ARDUINO

ARDUINO, YOUR GATEWAY TO A WORLD FULL OF INVENTIONS

CATALOGUE OF PRODUCTS

WELCOME TO ARDUINO!

ARDUINO® introduces electronics and programming through fun, hands-on projects. As an Arduino user, you become part of a worldwide community that shares ideas, tips, and tricks online at arduino.cc and all over the web.

When you buy an Arduino, you're benefiting from the experience of a team that's been supporting the world's biggest open-source hardware community for over ten years.
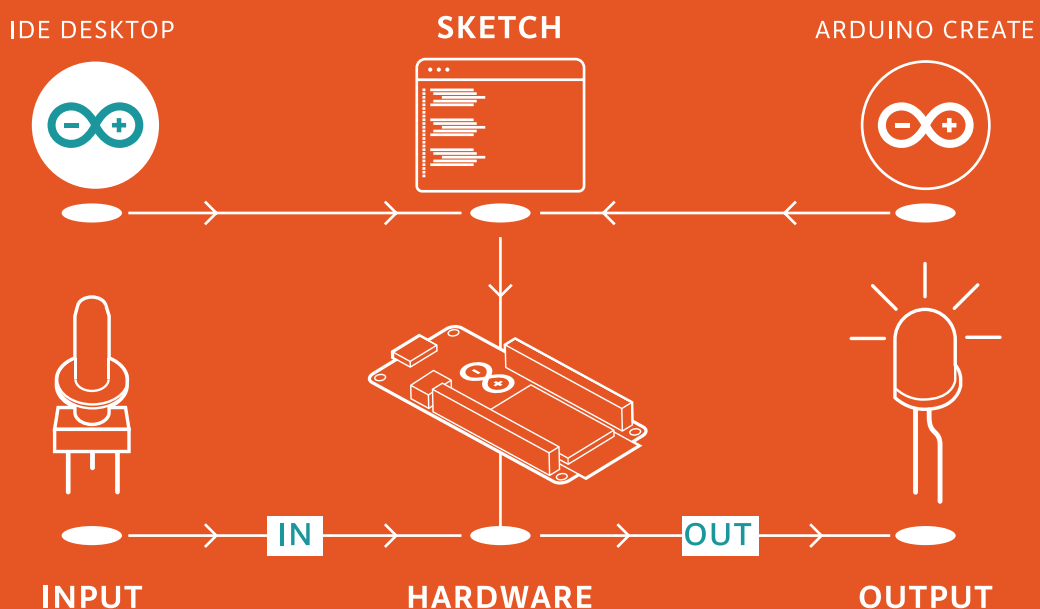
ARDUINO.CC

ARDUINO

WHAT IS ARDUINO

Arduino is the world's leading open-source hardware, software, and content platform, with a worldwide community of over 30 million active users. It has powered thousands of projects over the years, from everyday objects to complex scientific instruments. This success has been made possible by combining a wide variety of electronic boards, easy-to-use tools, a collaborative community, and practical project examples to suit all levels.

