other devices such as Raspberry PI through its 20 pin edge connector. The built-in compass together with the accelerometer and motion detector ensures that the micobit has endless possibilities. This starterskit is the ideal kit for starters who want to program with block editor or the mobile apps.

VMM001
€ 34,⁹⁰*

MICROBIT ADVANCED KIT

The microbit is a must for everybody who wants to get started with or is inspired by programming. It has an ARM-based embedded system. It is compatible with different coding languages starting from Block Editor & Mobile apps for the starters to Python for the more advanced users.

It's possible to connect it to other devices such as Raspberry PI through its 20 pin edge connector. The built-in compass together with the accelerometer and motion detector ensures that the micobit has endless possibilities. This advanced kit included a microbit project holder, breakout board & components. It is the ideal kit for medium and advanced users.

VMM002
€ 54,⁹⁰*

MICROBIT® TINKER KIT

This tinker kit is an educational kit based on micro:bit®. It comes with different plug & play breakout boards, connection wires and a micro:bit®. The full educational manual can be downloaded from our website.
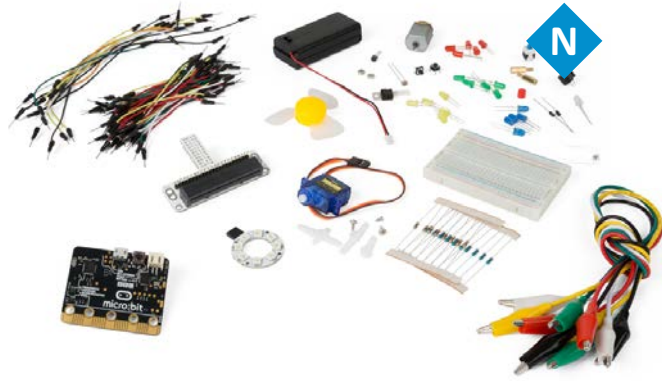
VMM502
€ 109,⁹⁰*

MICROBIT® EDUCATION SMART ROBOT KIT

Build, code and control this smart robot kit for micro:bit®.
It comes with all parts to build a working robot
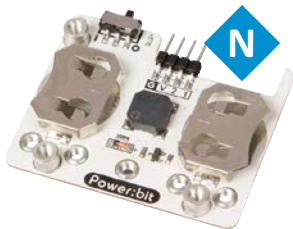car and it even includes a micro:bit.

E VMM500
€ 59,⁹⁰*

MICROBIT ® STARTER KIT

This starter kit is an educational kit based on microbit®.
It comes with basic electronic components,
a breadboard, connection wires and a microbit®.

E VMM501
€ 79,⁹⁰*
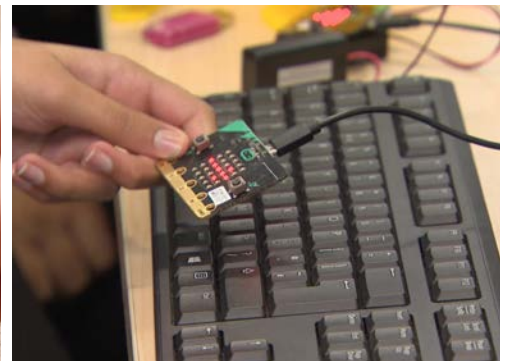
POWER:BIT SHIELD
FOR MICROBIT®

E VMM005
€ 8,⁹⁰*

4 CHANNEL RELAY MODULE
FOR MICROBIT®

E VMM400
€ 14,⁹⁰*
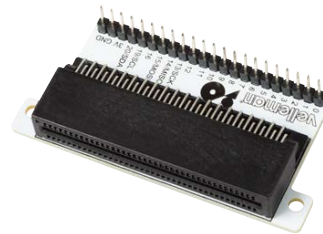
GPIO ADAPTOR BOARD
FOR MICROBIT®

E VMM004
€ 8,⁹⁰*
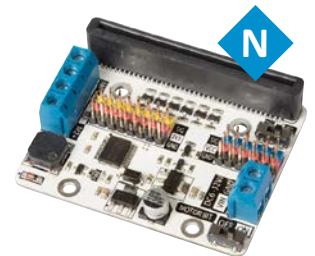
MOTOR SHIELD
FOR MICROBIT®

E VMM006
€ 16,⁹⁰*

MOTOR SHIELD FOR MICRO:BIT

This motor shield is compatible with micro:bit®
and can be used to drive 2 DC motors at the same
time. On top of that, you don't lose your micro:bit®'s
14 channel I/O ports because this little motor
shield extends them. The motor driving chip is a
TB6612 and drives a maximum of 1.2 A current.

MAKE A MICRO:BIT CONTROLLED FAN

The ideal project for summer break or when you need
to cool down! For this project, you will need to use
the motor shield in combination with the propellor
and the mini motor from the micro:bit starter kit.

Tip: create a cool case for the fan by using
some cardboard or a 3D printer!
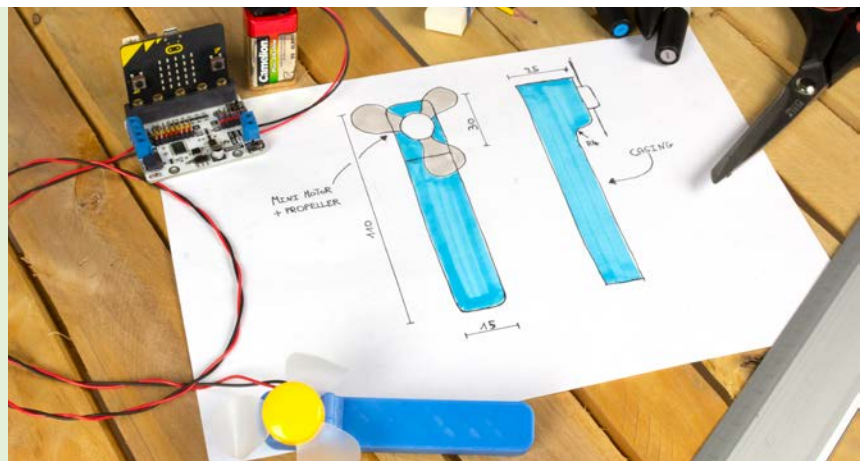
▷ CASES

RASPBERRY PI B CASE
FOR RASPBERRY PI B+, 2B AND 3B
PICASE1B
€ 6,⁹⁰*

RASPBERRY PI B CASE
FOR RASPBERRY PI B+, 2B AND 3B
PICASE1C
€ 6,⁹⁰*

RASPBERRY PI B CASE
FOR RASPBERRY PI B+, 2B AND 3B
PICASE1W
€ 6,⁹⁰*

RASPBERRY PI 3 CASE
BLACK
TKBERRY3B
€ 9,⁹⁰*

RASPBERRY PI 3 CASE
WHITE
TKBERRY3W
€ 9,⁹⁰*

RASPBERRY PI CAMERA CASE
TKCAMB
€ 21,⁹⁰*

RASPBERRY PI CAMERA CASE
TKCAMW
€ 21,⁹⁰*

RASPBERRY PI B+ CAMERA CASE
TKCAMWB
€ 21,⁹⁰*

VESA HOUSING
FOR RASPBERRY PI3®
VMP503
€ 12,⁹⁰*

N

TRANSPARENT BOX WITH COOLING
FOR RASPBERRY PI® 3B & 3B+
VMP504
€ 9,⁹⁰*

TRANSPARENT BOX CASE SHELL
FOR ARDUINO® UNO R3
VMA506
€ 4,⁹⁰*

TRANSPARENT BOX CASE SHELL
FOR ARDUINO® MEGA 2560R3
VMA507
€ 4,⁹⁰*

BEHUIZING
VOOR ARDUINO YUN
TKARDYUN
€ 11,⁹⁰

CASE FOR PI4 COMING SOON!

▷ EDUCATIONAL STARTER KITS

SOLDERLESS EDUCATIONAL STARTER KIT
This educational experiment kit with 10 projects is the ideal way to enthral the novice electronics enthusiast. Learn while you build without any soldering. The package contains a breadboard, cables and components, and illustrated instructions which will help you build a flashing light, etc.

e EDU01
€ 14,90*
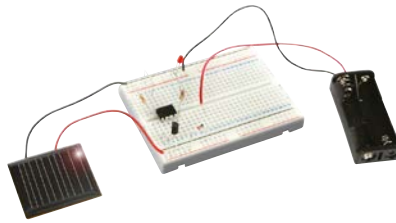
SOLAR ENERGY EXPERIMENT KIT
Solar energy is one of the major alternative sources of energy. This educational kit contains 10 projects relating to solar energy. Find out everything about the future of energy: how do solar panels work, how to convert light into energy... Build various applications and learn by playing.

e EDU02
€ 19,90*

OSCILLOSCOPE TUTOR BOARD
Learn how to get the most out of your digital oscilloscope. The board generates a number of safe 'real-world' signals, which we will use to perform measurements. Get familiarized with AC, DC and frequency measurements, sine and square waves, power supply ripple, full and half wave rectifiers, oscillators etc...

e EDU06
€ 22,90*

'START TO SOLDER' EDUCATIONAL KIT
A full set including a soldering iron, tools, electronic parts and the printed circuit boards required to complete two minikits: a LED light organ and flashing LEDs. An ideal introduction to soldering. Comes with a handy storage box.

e EDU03
€ 24,90*

START TO SOLDER - CHRISTMAS EDITION
This set includes all necessary tools to start soldering, plus two festive minikits to put your skills to the test. The basic tools for soldering are a soldering iron (110V AC version) and a support so you don't burn your table.

e EDU04
€ 24,90*

USB TUTOR MODULE
Take your first steps into the PC-USB world. This tutor will teach you to master USB communication with external devices.

e EDU05
€ 34,90*
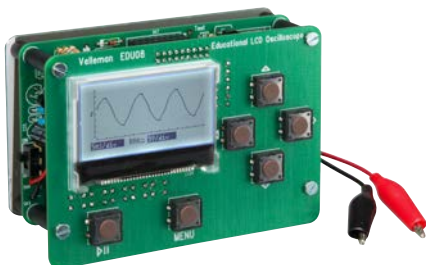
EDUCATIONAL LCD OSCILLOSCOPE
Build your own oscilloscope and learn how to visualize signals. See the signals you learn about in real life! Despite the low cost, this oscilloscope has a lot of features found only on expensive units like signal markers,...

e EDU08
€ 59,90*

EDUCATIONAL PC OSCILLOSCOPE KIT
Oscilloscopes are expensive and complicated instruments? Not this one! Build your own oscilloscope and use your PC to display your measurements. This small and easy to build kit has all the features of a full blown oscilloscope.

e EDU09
€ 39,90*

USB PIC PROGRAMMER AND TUTOR BOARD
Want to set the first steps into Microchip PIC programming? This board is all you need! The tutor can help to get you started into the magic world of PIC programming.

e EDU10
€ 58,90*

▷ LIGHT APPLICATIONS & DOMOTICS

MULTIFUNCTIONAL DIMMER

13 different functions: impulse switch, staircase light control, slow ON/OFF dimmer, interval timer, speed adjustment for fans...

K8028
€ 29,⁹⁰*

POWER DIMMER, PUSH-BUTTON CONTROLLED (1KW@230V)

K8038
€ 24,⁹⁰*

10-CHANNEL 12 VDC LIGHT EFFECT GENERATOR

This kit has 10 outputs to control cold-cathode fluorescent lamps, light bulbs, LEDs and "solid state" relays, ...

K8044
€ 29,⁹⁰*

3.5A DIMMER WITH POTENTIOMETER

Due to its small size, this small dimmer easily replaces an existing switch, permitting you to vary the brightness of a light or group of lights.

K8026
€ 14,⁹⁰*

3-CHANNEL SOUND LIGHT WITH MICROPHONE

Low, mid and high channels. Sensitivity adjustment per channel. LED indication per channel. Attractive translucent enclosure.

K8017
€ 39,⁹⁰*
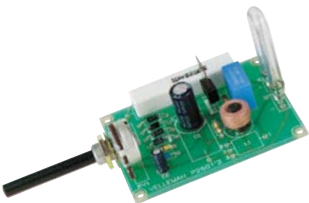
STROBOSCOPE

Flashing light effects for discos. Make your own snapshots and "lightning" light effects.

K2601
€ 16,⁹⁰*

1-CHANNEL DMX CONTROLLED POWER DIMMER

K8039
€ 29,⁹⁰*

3D LED CUBE 5 X 5 X 5

Programmable via USB. Create your own animations, scenes and 3D effects. Includes basic geometrical functions, move, rotate... The frames are can be dimmed separately.

K8018B
€ 58,⁹⁰*

K8018W
€ 48,⁹⁰*

DMX-CONTROLLED RELAY SWITCH

Use a DMX signal to turn a relay output on/off. 512 addresses.

| | K8072 | € 24,⁹⁰* |
| Module | VM138 | € 36,⁹⁰* |

USB CONTROLLED DMX INTERFACE

Control your DMX fixtures using a PC and USB interface.

| | K8062 | € 68,⁹⁰* |
| Module | VM116 | € 79,⁹⁰* |

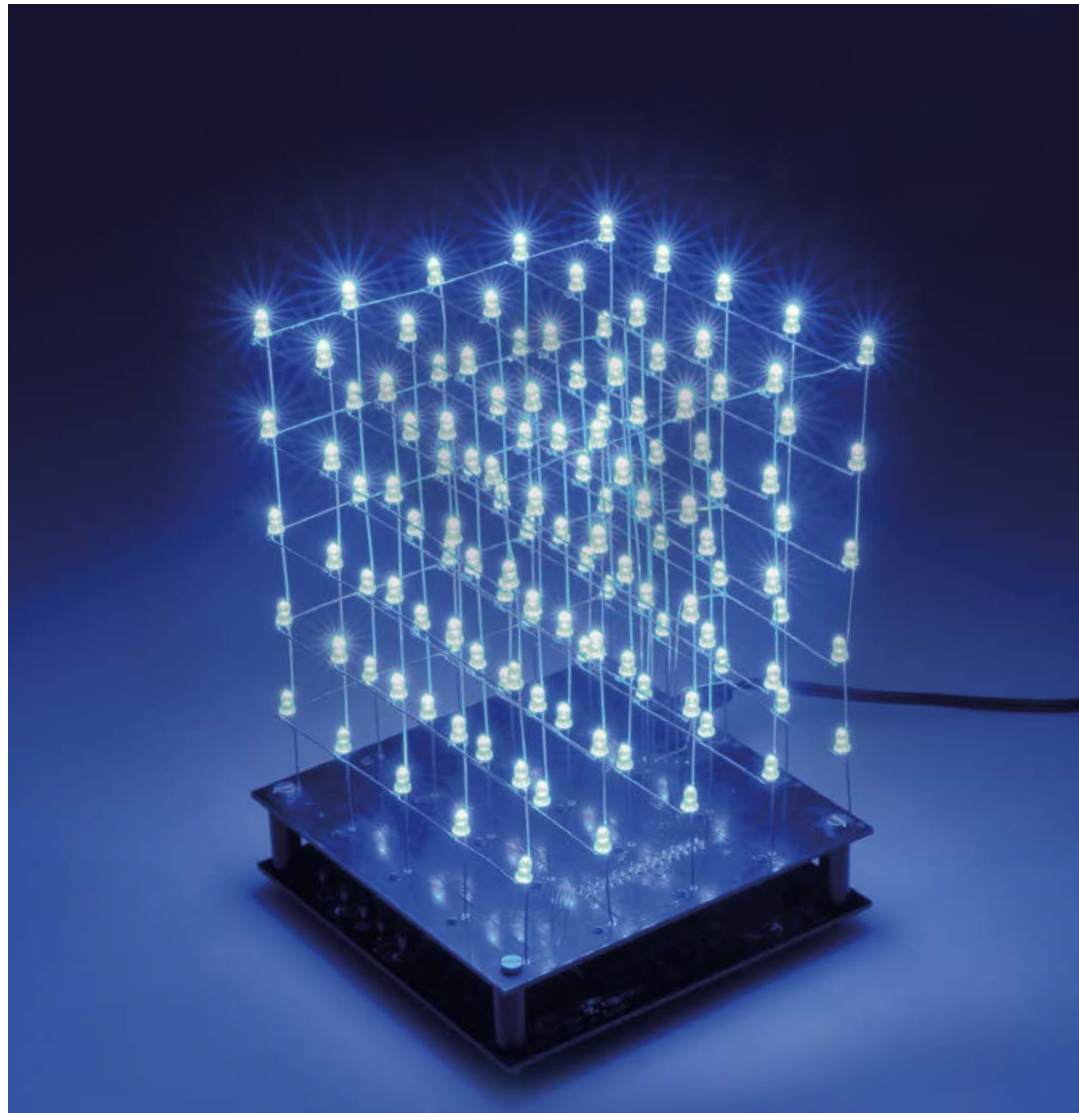### DC CONTROLLED DIMMER

Simple brightness adjustment by means of a DC voltage. Optically isolated adjustment input. Pre-set adjustment for full brightness.
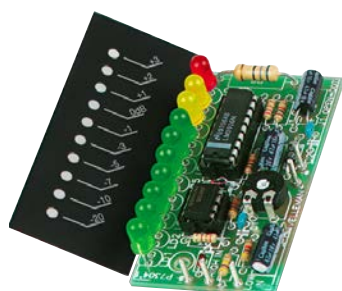
| | K8064 | € 23,⁹⁰* |

▷ AUDIO/HIFI APPLICATIONS

GUITAR PREAMPLIFIER WITH HEADPHONES OUTPUT

An electric guitar cannot be connected to just any amplifier or audio installation.

| | K4102 | € 24,⁹⁰* |

MONO VU-METER 10 LEDS

VU meter with a scale consisting of 10 LEDs and an adjustable input. Dot or bar indicator.

| | K4304 | € 14,⁹⁰* |

STEREO VU-METER
2 X 10 LEDS

Stereo VU meter with 2 x 10 LEDs (dot or bar indicator) and an adjustable input. or vertical mounting.

| | K4305 | € 19,⁹⁰* |

PRECISION STEREO VU-METER
2 X 15 LEDS

Stereo VU meter with 2 x 15 LEDs (dot or bar indicator) and an adjustable input.

| | K4306 | € 29,⁹⁰* |

SOUND GENERATOR

The ideal device for DJ's, jingles for radio stations or just to attract attention. With one output for direct connection to a speaker and one line output for connecting to a mixer panel or amplifier.

| | K4401 | € 19,⁹⁰* |

2-CHANNEL LOUDSPEAKER PROTECTION

This stereo speaker protection prevents switch-on clicks and DC components on the output of the amplifier connected.

| | K4700 | € 19,⁹⁰* |

STEREO ULTRASONIC SOUND AND BAT DETECTOR

This detector converts imperceptible sounds for humans such as bat signals into audible noise. Another usage may be the early detection of possible failures in machines, engines and electronics.

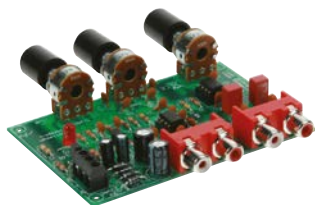| | K8118 | € 24,⁹⁰* |

EXTENDED RECORD / PLAYBACK MODULE

The K8094 allows you to record and play messages of up to 8 minutes long. Recording speed is continuously adjustable so that you can choose a perfect compromise between duration and sound quality.

| | K8094 | € 29,⁹⁰* |

THE TREMOR
OPTICAL TREMOLO GUITAR EFFECT PEDAL

ᴗ K8110
€ 49,⁹⁰*

FUZZ BOX
FULL DISTORTION GUITAR EFFECT PEDAL

ᴗ K8113
€ 49,⁹⁰*

EXTRADRIVE
(A)SYMMETRIC OVERDRIVE GUITAR EFFECT PEDAL

ᴗ K8111
€ 49,⁹⁰*

VOLUME AND TONE CONTROL - PREAMPLIFIER

If you ever needed to improve the sound quality of your MP3 player, then this simple and high-quality control is what you need.

ᴗ K8084
€ 19,⁹⁰*

DISCRETE POWER AMPLIFIER 200 W

Powerful and reliable amplifier, just connect a suitable transformer!

Module VM100
€ 64,⁹⁰*

ᴗ K8060
€ 19,⁹⁰*

MP3 PLAYER KIT

There are several reasons why to expand a device with an MP3 player: audio messages, sound effects, announcements, etc.

Module VM8095
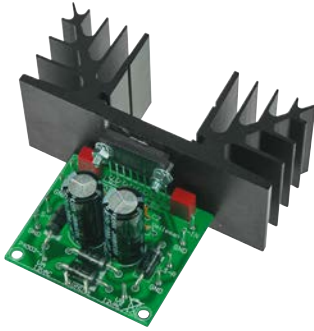**€ 109,⁹⁰***

ᴗ K8095
€ 64,⁹⁰*

AUDIO ANALYSER

Give your do-it-yourself audio equipment a high-tech look with this easy to install kit. Measure the linear audio spectrum, peak and RMS power and average noise level (dB).

ᴗ K8098
€ 49,⁹⁰*

2 X 30 W AUDIO POWER AMPLIFIER

This small amplifier is constructed with the TDA2616 IC, with a maximum supply capability of 2 x 15Wrms (4 ohm) of 2 x 10Wrms (8 ohm). The IC is protected against overheating and short circuits. Additional rectifier and smoothing filter are unnecessary because alternating current can be connected directly with the unit.

K4003
€ 19,90*

Module **VM113**
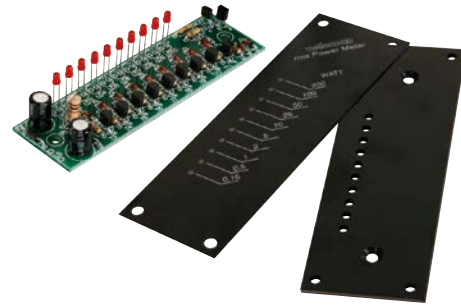
AUDIO POWER METER

10 LED scale, up to 2000Wrms power measurements. Does not need a special power supply, because it is supplied directly from the speaker output. Ideal for car audio systems and PA systems. Also usable for bridged amplifiers. The unit can be used both horizontal and vertical. The kit comes with a front panel and four attractive front stickers, for the different scales.

K4307
€ 22,90*

▷ MEASURING INSTRUMENTS
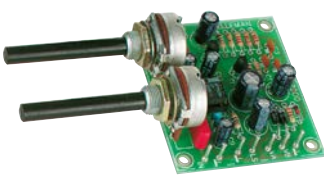
SIGNAL TRACER/INJECTOR

This signal tracer /injector has been designed to inject or detect a specific signal into an audio circuit in need of repair (such as amplifiers, radios, tone controls, ...) so as to detect the fault.

K7000
€ 14,90*

MAINS VOLTAGE DETECTOR

With this device wires can be very easily checked for mains voltage. It can be used to search for wires installed in or behind walls or to trace interruptions in wiring. A flashing LED indicates whether or not voltage is present. The flashing speed indicates how close by the wire is.

K7101
€ 8,90*

METAL DETECTOR

To come up against an electric cable while drilling a hole in a wall can have catastrophic consequences. Likewise, drilling into gas, water pipes or central heating pipes can be extremely hazardous.

K7102
€ 9,90*

4-CHANNEL RECORDER / LOGGER

record DC signals or slow-moving signals over very long periods · the measurements are automatically stored on your hard disk for further processing

K8047
€ 39,90*

POCKET AUDIO GENERATOR

For service, repair, testing, education... Microprocessor technology; digital waveform generation, sine wave, burst mode and 32-bit digital noise.

K8065
€ 16,90*
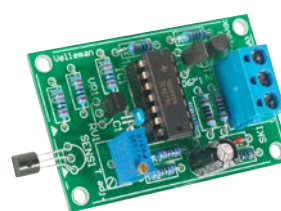
UNIVERSAL TEMPERATURE SENSOR

Measure indoor and outdoor temperatures, control heating and/or cooling of rooms, equipment...

K8067
€ 14,90*

COMPONENT TESTER KIT

Build your own component tester and receive all useful information about resistors, diodes and many more.

K8115
€ 59,90*

POWER SUPPLIES & CHARGERS

1 A POWER SUPPLY KIT
Just add a suitable transformer to power your project - 1.2V to 30V adjustable output.

Module VM124
€ 10,⁹⁰*

K1823
€ 9,⁹⁰*

SYMMETRIC 1A POWER SUPPLY
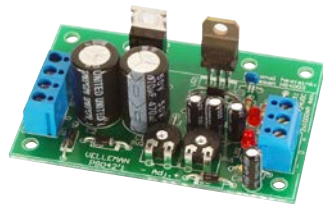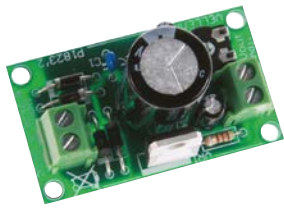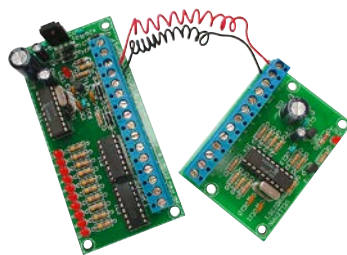low cost universal symmetric power supply · just add a suitable transformer and a heatsink

K8042
€ 9,⁹⁰*

1W/3W HIGH-POWER LED DRIVER
Can drive up to four 1W power LEDs or two 3W power LEDs. Highly efficient switching circuit.

K8071
€ 7,⁹⁰*

REMOTE CONTROL UNITS & DOMOTICS

10-CHANNEL, 2-WIRE REMOTE CONTROL
This kit allows you to control up to 10 devices using only 2 wires at a long distance. Microprocessor controlled. Inputs can be push-buttons, switches or open collector outputs from another device.

K8023
€ 29,⁹⁰*

15-CHANNEL IR TRANSMITTER
compatible with: K6711, K6712, K6713, K8046, K8050, K4100, K4500, MK161: 2-CHANNEL IR REMOTE RECEIVER , MK163, MK164 · 4 addresses allow the use of multiple receivers in one room

K8049
€ 34,⁹⁰*

2-CHANNEL RF REMOTE RECEIVER WITH RANDOM CODE
ompatible with: K8059, VM108, VM130T · two relay contact outputs · toggle or pulse function selectable per output · pulse function with turn off timer
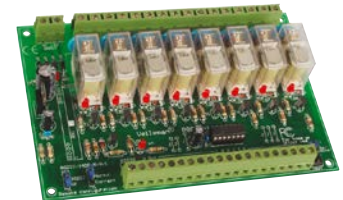
K8057
€ 24,⁹⁰*

8-CHANNEL RF REMOTE CONTROL
Optional 8 channel remote for various Velleman projects, different addresses and functions can be set.

Module VM118R
€ 29,⁹⁰*

K8058
€ 24,⁹⁰*

2-CHANNEL RF CODE-LOCK REMOTE TRANSMITTER
for use with the K8057: 2-CHANNEL RF REMOTE RECEIVER WITH RANDOM CODE /VM109 2-channel RF receivers · generates unique 32-bit code · more than 1,000,000,000 unique codes

K8059
€ 16,⁹⁰*

8-CHANNEL RELAY CARD
BThis relay card can be used in several ways: stand-alone card, addressed by switches or open collector outputs or remote-controlled through RS232.

Module VM118
€ 109,⁹⁰*

K8056
€ 49,⁹⁰*

UNIVERSAL RELAY CARD WITH 16 RELAYS

16 relais en schroefconnectoren meegeleverd! Voedingstransformator is meegeleverd. De 12VDC uitgang kan gebruikt worden als voeding voor andere kits : K6714, K8023,...

K6714-16
€ 59,-*

MULTIFUNCTION RELAY SWITCH

14 different functions including a timer, switching, flashing, interval, random switching...

K8015
€ 24,90*

▷ TIMERS & CONTROLLERS

POWER SAVER / TIMER

This power saver turns off your equipment after a preset time. It helps you save money and increases safety. Select 1h, 2h, 4h, 8h or 24h.
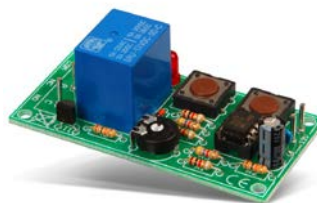
K8075
€ 13,90*

LED CLOCK WITH SLOW ON DIMMER

LED clock with connection possibility for a nightlight. From 15 min before the set time, the light intensity of the connected light will increase up to full power at set time and beeps will be heard.

K8091EU
€ 29,90*

UNIVERSAL START/STOP TIMER

Miniature timer for all applications requiring a delay of up to 60 minutes. The control range may be adjusted.

K2579
€ 12,90*

SPEED CONTROLLER

Designed to control AC motors with carbon brushes (drilling machine, vacuum cleaner, saw, ...). igh torque, even at low r.p.m. May also be used for low voltage loads (24V).

K2636
€ 26,90*

MULTIFUNCTIONAL UP/ DOWN COUNTER

Comes in handy for counting people or parts, for scorekeeping, ... Counts up or down. Count input through on-board push buttons or by external pulses.

K8035
€ 29,90*

57 MM 7-SEGMENT DIGITAL CLOCK

Large (57mm) 7-segment digital clock, complete with enclosure. Displays time (12h/24h) and/ or temperature (°C/°F) (with optional K8067/VM132 sensor).
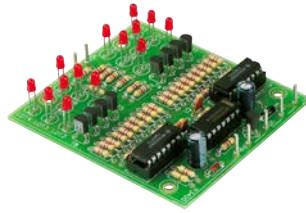
K8089
€ 59,90*

▷ HOME APPLICATIONS

LIQUID LEVEL CONTROLLER

You forget to turn off the tap, the washing machine leaks, the water level in your aquarium drops, the water tank is empty or suddenly overflows, there's water in your cellar, etc.

[U] **K2639**
€ 14,⁹⁰*

DUAL ELECTRONIC DICE

Board games are an excellent source of pleasant and healthy entertainment. However, the dice can be a constant source of irritation: they fall off the table, they're not cheat-proof, they're picked up before everyone has seen the result, etc.

[P] **K3400**
€ 12,⁹⁰*

MULTITONE CHIME

This device is a simple and economic way of generating electronic tones. This kit is primarily intended for use as a replacement for the traditional mechanical doorbell. Of course, it can also be used for many other types of applications.
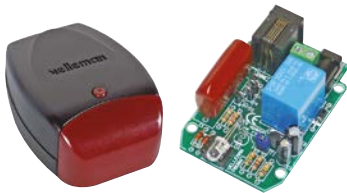
[U] **K6600**
€16,⁹⁰

PROXIMITY CARD READER WITH USB INTERFACE

store up to 250 tags · with USB interface for config-management · free tag management application for PC · fully documented protocol, write your own application

[U] **K8019**
€ 34,⁹⁰*

TELEPHONE RING DETECTOR WITH RELAY OUTPUT

Simply connect in parallel with you phone line. A powerful LED flashes when the phone rings.
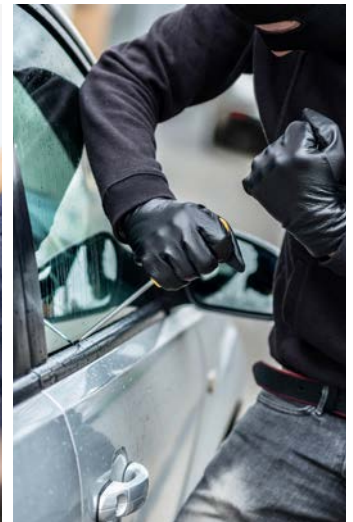
Module **VM144**
€ 24,⁹⁰*

[U] **K8086**
€ 15,⁹⁰*

TELEPHONE RINGER WITH BUZZER AND LED

Connect anywhere on your telephone line for an extra audible and visual indication when the phone rings. No power supply needed.

[U] **K8087**
€ 9,⁹⁰*

▷ ALARMS AND AUTOMOTIVE APPLICATIONS
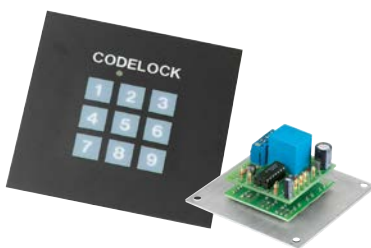
CODE LOCK

This code lock may be used to switch an alarm (e.g. car alarm K3504: CAR ALARM) on and off, or to open a door lock. An LED on the operating panel indicates the position of the 'lock'.

[U] **K6400**
€ 24,⁹⁰*

SAFE-STYLE CODE LOCK

Innovating and impressive code lock, using a rotary encoder instead of dull push buttons. Various setups and applications.

[U] **K8082**
€ 20,⁹⁰*

REMOTE CONTROLLED HOME ALARM

Can store up to 4 remote controls (FIFO). Chime function. Built-in pre-alarm. Always armed after power outage.