Arduino is a popular tool for IoT product creation, as well as one of the most successful programs for STEAM education. Hundreds of thousands of designers, engineers, developers, makers, and students around the world are using Arduino to innovate in automotive, robotics, farming, smart devices, music, games, toys, and countless other applications.
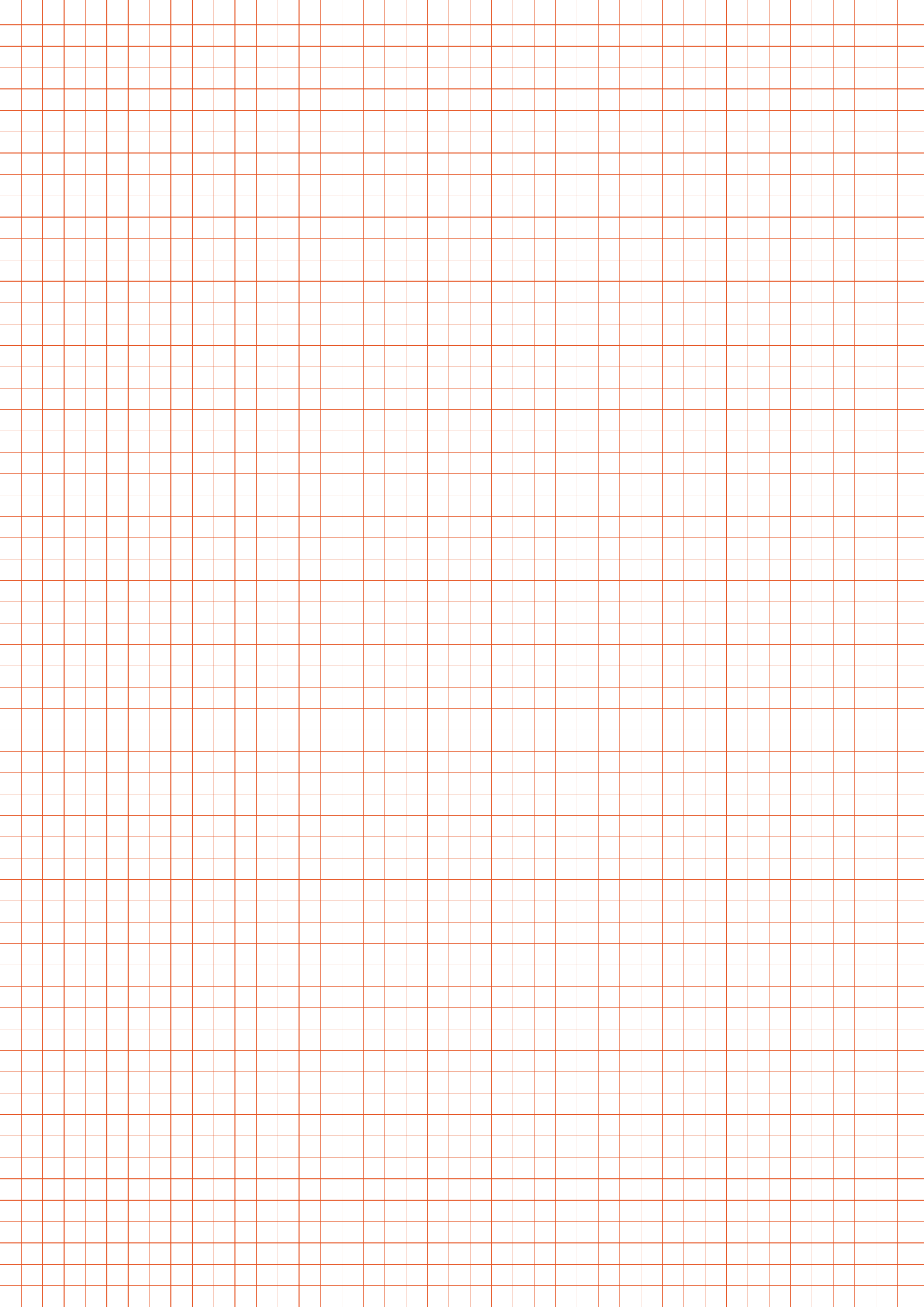
Arduino is widely adopted by startups and companies to simplify the IoT development, from prototype to production. This has been made possible by a wide variety of boards for each communication protocol, including WiFi, Bluetooth, LoRa, Sigfox, and GSM to name a few. Moreover, thanks to its passionate community, Arduino has produced comprehensive content to make project-based learning as easy and engaging as possible.
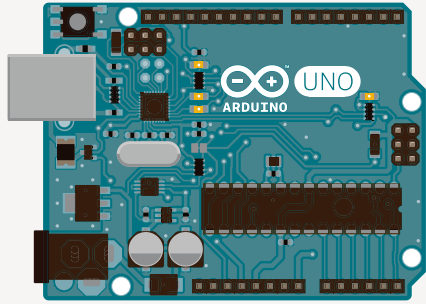
IDE DESKTOP   SKETCH   ARDUINO CREATE

IN   OUT

INPUT   HARDWARE   OUTPUT

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CTC 101   ENGINEERING KIT

LEGEND   BOARDS   SHIELDS & CARRIERS   KIT   MODULES   ACCESSORIES

UNO REV 3

YOUR FIRST ARDUINO BOARD: THE BEST WAY GET

TO STARTED WITH ELECTRONICS AND CODING.