[U] **K8093**
€ 24,⁹⁰*

ULTRASONIC RADAR

detection range: 5cm - 1.5m (adjustable) · detection angle: 5° · supply voltage: 10 - 15VDC / 16mA

[U] **K3502**
€ 19,⁹⁰*

▷ INTERFACE SYSTEMS & PROGRAMMERS

DC TO PULSE WIDTH MODULATOR

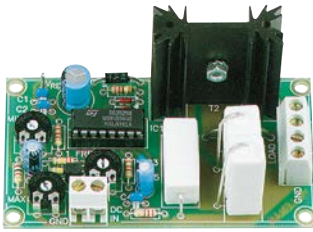This control circuit is ideal for the accurate control of DC motors, lighting levels, small heaters as well as other applications. The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage.
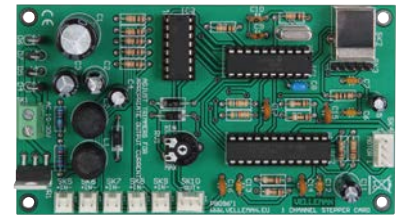
K8004
€ 19,⁹⁰*

USB MESSAGE BOARD

Add another screen to your computer that shows the information you want!

Even if your main screen is off.

K8101
€ 29,⁹⁰*

1-CHANNEL USB STEPPER MOTOR CARD

While the motor turns you can simultaneously check the status of the dry-inputs (ex. emergency stop signal, limit detection...). Use the switch inputs to test the motor. Can be used in every application where positioning is needed .

K8096
€ 39,⁹⁰*

4-CHANNEL USB STEPPER MOTOR CARD

USB controlled stepper motor card, to drive 4 stepper motors. While the motor turns you can simultaneously check the status of the dry-inputs (ex. emergency stop signal, limit detection...).

K8097
€ 59,-*

8-CHANNEL USB RELAY CARD

USB-controlled relay card. On-board manual operation. DLL for own software development

Module **VM8090**
€ 88,⁹⁰*

K8090
€ 48,⁹⁰*

USB EXPERIMENT INTERFACE BOARD

Easy-to-use multipurpose interface board for PC with USB connection. On-board push buttons and LEDs for all digital inputs and outputs, analogue and PWM outputs. Test the supplied sample programs or make your own application using the supplied DLL. Great value!

e **K8055N**
€ 36,⁹⁰*
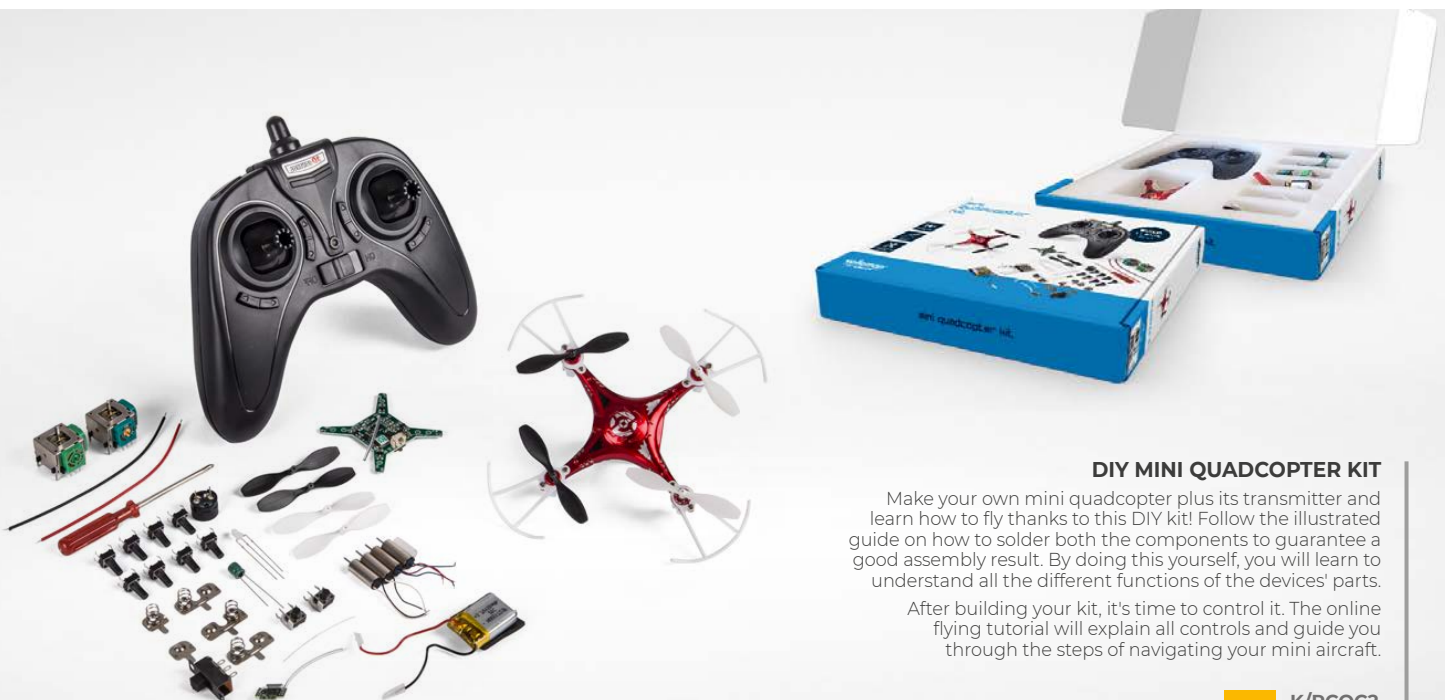
DIY MINI QUADCOPTER KIT

Make your own mini quadcopter plus its transmitter and learn how to fly thanks to this DIY kit! Follow the illustrated guide on how to solder both the components to guarantee a good assembly result. By doing this yourself, you will learn to understand all the different functions of the devices' parts.

After building your kit, it's time to control it. The online flying tutorial will explain all controls and guide you through the steps of navigating your mini aircraft.

P **K/RCQC2**
€ 39,⁹⁰

1. ELECTRONIC CHRISTMAS TREE

Christmas has never been this cosy ! 16 blinking LEDs. Power supply : 9V battery (not incl.). Height : 100mm.

P MK100
€ 6,90*

2. SNOWMAN

Cheer up your XMAS decorations with this animated snowman!

P MK200
€ 19,90*

3. FLASHING RED LED STAR

Flashing or static operation. Applications: desktop or hanging from the ceiling.

MK169Y
€ 8,90*

MK169R
€ 8,90*

4. ROULETTE

From now on you will be playing roulette like in a real casino. Without risking to lose your hard-earned money.

P MK119
€ 17,90*

5. SMD FLASHING HEART

Can be operated pending (e.g. around the neck) or can be worn as a badge (pin supplied).

P MK144
€ 6,90*

6. ANIMATED BELL WITH 83 LEDS

Create an animated bell that swings left and right using 83 LEDs. Easter has never been this fun!

MK122
€ 14,90*

7. SMD HAPPY FACE

Thanks to the small diameter of 2.9 cm, this smiley can be used as a pin or as a pendant.

MK141
€ 5,90*

8. WHITE STARLIGHT

GHave fun making this mini kit and enjoy the different effects of the white starlight all year round.

MK199W
€ 12,90*

9. TRAFFIC LIGHT

Miniature traffic light as used on four-way junctions. Realistic operation with adjustable delay. 12 LEDs.

MK131
€ 9,50*

10. FLASHING LED SWEETHEARTS

Use a fun way to show that your heart still beats for your loved one. Surprise him or her with this original Valentine Heart.

MK101
€ 7,50*

MINIKITS
STARTER SET

Minikit starter set. The ideal introduction to kitbuilding, with: flashing LED sweetheart (MK101), flashing LEDs (MK102), electronic dice (MK109), siren sound generator (MK113), IR light barrier (MK120), running microbug (MK127).

P **MKSET1**
€ 39,⁹⁰*
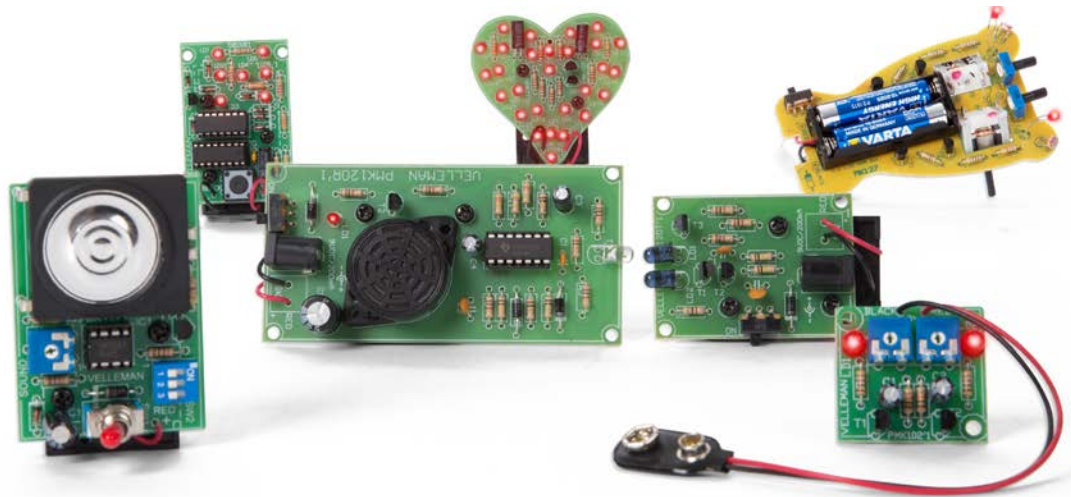
SEASONAL - GIFT
MINIKIT PACK-5/1

Seasonal minikit pack: MK101: Flashing Sweetheart, MK100: Electronic Christmas Tree, MK130: 3D Xmas Tree, MK167: electronic candle, MK169R: flashing red LED star.

P **MKSET2**
€ 34,⁹⁰*

HALLOWEEN JACK-O'-LANTERN

The candle has a realistic flickering flame mode and cannot be blown out by the wind!

P **MK202**
€ 9,⁹⁰*

HALLOWEEN PUMPKIN

With this kit, build your own pumpkin without getting your hands dirty. The 25 LEDs provide a spooky atmosphere and blink like a real candle in a pumpkin.

P **MK145**
€ 9,⁹⁰*

ANIMATED GHOST

Who says that ghosts do not exist? Invite your friends and surprise them with this ghost to prove them otherwise.

P **MK166**
€ 14,⁹⁰*

ELECTRONIC CANDLE

What an original and safe way to decorate your table or create atmosphere in the residence without danger of fire. This electronic tea light consists of a yellow LED and is safe for children, pets and your fingers.

P MK167
€ 5,90*

ELECTRONIC RGB CANDLE

Gives a realistic flickering effect. Because of the unique round design of the circuit board this candle can be placed in a sand-blasted glass of at least 38 mm diameter for a super realistic effect.
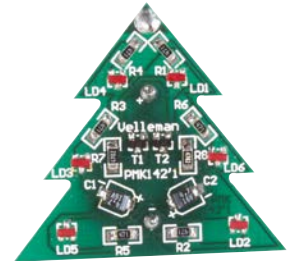
P MK184
€ 6,90*

RGB LED BALL

Many built-in RGB effects. Turns on at dusk, turns off at dawn.

P MK197
€ 6,90*

IR LIGHT BARRIER INTRUSION ALARM

Use the advantages of invisibility with this IR light barrier. Many applications are possible: announce visitors, warn against burglars, set limits, science projects...

P MK120
€ 11,90*

CHRISTMAS TREE
BLUE LED VERSION WITH ON/OFF SWITCH

Enjoy building the all new and improved blinking Christmas tree.

P MK100B
€ 9,90*

3D XMAS TREE

The ultimate Xmas gadget. 16 flashing red LEDs. Extra green and yellow LEDs provided to customise your tree.

P MK130
€ 8,90*

USB SMD X-MAS TREE

Easy to install and an ideal introduction to SMD technology. It will work when connected to your PC or with a battery.

P MK183
€ 8,90*

SMD X-MAS TREE

Miniature Xmas gadget, easy to build smd components.

P MK142
€ 6,90*

SOUND STAR

If you want an interactive star, then this minikit is for you. The star functions as a VU meter and reacts to music or sounds. 60 LEDs provide a nice star effect.

P MK172
€ 14,90*

60-LED MULTI-EFFECT STAR

This big star has as many as 60 LEDs and is microprocessor controlled to achieve 24 different animations.

P MK170
€ 19,90*

RIDING SANTA

Multicoloured animated Xmas gadget with 126 LEDs. Power supply : 9 to 12VDC. 12V-operation possible for use in cars, vans, trucks.

P MK116
€ 14,90*

DE LUXE XMAS TREE

This luxurious tree is the flagship among electronic Christmas trees. It consists of a whopping 134 bright LEDs. They are so constructed as if it were a real tree with 18 real candles.

P MK117
€ 17,90*

JUMBO SINGLE DIGIT CLOCK

This is the ultimate gadget and design clock for the electronics enthusiast. It displays the time with only one but very big digit: no less than 57 mm!

P **MK153**
€ 14,90

3RD BRAKE LIGHT FLASHER

Increase your safety and visibility on the road with this third traffic light. Suitable for any vehicle with a third stop lamp (lamps or LEDs).

P **MK178**
€ 6,90*

WHITE LED FLASHLIGHT

2 high-power LEDs (4500mcd). Low power consumption : max. autonomy of 10hrs on a single battery. Built-in strobe effect for emergencies.

P **MK143**
€ 8,90*

DUAL SUPER BRIGHT FLASHING RED LIGHTS

Two super bright red LEDs. Very powerful flash effect for emergencies, warning signs, as eye-catcher, etc ...

P **MK148**
€ 6,90*

2-CHANNEL HI-POWER LED FLASHER

High-power LEDs are increasingly available on the market. With this kit you can control two high-power LEDs and have them alternately flash through seven different effects.

P **MK180**
€ 17,90*

AC POWER VOLTAGE LED

You would like certain places in your house to have an indicator showing if the light in the basement is still on. This kit provides an easy solution.

P **MK181**
€ 3,50*

3D LED CUBE 3 X 3 X 3

Programmable via USB. Create your own animations, scenes, and 3D effects. Includes basic geometric functions such as shift, rotate...
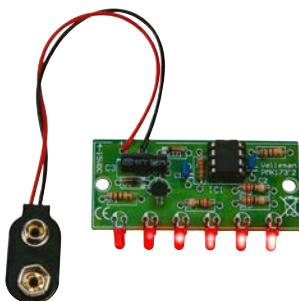
P **MK193**
€ 24,90*

SOUND-TO-LIGHT UNIT

This mini-kit will most certainly grab everyone's attention at parties. Four bright red LEDs flash to the rhythm of the music party.

P **MK103**
€ 6,90*

MINI-6-LED CHASER

The 6 bright red LEDs light up one by one, from one side to the other or in a single direction. Perfect attention grabber at trade shows, shops, etc.
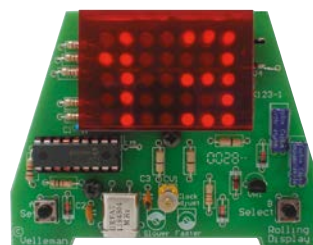
P **MK173**
€ 6,90*

LED CHEVRON ARROW

This animated chevron with 28 LEDs is an excellent way to bring a product into the spotlight, show where the exit is, or just to attract attention.

P **MK176**
€ 14,90*

ROLLING CLOCK

This animated clock display with 35 LEDs has a very special way to display date and time: every character is shown separately.

P **MK123**
€ 14,90*

ROLLING MESSAGE

Create your own message and show it on the news ticker. The 35 bright red LEDs ensure a perfect display of your message, even under difficult lighting conditions.

P **MK124**
€ 14,90*

LOW VOLTAGE LED DIMMER

With this kit, you can control low voltage lamps or LEDs or even entire LED strips.

MK187
€ 14,90*

12V CAR BATTERY MONITOR

This easy to build car battery monitor allows you to go on holiday with peace of mind.

MK189
€ 5,90*

INTERVAL TIMER

General purpose pulse-pause timer, pulse between 0.5 and 5s, pause between 2.5 and 60s.
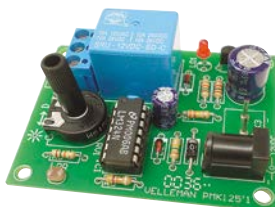
MK111
€ 6,90*

LOW VOLTAGE LIGHT ORGAN

This minikit uncovers the secret. A single-channel light control organ teaches you all about it.

MK114
€ 9,90*

LIGHT SENSITIVE SWITCH

This kit is especially designed to switch a device on at dusk and off at dawn. A built-in delay circuit prevents disruptive on and off.

MK125
€ 6,90*

SIMPLE ONE CHANNEL LIGHT ORGAN

This minikit uncovers the secret. A single-channel light control organ teaches you all about it.

MK110
€ 7,90*

1S - 60H PULSE-PAUSE TIMER

blinking lights, pulsed operation of buzzers, automated irrigation and lawn sprinklers, automated toilet flushing and ventilation, etc.

MK188
€ 15,90*

ELECTRONIC DECISION MAKER

This minikit uncovers the secret. A single-channel light control organ teaches you all about it.

MK135
€ 5,50*

LCD MINI MESSAGE BOARD

Mini message board with one line for maximum 16 characters. The message goes from left to right with adjustable speed. Power: 2 x AAA batteries (not incl.).

MK157
€ 15,90*

REMOTE CONTROL VIA MOBILE PHONE

You are leaving on vacation or you need to leave the house unexpectedly. But you would like a warm house when you come back.

MK160
€ 12,90*

2-CHANNEL IR REMOTE RECEIVER

Use the beautifully designed K8049 remote control for this IR receiver. This kit has two channels, each with its own relay output.
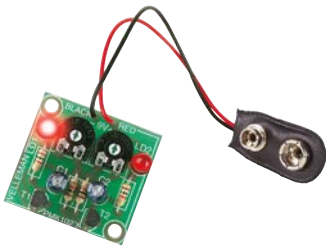
MK161
€ 14,90*

2-CHANNEL IR REMOTE TRANSMITTER

This kit (along with the MK161) allows to turn on just about anything via remote control. dimensions: 60 x 40 x 14 mm

MK162
€ 12,90*

FLASHING LEDS

Discover one of the basic circuits of electronics through this kit. It results in a fun flashing effect. Suited for different applications (e.g. model construction) or just as a gadget or attention grabber.

[P] **MK102**
€ 4,⁹⁰*

LED RUNNING LIGHT

This running light will help you create various cool effects. Like for example in the car on the dashboard. You've undoubtedly seen great

[P] **MK107**
€ 8,⁹⁰*

SIREN SOUND GENERATOR

This sound generator is more than a siren. Once mounted, you can choose from 4 sounds: police siren, fire siren, ambulance or machine gun.

[P] **MK113**
**€ 9,⁹⁰***

SUPER STEREO EAR

Do you have any ambitions as a spy? Would you like to hear what is being told across the street? Then this Super Stereo Ear is for you! This device is an ultra audio amplifier.

[P] **MK136**
€ 9,⁹⁰*

LED BUDDY

Hold any type of LED to the contact pads of the LED Buddy to start the process. It detects the polarity of the LED, measures the forward voltage and auto-calculates the series resistors that you need to use.

[P] **MK198**
€ 14,⁹⁰*
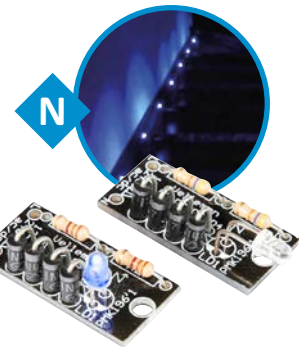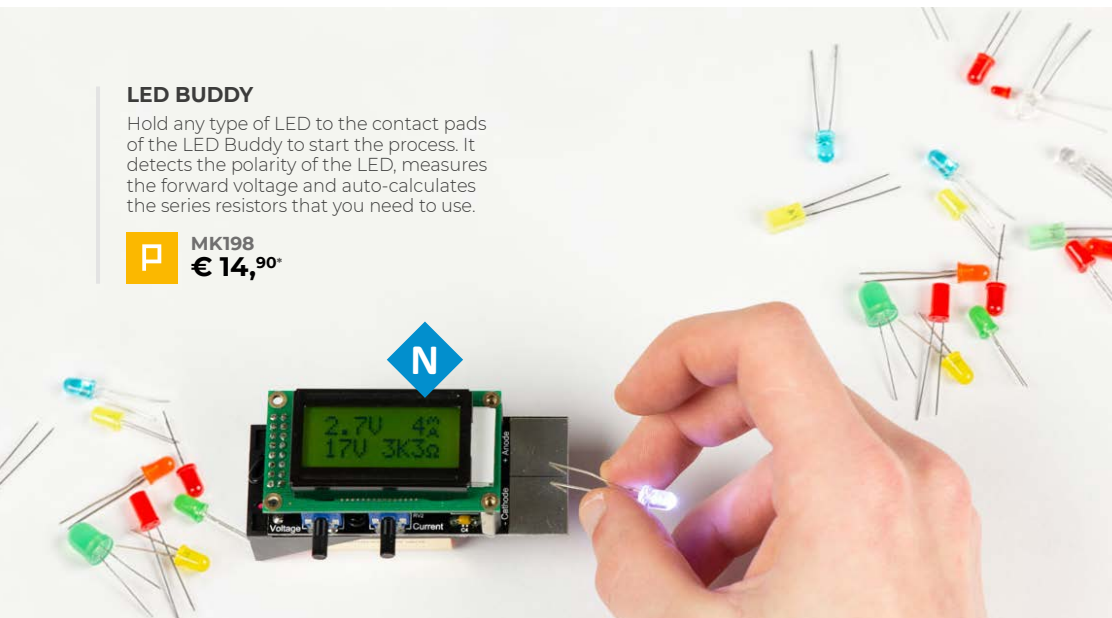
MULTI VOLTAGE PILOT LED

These ultra small blue led pilot lights fit everywhere and run from almost any power source.

[P] **MK196**
€ 4,⁹⁰*

ELECTRONIC CRICKET

Can be used for recreational purposes or to simulate a hot summer night. Automatically comes on when darkness falls. Cricket repetition, effect and tone are adjustable. Adjustable light sensitivity.

[P] **MK104**
€ 7,⁹⁰

VOICE CHANGER

This set is pure fun, both to build and to use. Have your voice transformed to a robot voice, low to high, as you want. For added effect, you can even add vibrato. Very nice for parties, plays, recordings, games, prank phone calls...
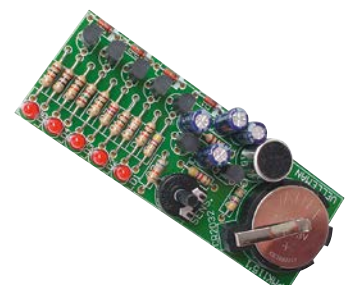
[P] **MK171**
€ 10,⁹⁰*

STEAM ENGINE SOUND GENERATOR

Generates sound of a vintage steam engine. Adjustable 'speed' and volume. Great for model railroads, radio plays, stage, as gadget. With 'steam whistle'-push button.

[P] **MK134**
€ 10,⁹⁰*

POCKET VU METER

Surprise your friends at parties with this original eye-catcher!

5 bright red LEDs, a built-in microphone and an adjustable sensitivity are all this kit needs to get a nice VU meter.

[P] **MK115**
€ 6,⁹⁰*

2X5W AMPLIFIER FOR MP3 PLAYER

Thanks to this kit, you will decide how your amplifier or docking station will look.

MK190
€ 9,90*

DIGITALLY CONTROLLED FM RADIO

Build your own FM radio. Excellent sensitivity.

MK194N
€ 28,90*

VOICE RECORDING/ PLAYBACK MODULE

recording time between 30 and 90 s (adjust the sample rate) · speaker Ø 57 mm included · using the speed adjustment, a "funny voice" can be created
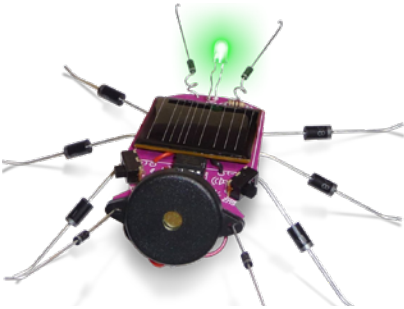
MK195
€ 20,90*

CABLE POLARITY CHECKER

Check cables for continuity and identify individual wires. Ideal for speaker cable polarity checking. LED indication for open circuit, shorts and correct or wrong polarity.

MK132
€ 6,90*

SOLAR BUG

Bring that mediterranean atmosphere to your garden. Chirps as long as the sun shines and glows after dark. Slow fading green led simulates glow-worm.

MK185
€ 12,90*

CRAWLING MICROBUG (WITH ENCLOSURE)

Attractive bug-shaped miniature robot. The microbug is always hungry for light and heads towards it. With enclosure.

MK165
€ 14,90

ANIMATED LED SMILEY

This LED smiley is the perfect addition to your desk. Use it to let people around you know what mood you're in. There is a facial expression for every mood.

MK175
€ 13,90*

KITCHEN TIMER

Is the built-in alarm clock in the oven of any use if you're not in the kitchen? Not really, and your cookies will be burned anyway. This timer does not only just save your cookies, but is also a fun project to build.

MK128
€ 14,90*

RUNNING MICROBUG

Learn more about insects with the minikit. Or not ... Once you have this creature soldered together, the fun can begin. This robot will faithfully follow any light source: use a flashlight to make him crawl to where you want.

MK127
€ 12,90*

CRAWLING MICROBUG

Dit robotje zal trouw het licht volgen, gebruik een zaklamp om hem te doen kruipen naar waar jij wilt. De ogen geven de richting aan waarin de robot zich zal bewegen en stopt bij complete duisternis

MK129
€ 14,90*

SHAKING DICE

Dice with seven bright red LEDs, shake before use. Uses a lithium battery (not included).

P **MK150**
€ 11,90*

ELECTRONIC DICE

Dice with seven bright red LEDs, rolls when the button is released. Operates on a standard 9V battery (not included).

P **MK109**
€ 6,90*

QUIZ TABLE

Just like with quizzes on TV, be the first to find the right answer and press the red button. For 4 players. A LED indicates which player pressed first.

P **MK133**
€ 9,90*

SPINNING LED WHEEL

Try your luck with our wheel of fortune! Take a spin on the wheel with the push button. The LEDs will soon start to turn and come to a standstill until only one stays on.

P **MK152**
€ 7,50*

BRAIN GAME

Test your memory with this addictive game. The object of the game is to repeat a randomly generated pattern.
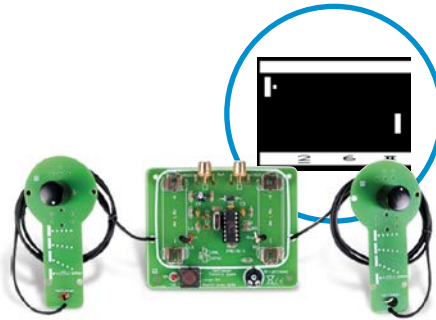
P **MK159**
€ 14,90*

BRAIN GAME

This may look like a simple game... Repeat a randomly generated sequence. You might be surprised at how difficult it turns out to be!

P **MK112**
€ 9,90*

CLASSIC TV TENNIS GAME WITH ANALOG BATS

Each player has his/her own bat with rotary potentiometer for ultra fast bat movement.

P **MK191**
€ 19,90*

LOVE TESTER

This set is the ultimate gadget for couples in love. Each partner or future partner takes one end of the meter. Now give each a hand and see how the love meter rises.

P **MK149**
€ 12,90*

LOW VOLTAGE LED LIGHT ORGAN

With this kit, you can control low voltage lamps or LEDs or even entire LED strips.
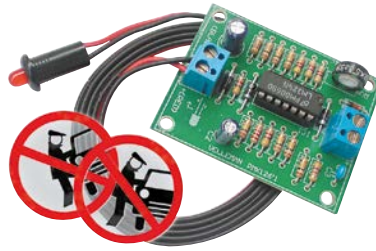
🅿 **MK186**
€ 14,⁹⁰*

DING DONG

Ideal if you long for the classic sound of a mechanical doorbell. This kit electronically reproduces the classical ding dong sound.

🅿 **MK177**
€ 6,⁹⁰*

CAR ALARM SIMULATOR

With care thieves around, it may be just enough to simulate the presence of an alarm system to deter them.

🅿 **MK126**
€ 4,⁹⁰*

IR REMOTE CHECKER

Everyone has been there: pressing the remote control of your TV and… nothing happens. First you shake it, then you keep it closer to your TV but nothing helps.

🅿 **MK137**
€ 5,⁹⁰*

PROXIMITY CARD READER

These are the advantages: hard to crack 64-bit encryption, up to 25 badges (or an infinite number in low-security mode), output control on / off or time-controlled.

🅿 **MK179**
€ 24,⁹⁰*

THERMOSTAT

This kit gives a cheap and convenient home thermostat, universally applicable. Comes with relay indication LED and NTC temperature sensor.

🅿 **MK138**
€ 7,⁹⁰*

CLAP ON/OFF SWITCH

This may sound familiar: You are in bed, about almost asleep, but the light is still on and the switch is at the far end of the room.

🅿 **MK139**
€ 14,⁹⁰*

DIGITAL ECHO CHAMBER

This cool kit is an ideal addition to any DJ setup. Or do you fancy a karaoke party but not all voices sound full enough? This echo chamber provides a solution.

🅿 **MK182**
€ 15,⁹⁰*

DIGITAL LED CLOCK

This is all but an everyday clock. It features a red 7-segment display in an attractive anthracite housing.

🅿 **MK151**
€ 19,⁹⁰*

SIGNAL GENERATOR

If you have ever worked with amplifiers, you undoubtedly know that it is almost impossible to detect defects without a signal generator.

🅿 **MK105**
€ 7,⁵⁰*

METRONOME

Musicians have been using metronomes for centuries to keep the rhythm. Mechanical metronomes often are quite cumbersome and need to be wound regularly.
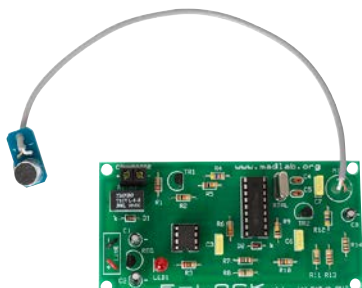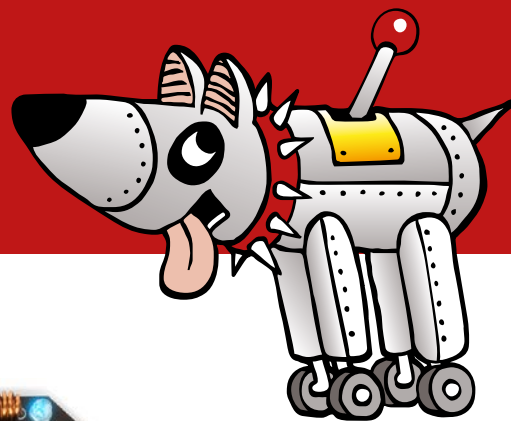
🅿 **MK106**
€ 9,⁹⁰*

WATER ALARM

The immersion pump in your basement no longer works, but as you do not live in the basement, you never knew it. Result? A flooded basement!
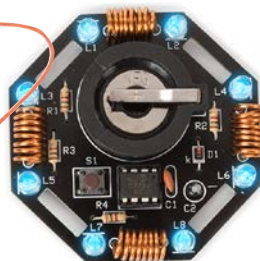
🅿 **MK108**
€ 5,⁹⁰*

madlab
electronic kits

Madlab invents **unique electronic solder kits** for both children and adults. The circuit boards are specially designed for **beginners** and once you are finished soldering, you'll have a **fun gadget!**

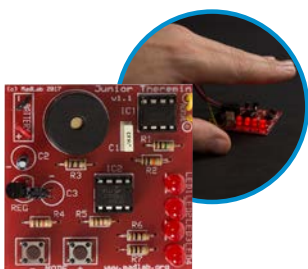**MADLAB ELECTRONIC KIT - E-LOCK**

MLP101
€ 19,90*

MADLAB ELECTRONIC KIT - 1-2-3

MLP102
€ 7,90*

MADLAB ELECTRONIC KIT - ATOM HEART

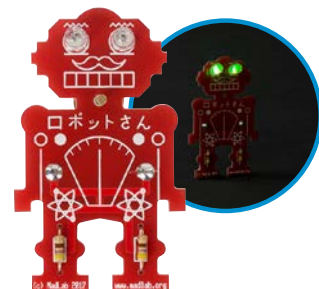MLP103
€ 14,90*

MADLAB ELECTRONIC KIT - JUNIOR THEREMIN

MLP105
€ 11,90*
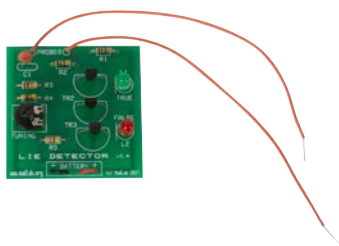
MADLAB ELECTRONIC KIT - LIE DETECTOR
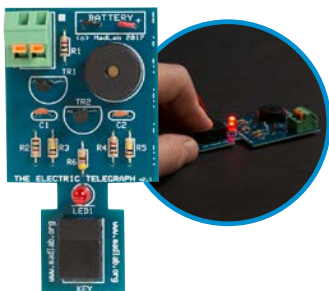
MLP106
€ 5,90*

MADLAB ELECTRONIC KIT - MY LITTLE ALIEN
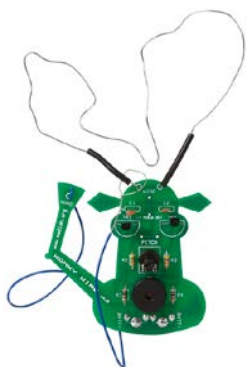
MLP107
€ 7,90*

MADLAB ELECTRONIC KIT - MR. ROBOT

MLP108
€ 5,90*

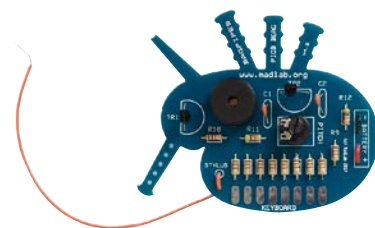**MADLAB ELECTRONIC KIT - ELECTRIC TELEGRAPH**

MLP109
€ 9,90*

MADLAB ELECTRONIC KIT - WONKY WIRE

MLP110
€ 9,90*

MADLAB ELECTRONIC KIT - WHACK A MOLE

MLP111
€ 12,90*

**MADLAB ELECTRONIC KIT - BAGPIPES**

MLP104
€ 7,90*

BRIGHTDOT CLOCK KIT

Brighten any room or space with this fully Arduino® compatible, ESP32 controlled BrightDot clock kit.