ARDUINO UNO is the ideal board for getting started with electronics, through fun and engaging hands-on projects. This board is your entry to the unique Arduino experience: great for learning the basics of how sensors and actuators work, and an essential tool for project prototyping. Arduino Uno is the most used and documented board in the world. Thanks to the lively and helpful community surrounding the Arduino Uno, advice and inspiration are easy to find.

Arduino Uno is a microcontroller board based on the ATmega328P, an 8-bit microcontroller with 32 KB of Flash memory and 2 KB of RAM. 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.

COD:A000066

STORE.ARDUINO.CC/ARDUINO-UNO-REV3

TECH SPECS:

MICROCONTROLLER MICROCHIP AT-MEGA328P

OPERATING VOLTAGE 5V

USB STANDARD TYPE B

DIGITAL I/O PINS 14

PWM DIGITAL I/O PINS 6

ANALOG INPUT PINS 6

FLASH MEMORY 32 KB
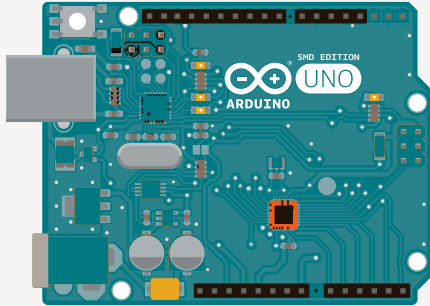
SRAM 2 KB

EEPROM 1 KB

CLOCK SPEED 16 MHZ

UNO SMD REV 3

THE BOARD EVERYBODY GETS STARTED WITH, BASED ON THE ATMEGA328 (SMD)

COD:A000073

STORE.ARDUINO.CC/ARDUINO-UNO-SMD-REV3

The **ARDUINO UNO SMD** R3 is a microcontroller board based on the ATmega328. It has 14 digital input/ output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. 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. The Uno differs from all preceding boards in that it does not use the FTDI USB-to-serial driver chip. Additional features coming with the R3 version are:
- ATmega16U2 instead 8U2 as USB-to-Serial converter.
- 1.0 pinout: added SDA and SCL pins for TWI communication placed near to the AREF pin and two other new pins placed near to the RESET pin, the IOREF that allow the shields to adapt to the voltage provided from the board and the second one is a not connected pin, that is reserved for future purposes.
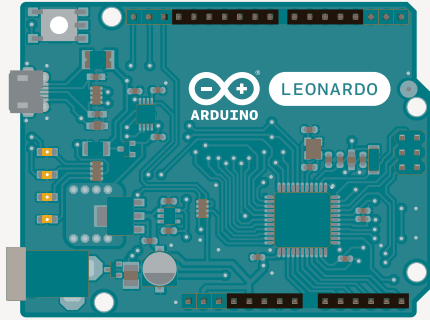- stronger RESET circuit.

"Uno" means "One" in Italian and is named to mark the upcoming release of Arduino 1.0. The Uno and version 1.0 will be the reference versions of Arduino, moving forward. The Uno is the latest in a series of USB Arduino boards, and the reference model for the Arduino platform.

TECH SPECS:

MICROCONTROLLER ATMEGA328		DC CURRENT PER I/O PIN 40 MA
OPERATING VOLTAGE 5V		DC CURRENT FOR 3.3V PIN 50 MA
INPUT VOLTAGE (RECOMMENDED) 7-12V		FLASH MEMORY 32 KB (ATMEGA328) OF
INPUT VOLTAGE (LIMITS) 6-20V		WHICH 0.5 KB USED BY BOOTLOADER
DIGITAL I/O PINS 14 (OF WHICH 6		SRAM 2 KB (ATMEGA328)
PROVIDE PWM OUTPUT)		EEPROM 1 KB (ATMEGA328)
ANALOG INPUT PINS 6		CLOCK SPEED 16 MHZFLASH MEMORY

LEONARDO

SIMILAR TO AN ARDUINO UNO, CAN BE RECOGNIZED BY COMPUTER AS A MOUSE OR KEYBOARD.

The **ARDUINO LEONARDO** is a microcontroller board based on the ATmega32u4 (datasheet). It has 20 digital input/output pins (of which 7 can be used as PWM outputs and 12 as analog inputs), a 16 MHz crystal oscillator, a micro USB connection, a power jack, an ICSP header, and a reset button. 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.