This designer clock features 60 bright RGB LEDs that reflect against the surface on which you mount the clock, hence telling you what time of day it is.

The SMD RGB LEDs are pre-assembled but the rest of the solder work is up to you! Solder the light blocking pads into place and connect the clock to the ESP32 by using the data cable. Then it's time to pick out a nice spot to hang the clock with the invisible mounting option!

Once you've overcome the choice overload of available hanging spots, you can connect the clock to your wireless network and it will sync automatically with the NTP time server. Afterwards, you will be able to control every animation, colour or setting that is available by using the built-in web page which is accessible with your smartphone or PC. Another choice overload situation! Other cool features include the alarm and the LED auto dim for when its bedtime.

ARDUINO® COMPATIBLE

N

10:15
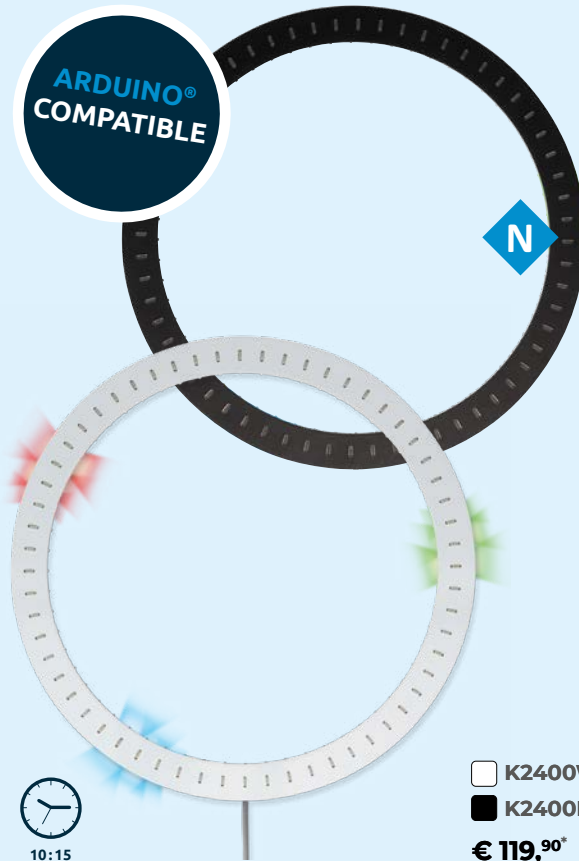
☐ **K2400W**
◼ **K2400B**

€ 119,⁹⁰*
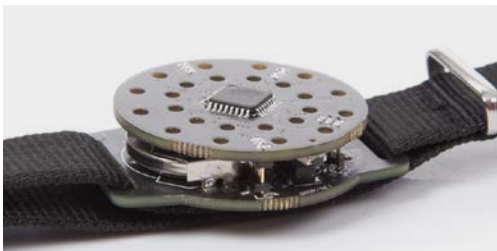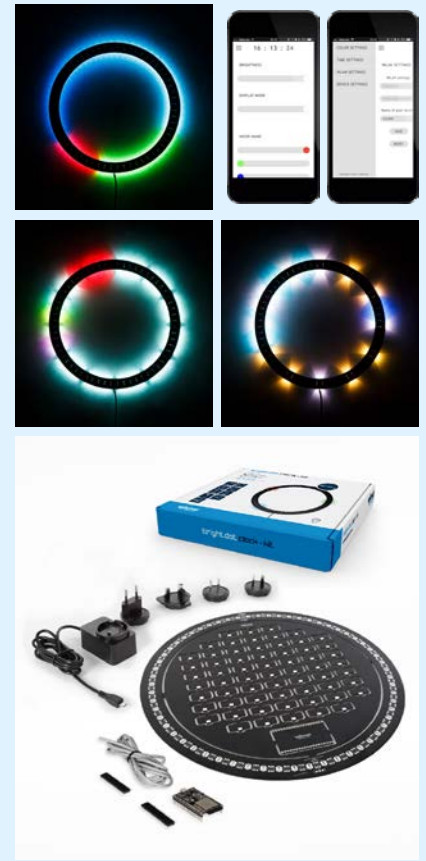
VELLEMAN WATCH

Isn't it about time you made your own electronic watch!?

Make a statement with this neat looking DIY, Arduino compatible watch that fits everyone's wrist. The watch is equipped with 24 amber coloured LEDs that are bright enough to be clearly visible in broad daylight!

The most difficult SMD components are pre-soldered but the rest of the soldering fun is up to you.

The watch is Arduino based and pre-programmed with an addictive reflex game and of course with a basic time view. These functions are triggered by pressing the single multipurpose button and is displayed by using the LEDs. Then again, you can easily re-program it to your liking by using the custom cradle (K1201) or a USB to UART module.

Don't worry about the programming difficulty because you can base your own code on the open-source Arduino library. So feel free to experiment with different time views or invent your own game!

N

E **K1200**
€ 29,⁹⁰*
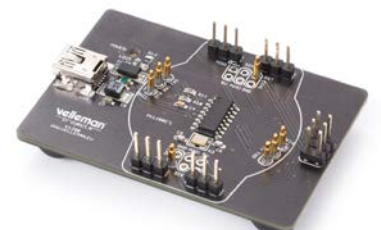
PROGRAMMING CRADLE
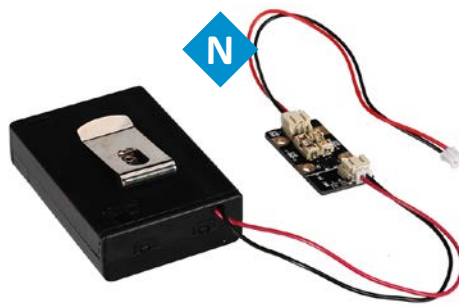**FOR VELLEMAN WATCH**

E **K1201**
€ 34,⁹⁰*

▷ BRIGHTDOT ELECTRONIC WEARABLES

ESP32 WEARABLE DEVELOPMENT BOARD

VMW101
€ 24,90*

BRIGHTDOT POWER & FUSE PACK FOR ELECTRONIC WEARABLES

VMW111
€ 14,90*

**BRIGHTDOT WEARABLE DEVELOPMENT BOARD**

VMW100
€ 44,90*

▷ BRIGHTDOTS?

BrightDots are small and wearable modules with one or more LEDs that need to be controlled by an **Arduino compatible** development board.

The entire collection includes a series of diverse modules with **addressable RGB LEDs** that can be controlled individually. We also developed a unique Arduino compatible VMW101: ESP32 WEARABLE DEVELOPMENT BOARD that you can use to create something bright & wearable that's also smart.

The PCB of each BrightDot module is super thin and includes gold plated contacts with 6 sewing holes of 1.22mm. Also, all models have **backup lines** to ensure that one broken LED does not affect the others.

Every LED is controlled by 3 wires (power, ground & data) and can be connected via these wires to the next LED, creating a big string of LEDs. You can solder these LEDs in electric circuits, or sew them into clothing, onto backpacks, onto shoes, …
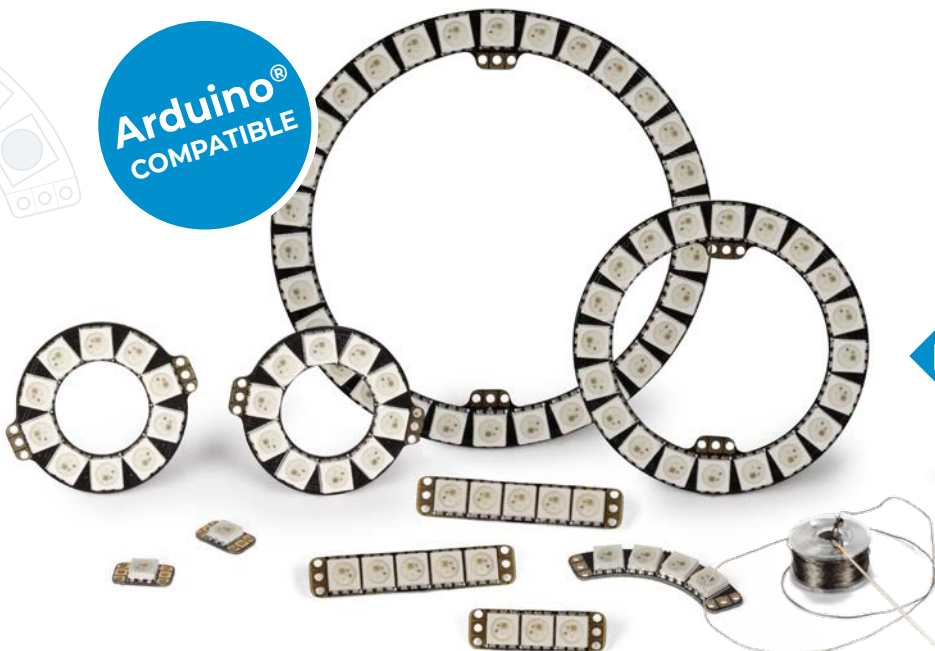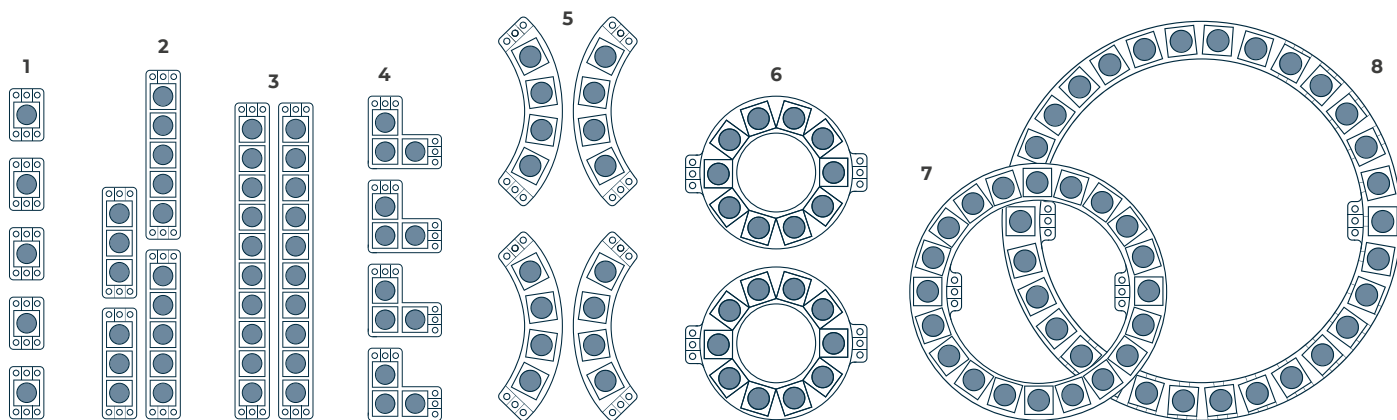
Arduino® COMPATIBLE
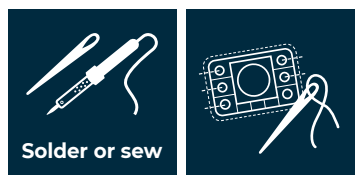
Solder or sew

BRIGHTDOT SEWING KIT FOR ELECTRONIC WEARABLES
· conductive sewing thread (3 ply)
· sewing needle set (20 pcs, 5-9)
· thread fixator (5 ml)

VMW110
€ 19,90*

1. SMALL BRIGHTDOT PACK
↔ 11 MM

C VMW102
€ 11,90*

2. MEDIUM BRIGHTDOT PACK
↔ 22 & 33 MM

C VMW103
€ 14,90*

3. LARGE BRIGHTDOT PACK
↔ 60.5 MM

C VMW104
€ 14,90*

4. CORNER BRIGHTDOT PACK
↔ 14.3 MM

C VMW105
€ 12,90*

5. ARC BRIGHTDOT PACK
↔ 32.5 MM

C VMW106
€ 14,90*

6. SMALL BRIGHTDOT CIRCLE PACK
Ø 32 MM

C VMW107
€ 14,90*

7. MEDIUM BRIGHTDOT CIRCLE PACK
Ø 47 MM

C VMW108
€ 14,90*

8. LARGE BRIGHTDOT CIRCLE PACK
Ø 69 MM

C VMW109
€ 19,90*
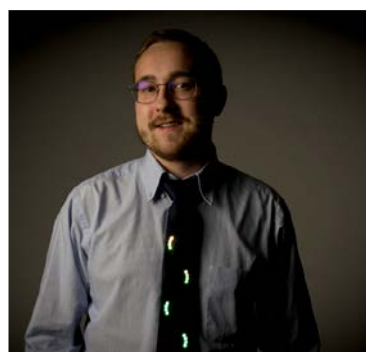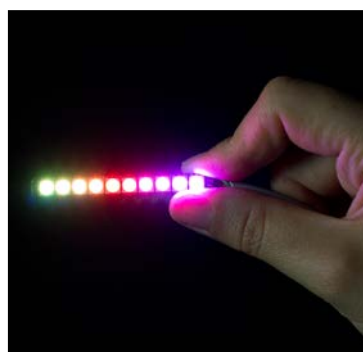
▷ BRIGHTDOT CAP PROJECT

Sun's out, caps out! Take your baseball cap game to the next level and equip it with some shiny trinkets. It's easy enough and you can choose which model of BrightDots you add to the connection.

MATERIAL

Ingredients: a rad cap (preferably in a dark color) · 1 x ESP32 wearable development board (or a similar Arduino compatible development board) · 4 x corner BrightDots (you can use any type and quantity of BrightDots you like, go nuts!) · 1x 3X AA battery pack · 3 x AA batteries · soft electrical wires with a full core · board to wire connector – female – 3pin · board to wire connector – male – 3pin

Tools: USB A to Mini B · stripping pliers · soldering iron · solder · shrink tubes · heat gun or hair dryer · thick sewing needle (something to puncture through the cap)

Discover the complete tutorial on vellemanformakers.com /stories

Enjoy and get out there!

▷ MODULES

DIGITAL PANEL THERMOMETER WITH MIN/MAX READ-OUT

Small multi-purpose LED digital panel thermometer, stores the lowest and highest measured temp until reset.

VM145
€ 36,90*

PANEL COUNTER MODULE

Mini counter. Can count up or down and activate an output when a preset value is reached. With auto reset option.

VM147
€ 34,90*

PANEL THERMOSTAT MODULE

General purpose panel mount thermostat.Usable for heating or cooling purposes, (central heating, airco, incubator,...).

VM148
€ 39,90*

PANEL CLOCK MODULE

VM163
€ 36,90*

RGB LED DIMMER
FOR DIN RAIL

VM150
€ 49,90*

OSCILLOSCOPE AND LOGIC ANALYZER SHIELD
FOR RASPBERRY PI

Do you have a RaspberryPi? Add this shield and you also own a digital storage oscilloscope!

VM205
€ 44,90*

MP3 JUKEBOX MODULE

Plays your .mp3 files from a USB memory stick to AUDIO OUT. Playback to any domestic or car (radio), active speakers, mixing panel etc.

VM202N
€ 24,90*

START-STOP TIMER (1S - 60H)

This timer has a wide timing range from 1 s up to 60 h and uses an animated indication.

VM141
€ 20,90*

UNIVERSAL TIMER MODULE
WITH USB INTERFACE

If the built-in modes or delays do not suit your application, you can tailor them to your needs using the supplied PC software.

VM206
€ 34,90*

1S - 60H PULSE-PAUSE TIMER

VM188
€ 22,90*

USB PIC® PROGRAMMER

This PICKit™2 Development Programmer is very versatile. It features on board sockets for many types of PIC® microcontrollers.

VM203
€ 49,90*

INTERVAL TIMER MODULE

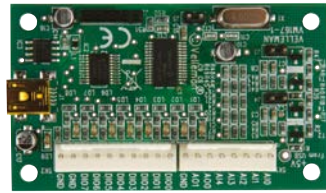General purpose pulse-pause timer, pulse between 0.5 and 5s, pause between 2.5 and 60s.

VM136
€ 9,90*

USB INTERFACE CARD

Easy to use multi-purpose interface board for PC with USB. On-board push buttons and LED's for all digital input and outputs, analog and PWM outputs.
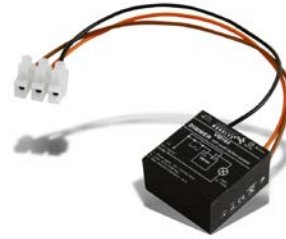
VM110N
€ 64,⁹⁰*

MINI USB INTERFACE BOARD

Small, universal USB powered and controlled I/O board. Add USB interface to existing equipment.

VM167
€ 39,⁹⁰*

MINI DIMMER
WITH PUSHBUTTON CONTROL

Our smallest dimmer! Can be used for conventional bulbs or mains halogen bulbs.

VM164
€ 29,⁹⁰*

THERMOSTAT MODULE
5 - 30°C (41 - 86°F)

Thermostat or controller for various applications, for regulation or Hi/Lo alarm.

VM137
€ 12,⁹⁰*

EXTENDED USB INTERFACE BOARD

33 analogue, digital and PWM inputs and outputs - galvanic isolation from the computer!

VM140
€ 129,⁹⁰*

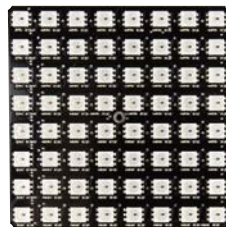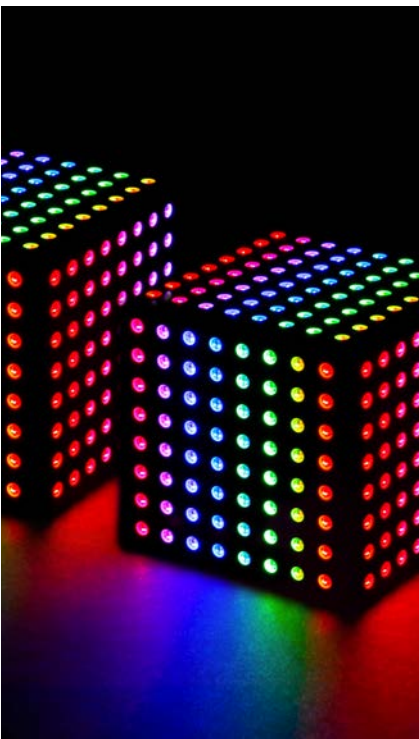## VELLEMAN PROJECT BOX

VPB108
€ 6,⁹⁰*

LOW VOLTAGE LED LIGHT ORGAN

VM186
€ 24,⁹⁰*

LOW VOLTAGE LED DIMMER

VM187
€ 24,⁹⁰*

64 LED RGB MATRIX

Display dazzling, colourful, 2D or 3D, static or animated images and even video straight from your favorite microcontroller platform. Quantity: 1 panel!

VM207
€ 44,⁹⁰*

12V CAR BATTERY MONITOR

VM189
€ 9,⁹⁰*

RGB POWER SLAVE MODULE 3 X 4A

Multiply the output power of your Velleman LED controller! VM146, VM150, VM151, VM152, VM161, VM162, VM168, CHLSC1, ...

VM169
€ 39,⁹⁰*

RGB LED CONTROLLER
RF VERSION

VM192RF is a radio remote controlled RGB driver for 12 or 24VDC led strips. It allows you to set a colour manually or loop through all colours automatically, with 4 selectable fading speeds.

VM192RF
€ 48,⁹⁰*

2-CHANNEL RF REMOTE CONTROL SET

Compact universal receiver module featuring 2 toggle or pulse outputs with timer. This receiver can store up to 31 transmitters. More than 1.000.000.000 unique codes.

VM130N
€ 54,-*

2-CHANNEL REMOTE CONTROL TRANSMITTER

Use this compact transmitter in combination with a universal receiver like the VM130N. This version is a redesign of the original remote control (VM130) and features an extra LED flashlight function.

VM130TN
€ 19,⁹⁰*

EARTH LISTENER

Ever wondered how good the air quality is in your living room? Or do you need proof of why you fall asleep in a non-ventilated meeting room after 3 hours? Look no further! This DIY experimental kit has all the answers! The Earth Listener is an Arduino based sensor device that reads multiple environmental values to indicate the air quality. This kit is assembled in 15 minutes and you don't need a soldering iron! Just connect the parts and wires, put everything in the case and connect it to a 5V USB socket. The Mega development board is pre-programmed and shows **eCO2, TVOC (particles in the air), barometric pressure, temperature and humidity values** onto the TFT touchscreen. To top thing off, the Earth Listener also contains a lightning detection sensor.

WOOD • VM211
TRANSPARENT • VM211SE
€ 149,⁹⁰*

USE
STEM
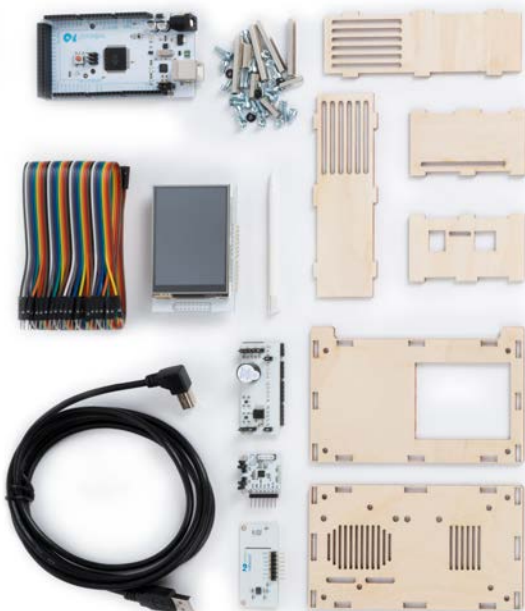
MINI PIC-PLC APPLICATION MODULE

Create your own microcontroller project, without the need to develop hardware.

This module has all you need. 4 inputs, 5 outputs, free to use LED and buzzer.

VM142
€ 29,⁹⁰*

4-CHANNEL RF REMOTE CONTROL SET

Can be used as remote receiver or codelock security receiver. Works with Velleman: VM160T hand-held transmitter (included)! · VM160DT desktop transmitter (not for USA)

VM160
€ 68,⁹⁰*

4-CHANNEL RF TRANSMITTER

Hand held remote control and codelock transmitter. 4 channels under your thumb!

VM160T
€ 29,⁹⁰*

4 CHANNEL IR TRANSMITTER

This transmitter supports the following Velleman products: VM8095: MP3 player board, K8095: MP3 player kit, K8050: 15-channel IR receiver, MK161: 2-channel IR receiver, VM122: 15-channel IR receiver, VM192IR: RGB led controller/-dimmer without IR remote control
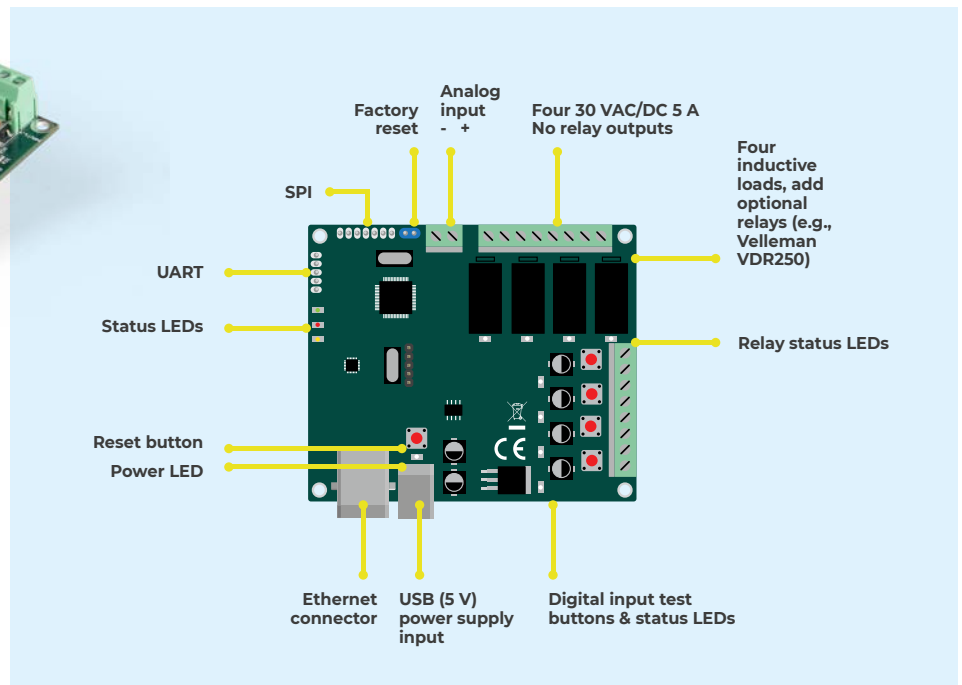
VM191
€ 24,⁹⁰*

ETHERNET RELAY CARD

VM204 is an Ethernet controlled board with 4 relay outputs, 4 digital inputs and 1 analogue input. It can send e-mail notifications when the status of an input changes and features an embedded webserver. Free apps are available for Android® and iOS®.

VM204
€ 89,-*

Factory reset

Analog input - +

Four 30 VAC/DC 5 A No relay outputs

SPI

Four inductive loads, add optional relays (e.g., Velleman VDR250)

UART

Status LEDs

Relay status LEDs

Reset button

Power LED

Ethernet connector

USB (5 V) power supply input

Digital input test buttons & status LEDs

ETHERNET RELAY CARD

Control up to 8 relays via internet.

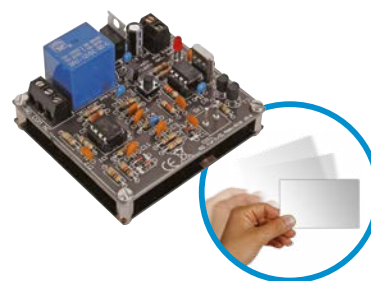The card simply connects to your (wireless) router by means of a standard network cable.

VM201
€ 149,⁹⁰*

10-CHANNEL 12 VDC LIGHT EFFECT GENERATOR

This kit has 10 outputs (12V/400mA) to control cold-cathode fluorescent lamps, light bulbs, LEDs and "solid state" relays, ...
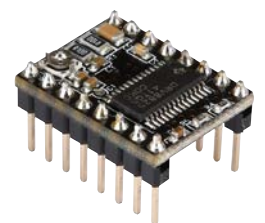
VM120
€ 49,⁹⁰*

PROXIMITY CARD READER

store up to 25 tags · excellent security: 64-bit coded · Unlimited # of tags in low-security mode · two tags supplied (card-type)
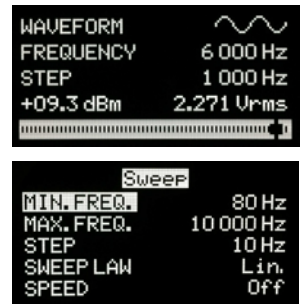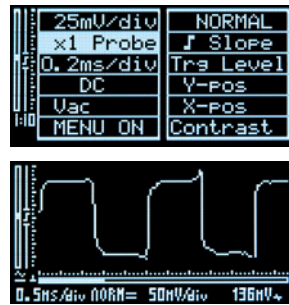
VM179
€ 39,⁹⁰*

STEPPER DRIVER BOARD

Control a bipolar stepper motor in a simple way.

VM8400DB
€ 11,⁹⁰*

▷ INSTRUMENTS

HANDHELD OSCILLOSCOPE

The HPS140MK2 handheld oscilloscope still holds the same power as its predecessor, the HPS140, but in a new and modern design.

Although small in size, this oscilloscope packs 40 MS/s in real time and its sensitivity can go as low as 0.1 mV. It also has a full automatic measuring system but can be operated manually if preferred.

40 Mega samples/sec in real time · bandwidth up to 10 MHz · full auto range option · sensitivity down to 0.1 mV · signal markers for amplitude and time · memory hold function · direct audio power measurement

HPS140MK2
€ 149,⁹⁰*

1 MHZ POCKET FUNCTION GENERATOR

Working a lot on location? Then you need a complete function generator in pocket format so you can measure test signals whenever, wherever!

Set the output voltage or frequency and select a signal waveform by using the on screen menu. Three waveforms can be selected and a powerful sweep function is also included, check out more features below!

DDS type generator (Direct Digital Synthesis) · sweep function with bi-direction option · OLED screen · operates on 4 x 1.5V AAA batteries (not included) · signature white back casing

HPG1MK2
€ 139,⁰⁰*

MINI PC SCOPE

Oscilloscopes are expensive and complicated instruments? Not this one!
This small and easy to use 1 channel oscilloscope has all the features of a full blown oscilloscope. Complete with instructions (download), test leads and software (download) and it comes in a design enclosure.

test leads · software download · USB cable · design enclosure

PCSU01
€ 59,⁹⁰*

USB FUNCTION GENERATOR

The new PC USB miniature function generator is simple to use and has a frequency range of up to 1 MHz! This nifty measuring instrument can generate sine, square and triangle waveforms, and it has a DAC resolution of 10 bits. To top things off, it has an output of 0.2 Vpp to 10 Vpp.

Download the dedicated Windows® software and control the various signals. Among other things, the software includes a handy automated wave sequence generator.

dedicated Windows® software to control the various signals (free download) · software includes an automated wave sequence generator · design enclosure · test leads · free software download · USB cable

PCGU01
€ 64,⁹⁰*

MINI 4 CHANNEL SIGNAL RECORDER

Record DC or slow moving signals over very long periods with this 4 channel signal recorder. Signals are instantly displayed on your PC screen using an analogue or DVM display and all your measurements are automatically stored on your hard disk for further processing.

Thanks to the USB connection no power supply is necessary and installation is easy and straightforward!

records DC signals or slow moving signals over long periods · automatic measurement storage · easy to use mini clips · USB connection · USB cable included · instant signal display (analogue or DVM display) · software for download (includes demo)

PCRU01
€ 59,⁹⁰*

COMPONENT TEST OPTION
FOR HANDHELD OSCILLOSCOPE

Connect this easy to use component tester to your handheld oscilloscope (HPS140MK2) and receive all useful information about resistors, transistors, diodes and more, including their pin out identification. · a single button test · a test indicator · auto shutdown · shows pin layout · handheld oscillopscope (HPS140mk2) needed (not included) · only compatible with the HPS140mk2 (not included) · battery included · component analyzer with automatic pin out identification

HPS141
€ 49,⁹⁵*

PROTECTIVE POUCH
FOR VELLEMAN INSTRUMENTS

This pouch fits both handheld oscilloscopes HPS140MK2: HANDHELD OSCILLOSCOPE and the HPG1(mk2) instruments, and still leaves room for your measuring probes!
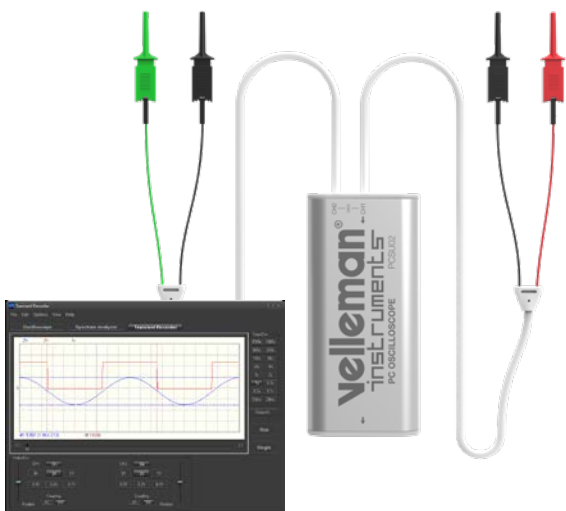
HPSP1
€ 12,⁹⁰*

MEASURING PROBE
FOR VELLEMAN INSTRUMENTS

Insulated scope probe with a bandwith of 60 MHz that is compatible with all Velleman Instruments.

complete probe set · safety: conform with IEC-1010 cat II · attenuation: 1:1 or 1:10

HPSPR1
€ 19,⁹⁰*

MINI 2 CHANNEL USB PC SCOPE

Oscilloscopes are expensive and complicated instruments? Not this one!