The Leonardo differs from all preceding boards in that the ATmega32u4 has built-in USB communication, eliminating the need for a secondary processor. This allows the Leonardo to appear to a connected computer as a mouse and keyboard, in addition to a virtual (CDC) serial / COM port. It also has other implications for the behavior of the board; these are detailed on the getting started page. Getting Started

COD:A000052/ A000057

STORE.ARDUINO.CC/ARDUINO-LEONARDO

TECH SPECS:

MICROCONTROLLER	ATMEGA32U4	DC CURRENT PER I/O PIN	40 MA
OPERATING VOLTAGE	5V	DC CURRENT FOR 3.3V PIN	50 MA
INPUT VOLTAGE (RECOMMENDED)	7-12V	FLASH MEMORY	32 KB (ATMEGA32U4) OF
INPUT VOLTAGE (LIMITS)	6-20V	WHICH 4 KB USED BY BOOTLOADER	
DIGITAL I/O PINS	20	SRAM	2.5 KB (ATMEGA32U4)
PWM CHANNELS	7	EEPROM	1 KB (ATMEGA32U4)
ANALOG INPUT CHANNELS	12	CLOCK SPEED	16 MHZ

MICRO

THE SMALLEST BOARD OF THE FAMILY, IT'S PER-

FECT TO MAKE EVERYDAY OBJECTS INTERACTIVE.

The **MICRO** is a microcontroller board based on the ATmega32U4 (datasheet), developed in conjunction with Adafruit. It has 20 digital input/output pins (of which 7 can be used as PWM outputs and 12 as analog inputs), a 16 MHz crystal oscillator, a micro USB connection, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a micro USB cable to get started. It has a form factor that enables it to be easily placed on a breadboard.
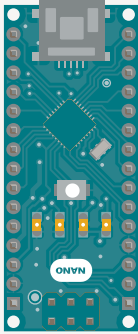
The Micro board is similar to the Arduino Leonardo in that the ATmega32U4 has built-in USB communication, eliminating the need for a secondary processor. This allows the Micro to appear to a connected computer as a mouse and keyboard, in addition to a virtual (CDC) serial / COM port. It also has other implications for the behavior of the board; these are detailed on the getting started page.

COD:A000053

STORE.ARDUINO.CC/ARDUINO-MICRO

TECH SPECS:

MICROCONTROLLER ATMEGA32U4

OPERATING VOLTAGE 5V

INPUT VOLTAGE (RECOMMENDED) 7-12V

INPUT VOLTAGE (LIMIT) 6-20V

DIGITAL I/O PINS 20

PWM CHANNELS 7

ANALOG INPUT CHANNELS 12

DC CURRENT PER I/O PIN 20 MA

DC CURRENT FOR 3.3V PIN 50 MA

FLASH MEMORY 32 KB (ATMEGA32U4) OF WHICH 4 KB USED BY BOOTLOADER

SRAM 2.5 KB (ATMEGA32U4)

EEPROM 1 KB (ATMEGA32U4)

CLOCK SPEED 16 MHZ

LED_BUILTIN 13

NANO

THE ARDUINO NANO IS A COMPACT BOARD SIMILAR TO THE UNO.

The **ARDUINO NANO** is a small, complete, and breadboard-friendly board based on the ATmega328 (Arduino Nano 3.x). It has more or less the same functionality of the Arduino Duemilanove, but in a different package. It lacks only a DC power jack, and works with a Mini-B USB cable instead of a standard one

COD:A000005

STORE.ARDUINO.CC/ARDUINO-NANO

TECH SPECS:

MICROCONTROLLER ATMEGA328	EEPROM 1 KB
ARCHITECTURE AVR	DC CURRENT PER I/O PINS 40 MA
OPERATING VOLTAGE 5 V	(I/O PINS)
FLASH MEMORY 32 KB OF WHICH 2	INPUT VOLTAGE 7-12 V
KB USED BY BOOTLOADER	DIGITAL I/O PINS 22 (6 OF
SRAM 2 KB	WHICH ARE PWM)
CLOCK SPEED 16 MHZ	PWM OUTPUT 6
ANALOG IN PINS 8	

HOLDER TYPE UNO

HOLDER TYPE UNO GUARD YOUR BOARD FROM ACCIDENTAL

DAMAGES AND HELP PREVENTING SCRATCHES.

Don't pay too much attention where to place your UNO-Type and size boards.

The **HOLDER TYPE UNO** will help guard you boards from accidental damages. It fits every UNO sized boards, and you can choose among a number of nice colors.

Use screws to attach the board and use the different colors to tell your board from friends' working with you or the usage, and they also help prevent table scratches.

COD:X000018

STORE.ARDUINO.CC/HOLDER-TYPE-UNO

STARTER KIT

1 PROJECTS BOOK (170 PAGES)

1 ARDUINO UNO REV3

1 USB CABLE

1 BREADBOARD 400 POINTS

70 SOLID CORE JUMPER WIRES

1 EASY-TO-ASSEMBLE WOODEN BASE

1 9V BATTERY SNAP

1 STRANDED JUMPER WIRES (BLACK)

1 STRANDED JUMPER WIRES (RED)

6 PHOTORESISTOR [VT90N2 LDR]

3 POTENTIOMETER 10KOHMS

10 PUSHBUTTONS

1 TEMPERATURE SENSOR [TMP36

1 ALPHANUMERIC LCD (16X2 CHARAC-
TERS)

1 LED (BRIGHT WHITE)

1 LED (RGB)

8 LEDS (RED)

8 LEDS (GREEN)

8 LEDS (YELLOW)

3 LEDS (BLUE)

1 SMALL DC MOTOR 6/9V

1 SMALL SERVO MOTOR

1 PIEZO CAPSULE [PKM17EPP-4001-B0]

1 H-BRIDGE MOTOR DRIVER [L293D]

1 OPTOCOUPLERS [4N35]

1 TILT SENSOR

2 MOSFET TRANSISTORS [IRF520]

5 CAPACITORS 100UF

5 DIODES [1N4007]

3 TRANSPARENT GELS (RED, GREEN,
BLUE)

1 MALE PINS STRIP (40X1)

20 RESISTORS 220 OHM

5 RESISTORS 560 OHM

5 RESISTORS 1K OHM

5 RESISTORS 4.7K OHM

20 RESISTORS 10K OHM

5 RESISTORS 1M OHM

5 RESISTORS 10M OHM

THE ULTIMATE SOLUTION FOR GETTING STARTED WITH ARDUINO!
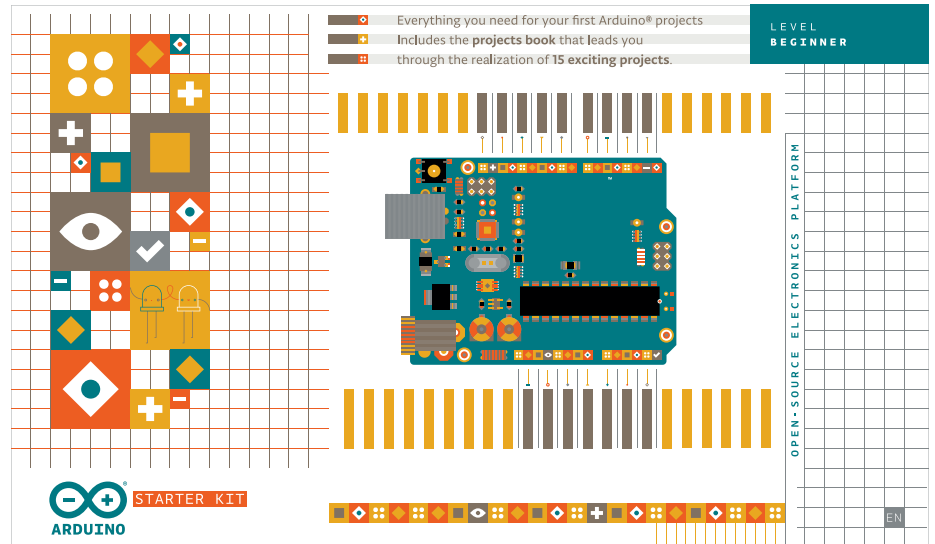
The **ARDUINO STARTER KIT** is the ultimate educational solution for learning how to use the Arduino platform. It contains an Arduino Uno Rev 3 board, a collection of sensors and actuators, and a book that guides the absolute beginners from their very first steps with electronics into the world of interactive and sensing objects thanks to fifteen engaging projects. The Arduino Starter Kit is a great gift for kids ages 9 to 99 and it's available in eight languages, with more translations coming soon!