This small and easy to use 2 channel oscilloscope has all the features of a full blown oscilloscope and it also has a bandwidth of 500 kHz ±3 dB!

Complete with instructions (download), test leads and software (download) and it comes in a design enclosure.

test leads · software download · USB cable included · design enclosure

PCSU02
€ 79,⁹⁰*
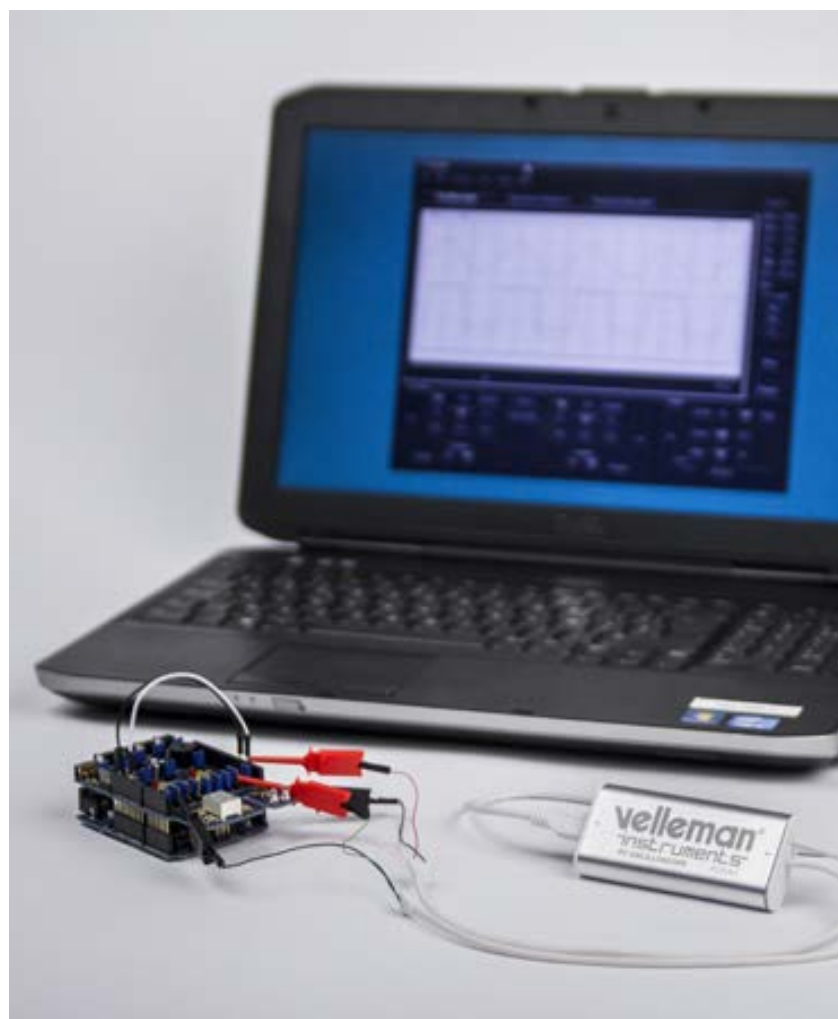
USB PC OSCILLOSCOPE AND SIGNAL GENERATOR

function generator: crystal-based stability · standard waveforms: sine, square and triangle · predefined library waveforms included: sine(x)/x, sweep, ...

oscilloscope: auto set-up function and X10 option · pre-trigger function · readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency... · persistence options: colour graded, variable and infinite

transient recorder: automatic storage of data · automatic recording for more than 1 year · record and display of screens

bode plotter: automated sync between oscilloscope and generator · logarithmic scale option · Volt or dB display scale · phase plot option

spectrum analyser: linear or logarithmic timescale · operating principle: FFT (Fast Fourier Transform) · FFT input channel: CH1 or CH2 · zoom function

in the box: getting started manual · USB PC Scope+generator unit · USB cable

PCSU200
€ 169,⁰⁰*

USB-PC SCOPE + GENERATOR (2 CHANNELS)

A complete USB-powered lab-in-a-box

Feature-packed PcLab2000-LT software for two channel oscilloscope, spectrum analyser, recorder, function generator and bode plotter. With the generator, you can create your own waveforms using the integrated signal wave editor. For automated measurements, it is even possible to generate wave sequences, using file or computer RS232 input.

function generator: crystal-based stability · standard waveforms: sine, square and triangle · predefined library waveforms included: sine(x)/x, DCV, sweep...

oscilloscope: auto set-up function and X10 option · pre-trigger function · readouts: true RMS, dBV, dBm, p to p, duty cycle, frequency...

transient recorder: automatic storage of data · automatic recording for more than 1 year · record and display of screens

bode plotter: automated sync between oscilloscope and generator · logatithmic scale option · Volt or dB display scale · phase plot option

spectrum analyser: linear or logarithmic timescale · operating principle: FFT (Fast Fourier Transform) · FFT input channel: CH1 or CH2 · zoom function

in the box: getting started manual · USB PC scope + generator unit · USB cable · software on CD · 1 x 60 MHz scope probe · BNC adapter, BNC male to RCA female

PCSGU250
€ 199,⁰⁰*

2-CHANNEL USB PC OSCILLOSCOPE

The PCSU1000 digital storage oscilloscope uses the power of your PC to visualize electrical signals. Its high sensitive display resolution, down to 0.15mV, combined with a high bandwidth and a sampling frequency of up to 1GHz are giving this unit all the power you need.

The USB connection makes this unit a snap to set-up, no external power required! In the field measurements using a lap-top computer have never been this easy.

This scope comes in a stylish vertical space saving design.

Powerful software will fulfill all your needs, but for those who like a challenge; a DLL is supplied, which allows you to create your own application.

oscilloscope: time base : 20ns to 100ms per division · trigger source: CH1, CH2, EXT or free run · trigger edge : rising or falling · trigger level : full-screen adjustable · step interpolation : linear or smoothed · markers for : voltage and time/frequency · input range : 5mV to 2V/division · input sensitivity: 0.15mV display resolution · auto set-up function and X10 option · pre-trigger function · readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency... · record length: 4K samples / channel · real time sampling frequency: 1.25kHz to 50MHz · sampling frequency for Repetitive signals: 1GHz

spectrum analyser: frequency range : 0 .. 1.2kHz to 25MHz · linear or logarithmic timescale · operating principle : FFT (Fast Fourier Transform) · FFT resolution : 2048 lines · FFT input channel : CH1 or CH2 · zoom function · markers for amplitude and frequency

transient recorder: timescale: 20ms/Div to 2000s/Div · max. record time: 9.4hour/screen · automatic storage of data · automatic recording for more than 1 year · max. number of samples : 100/s · min. number of samples : 1 sample/20s · markers for time and amplitude · record and display of screens

PCSU1000
€ 249,⁰⁰*

▷ JUMPER WIRES & BREAD BOARDS

40 PINS 30 CM MALE TO MALE JUMPER WIRE
(FLAT CABLE)
VMA413
€ 4,⁹⁰*

40 PINS 30 CM MALE TO FEMALE JUMPER WIRE
(FLAT CABLE)
VMA414
€ 4,⁹⁰*

40 PINS 30 CM FEMALE TO FEMALE JUMPER WIRE
(FLAT CABLE)
VMA415
€ 4,⁹⁰*

40 PINS 15 CM MALE TO MALE JUMPER WIRE
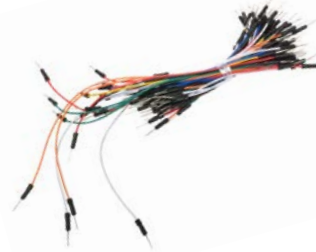(FLAT CABLE)
VMA427
€ 2,⁹⁰*

40 PINS 15 CM MALE TO FEMALE JUMPER WIRE
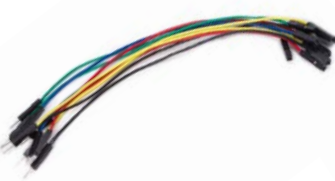(FLAT CABLE)
VMA428
€ 2,⁹⁰*

40 PINS 15 CM FEMALE TO FEMALE JUMPER WIRE
(FLAT CABLE)
VMA429
€ 2,⁹⁰*

SET OF AWG JUMPER WIRES - ONE PIN
MALE TO MALE (65 PCS)
WJW009N
€ 3,⁹⁰*

SET OF AWG BREADBOARD JUMPER WIRES - ONE PIN
MALE TO MALE - 5.9" - 10 PCS
WJW010
€ 1,⁹⁰*

SET OF AWG BREADBOARD JUMPER WIRES - ONE PIN
MALE TO FEMALE - 5.9" - 10 PCS
WJW011
€ 1,⁹⁰*

SET OF AWG BREADBOARD JUMPER WIRES - ONE PIN
FEMALE TO FEMALE - 5.9" - 10 PCS
WJW012
€ 1,⁹⁰*

ASSORTED JUMPER WIRE SET
(140 PCS)
WJW140
€ 7,⁹⁰*

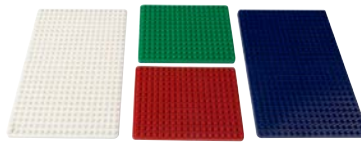**ASSORTED JUMPER WIRE SET**
(140PCS)
WJW70
€ 8,⁹⁰*
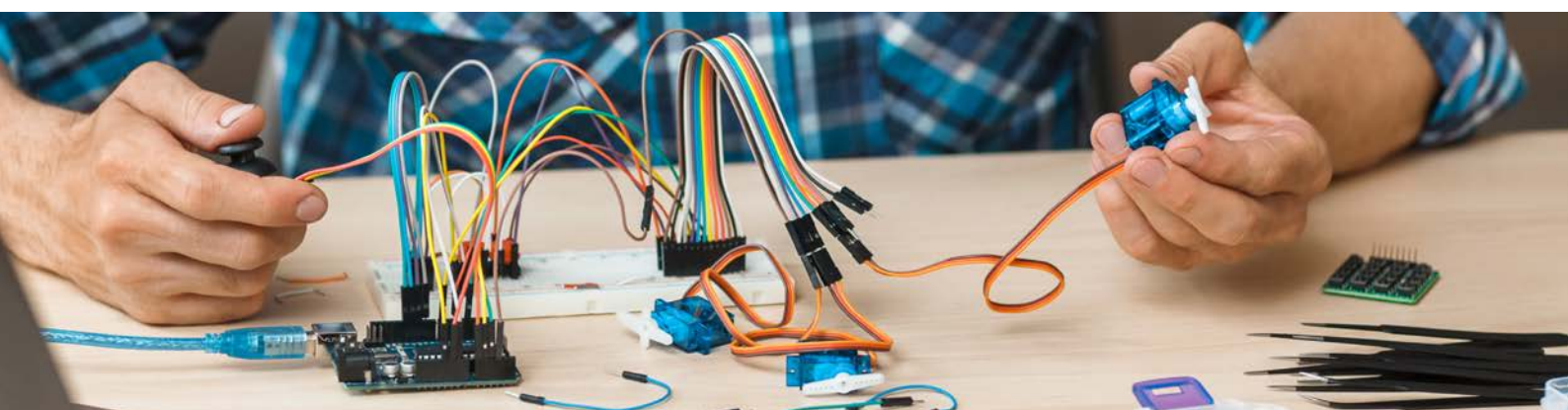
SET OF MINI BREADBOARDS
170 TIE-POINTS - 4 PCS
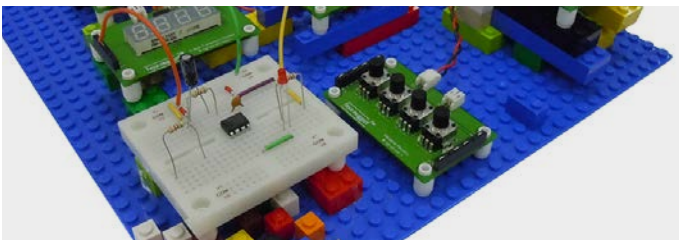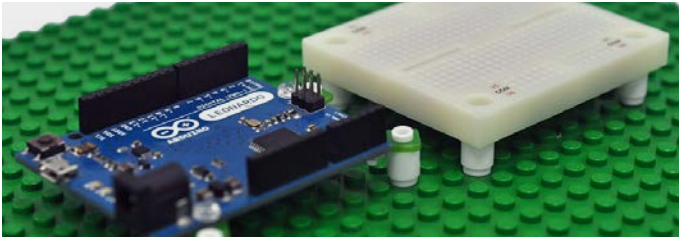
VTBB8
€ 5,90*

SET OF MINI BREADBOARDS
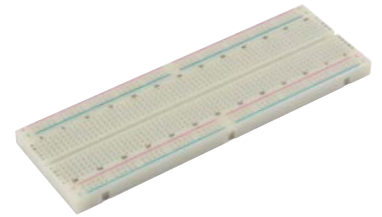55 TIE-POINTS - 5 PCS

VTBB6
€ 3,50*

SET OF PLATES
FOR MINI BREADBOARDS - 4 PCS

VTBB7
€ 3,90*

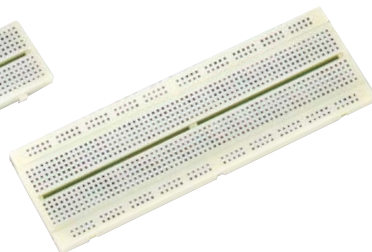**HIGH-QUALITY BREADBOARD**
400 HOLES

VTBB3
€ 2,90*

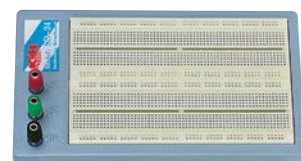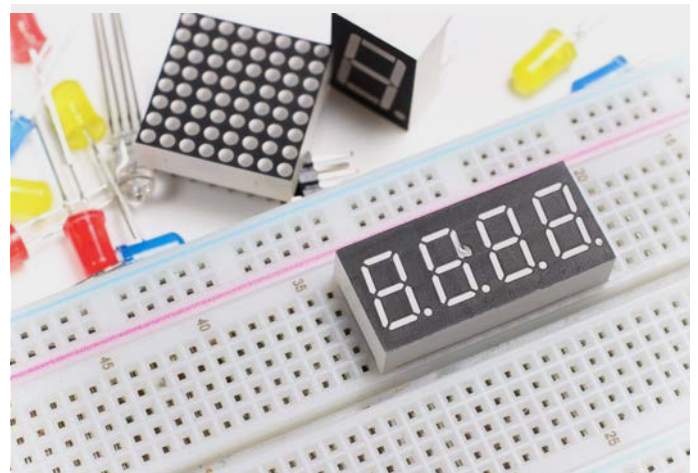**HIGH-QUALITY BREADBOARD ARDUINO**
360 HOLES

VTBB9
€ 9,90*

SOLDERLESS BREADBOARD
830 HOLES

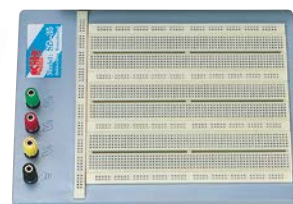VTBB2N
€ 4,90*

HIGH-Q BREADBOARD
640 HOLES

SD10N
€ 5,90*

HIGH-Q BREADBOARD
840 HOLES

SD12N
€ 8,90*

HIGH-Q BREADBOARD
1680 HOLES

SD24N
€ 21,90*

HIGH-Q BREADBOARD
1680 HOLES

VTBB4
€ 19,90*

HIGH-Q BREADBOARD
2420 HOLES

SD35N
€ 29,90*

HIGH-Q BREADBOARD
2420 HOLES

VTBB5
€ 29,90*

▷ COMPONENT SETS

CERAMIC CAPACITOR SET
224 PCS - 10PF TO 220NF

21 x: 10pF, 100pF, 1nF, 10nF,
100nF ; 14 x: 22pF, 47pF,
220pF, 470pF, 2.2nF, 4.7nF,
22nF, 47nF ; 7 x: 220nF

K/CAP1
€ 14,⁹⁰*

ELECTROLYTIC CAPACITOR SET
120 PCS - 1μF TO 1000μF

15 x: 1μF/50V, 2.2μF/50V, 4.7μF/50V,
10μF/50V, 22μF/50V, 47μF/25V,
100μF/25V ; 5 x: 220μF/25V,
470μF/25V, 1000μF/25V

K/CAP2
€ 14,⁹⁰*

E-12 SERIES RESISTOR SET
610 PCS - 10E TO 1M

1/4W. E12-series. 10 pcs per value.
61 values (from 10E to 1M).

K/RES-E12
€ 11,⁹⁰*

E3-SERIES RESISTOR SET
480 PCS - 10E TO 1M

1/4W. E3-series. 30 pcs per value.
16 values (from 10E to 1M).

K/RES-E3
€ 9,⁹⁰*

SMD E-12 RESISTOR SET
1700 PCS - 1,0R TO 10M - 0603

These surface-mount (SMD)
resistors can be used for design,
production and maintenance
of electronic equipment.

K/RES0603
€ 12,⁹⁰*

TRANSISTOR SET
100 PCS - 8 VALUES

BC547B: ± 28 / BC557B:
± 28 / BC337: ± 12 / BC327:
± 12 / BC517: ± 6 / C516: ± 6 /
BD139: ± 4 / BD140: ± 4

K/TRANS1
€ 9,⁹⁰*

DIODE SET
120 PCS

For service, hobby, education, ...

K/DIODE1
€ 8,⁹⁰*

MIXED LED SET
80 PCS - 2 SIZES - 3 COLOURS

15 x: 3mm green, 4.0mcd /
20 x: 3mm red, 1.0mcd / 15 x: 5mm
green, 6.0mcd / 20 x: 5mm red,
2.0mcd / 10 x: 5mm yellow, 3.9mcd

K/LED1
€ 9,⁹⁰*

LED SET
30 PCS - 3.2V - 30 X 3 MM

K/LED30B
€ 6,⁹⁰*

K/LED30W
€ 6,⁹⁰*

RGB CROSSFADING LED SET
5 PCS - 3.1V

K/LED5RGB
€ 3,⁹⁰*

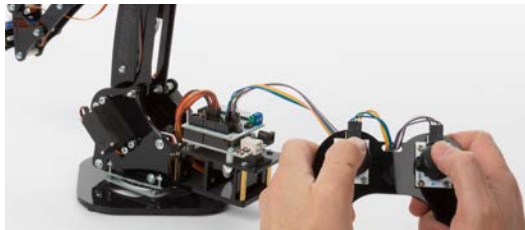## ▷ COMING SOON

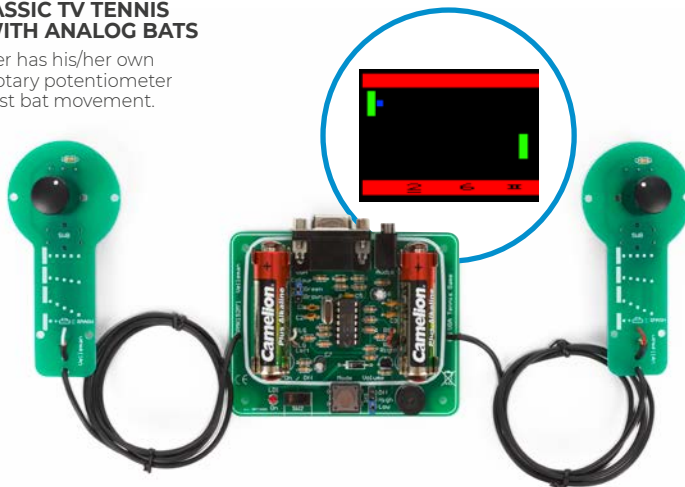### KITS
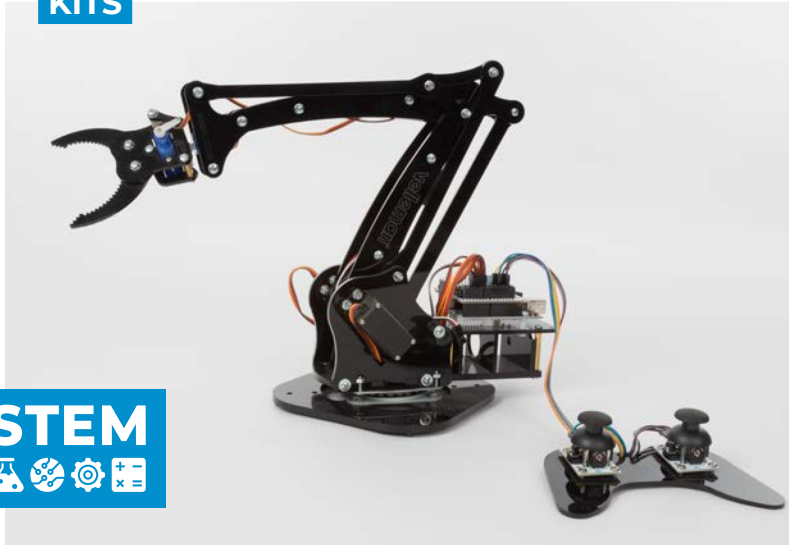
STEM

STEM ROBOT ARM KIT

Assemble and program this fully Arduino powered robot arm! It's great for STEM projects and remote control experiments.

VR800

VGA CLASSIC TV TENNIS GAME WITH ANALOG BATS

Each player has his/her own bat with rotary potentiometer for ultra fast bat movement.

MK192

ONLY 20 PCS AVAILABLE!

NIXIE CLOCK

SPECIAL EDITION WITH WOODEN LASER CUT ENCLOSURE

Enjoy this unique and nostalgic clock with 4 original nixie tubes. This kit comes with a wooden laser cut enclosure that can be personalised. ONLY 20 ARE AVAILABLE!

K8099SE

SETS

VOLTAGE REGULATOR SET

Starter set to build your own voltage regulators; heatsinks, elcos, diodes, screws and resistors are included.

VCS100

MOSFET SET

Switch and amplify your electronic signals in high power applications with this set! IT includes the IRFZ44N, IRF540N, IRFP460, FQP47P06, IRL540, IRLZ44, NTP60N06L, FQP27P06, a fast speed bipolar transistor insulated gate IGB 17A and an octal bus transceiver with 3-State outputs.

VCS103

TRANSISTOR AND TRIMMER SET

Amplify or switch electronic signals and electrical power with these transistors. Also included are potentiometers which you can use as adjustable voltage dividers.

VCS104

LED SET

Multicolored LED set with green, blue, red and white (which is not a color, we know!) LEDs as well as color changing and RGB LEDs. Enjoy!

VCS101

SCREW, NUT, SPACER, WASHER SET

Use this set as a means to connect electronic boards onto objects, development board, shields, etc.

VCS400

BOARD TO WIRE CONNECTOR SET

Max. 30 V - Create your own dupont wires with this set! Choose from 1, 2, 3 2x2, 2x3 or 2x4 connectors and make those cables work.

VCS202

INTERGRATED CIRCUITS SET

This set includes NE555 timers, LM324 apliefiers, 8-bit shift registers, quadruple bus buffer gates, L293D motor drivers and ULN2003 & ULN2803 darlington transistor arrays. All breadboard compatible!

VCS102

PLUG, JACK, RCA, BNC, ... TO SCREW TERMINAL SET

DC PLUG, Audio jack, RCA male & female, BNC male & female, and more connectors are included.

VCS204

CONNECTOR SET FOR LOW VOLTAGE APPLICATIONS (MAX. 30V)

Assemble your own connecters with this set. It includes different types of connectors and heating tubes.

VCS200

PUSH BUTTON AND SWITCH SET

Buttons galore! Different sizes, colors and shapes, what more do you need in life?

VCS300

CABLE END SLEEVES SET 800 PCS

VCS203

SMART HOME

DIN-RAIL WLAN RELAY CARD

Remotely control any appliance in your house that is connected to your electrical cabinet by installing this new and improved module! It can be controlled by your smartphone and has 4 relays and 2 transistor outputs.

VM208

DIN-RAIL EXTENSION RELAY CARD

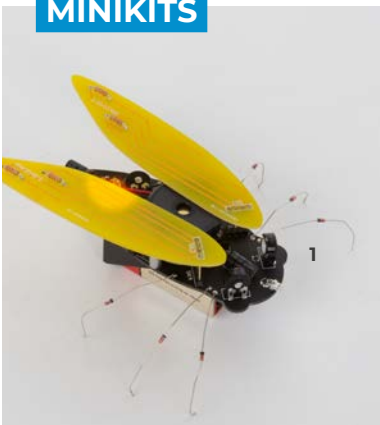Upgrade your DIN-rail relay card (VM208) with 8 extra relays of 16A @ 230VAC.

VM208EX

MAGIC MIRROR

View useful information like the weather, live news messages, your daily schedule, appointment updates, time and much, much more on this Rasberry Pi based smart mirror. It's gesture controlled and has a practical auto-off display.

VR800

MINIKITS

1. ELECTRONIC CICADA

Ring in the summer with this beautiful electronic cicada soldering kit.

The cicada consists out of three PCBs to mimic the shape of this popular insect as best as possible. The body is mat black and the two wings are shiny yellow with golden tracks. To finish off the design, you can use the included components to add legs to the cicada. This way, it will have a real-life look!

MK204

2. THE MONARCH

Solder kits don't get any more beautiful than Boldport's butterfly! This wonderful bug flashes its red LEDs when its antennae touch, mimicing the movement of the wings. · *Designed by Boldport.*

MK208

BOLDPORT STUDIO

3. PANDA PLANT GUARDIAN

This panda has gold plated contact points or probes that can measure the humidity of a plant's soil. It's very easy to assemble and once finished, you can simply stick it into the soil of your favorite houseplant. The bright RGB LEDs that mimic the panda's eyes will light up every 30 seconds to show the status of the soil. The soil is either too wet, too dry or perfect.

MK201

4. SMD HAUNTING BAT

Get into the Halloween spirit with this SMD solder kit that's shaped like a vampire bat. The orange LEDs will light up in reaction to loud sounds and you can hang it up by its claws for an extra spooky effect.

MK203

5. THE GENT

A mesmerizing chameleon that lights up in the dark. · *Designed by Boldport.*

MK205

6. THE CONEHEAD

The Conehead is an audio circuit that synthesizes the sound of a cricket. Its chirping frequency depends on the amount of light that it 'sees'. · *Designed by Boldport.*

MK207

7. THE LADY

You won't be able to keep your eyes off this pretty little lady bug who's special LEDs shine a diffused red. · *Designed by Boldport.*
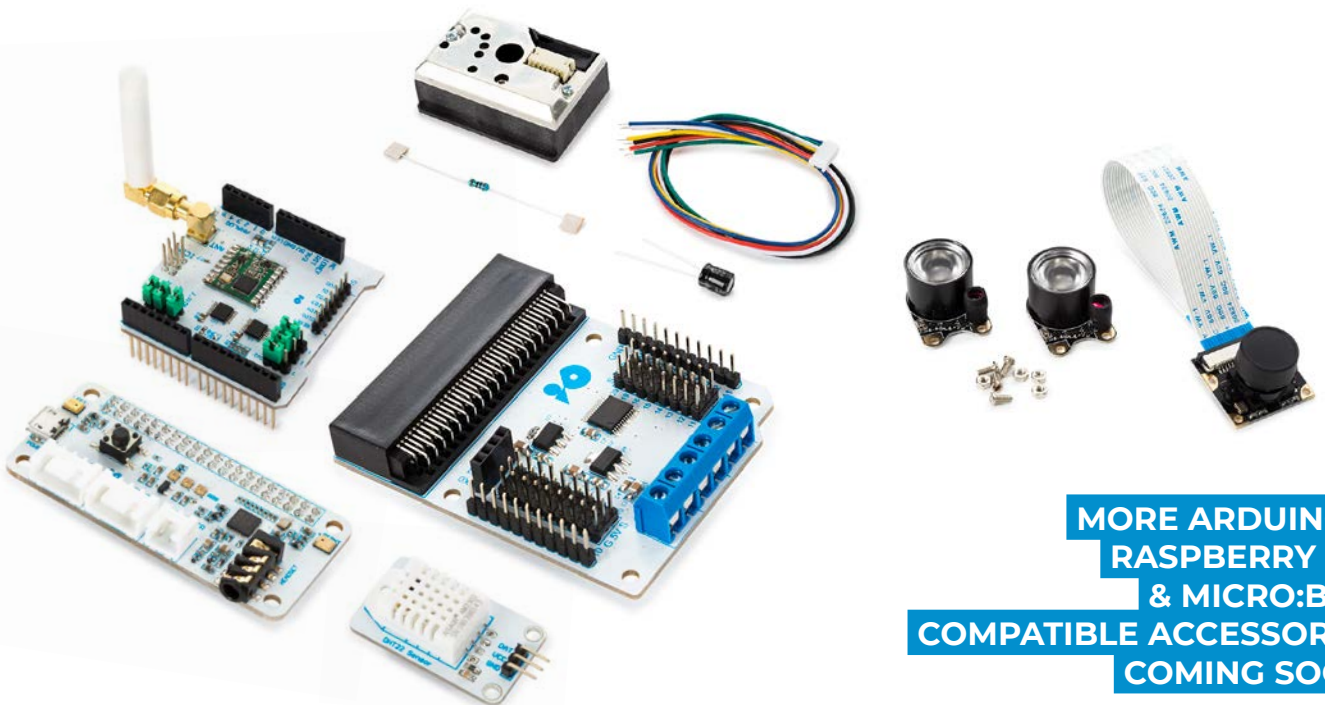
MK206

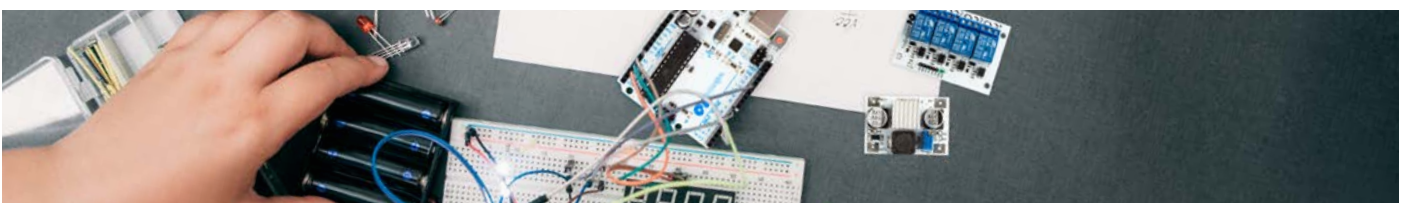# RASPBERRY PI® 4

Raspberry Pi

RASPBERRY PI® 4 2GB
STARTER KIT

Get your RaspberryPi 4 projects going with this practical starter kit. Among other things, this kit includes a RaspberryPi 4 (2GB version) and a special cooling case that makes a 30°C difference!

PI4SET

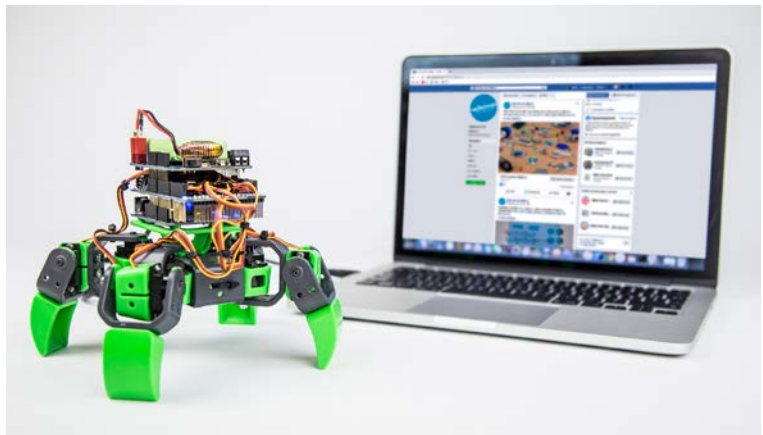## MORE ARDUINO®, RASPBERRY PI® & MICRO:BIT® COMPATIBLE ACCESSORIES COMING SOON!

▷ **NOTES**

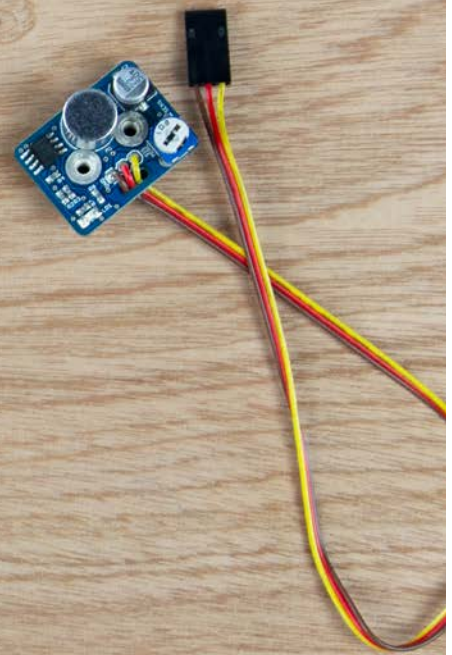## FOLLOW US
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