KIT INCLUDES:

1 ARDUINO UNO BOARD
FULL SET OF COMPONENTS AND
PARTS FOR 15 PROJECTS
1 PROJECT BOOK
IDEAL TO GET STARTED WITH ARDU-
INO
AVAILABLE IN 8 LANGUAGES

KIT INCLUDES:

(ITALIAN, ENGLISH, FRENCH, KOREAN,
GERMAN, CHINESE, SPANISH)

MEGA 2560 REV 3

DESIGNED FOR YOUR MOST AMBITIOUS PROJECTS WHICH REQUIRE ADDITIONAL PINS AND EXTRA MEMORY.

Don't limit your projects, think big, think MEGA!

The **ARDUINO MEGA 2560** has been designed with bigger and more ambitious projects in mind. The large number of analog and digital pins, together with a larger memory makes it ideal for devices like 3D printers and other demanding applications.
The Mega 2560 is a board based on the 8-bit AVR microcontroller ATmega2560. It has 54 digital input/ output pins (15 of which can be used as PWM outputs), 16 analog inputs, 4 UARTs (i.e., hardware serial ports). It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable. The Mega 2560 board is compatible with most shields designed for the Arduino Uno.
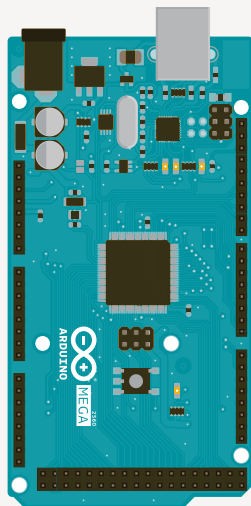
COD:A000067

STORE.ARDUINO.CC/ARDUINO-ME-GA-2560-REV3

TECH SPECS:

MICROCONTROLLER MICROCHIP
ATMEGA2560
OPERATING VOLTAGE 5V
USB 1 - TYPE B
DIGITAL I/O PINS 54
PWM PINS 15
ANALOG INPUT PINS 16
DC CURRENT PER I/O PIN 20 MA
DC CURRENT FOR 3.3V PIN 50 MA

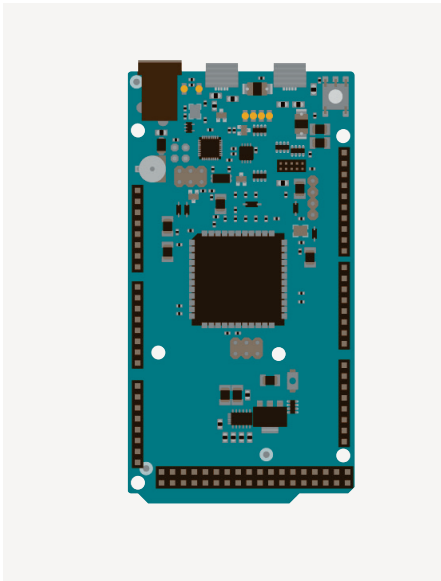FLASH MEMORY 256 KB
SRAM 8 KB
EEPROM 4 KB
CLOCK SPEED 16 MHZ
EEPROM 1 KB
DC CURRENT PER I/O PINS 40 MA
(I/O PINS)
INPUT VOLTAGE 7-12 V
DIGITAL I/O PINS 22 (6 OF
WHICH ARE PWM)
PWM OUTPUT 6

DUE

FLY HIGH WITH ARDUINO DUE TO CONTROL HIGH PERFORMANCE

APPLICATIONS FROM DRONES TO CNC MACHINES!

ARDUINO DUE is a microcontroller board based on the Microchip SAM3X8E with an Arm Cortex-M3 processor. It was the first Arduino board based on a 32-bit Arm microcontroller. It has 54 digital input/output pins (12 of which can be used as PWM outputs), 12 analog inputs, 4 UARTs (i.e., hardware serial ports), a 84 MHz clock, an USB OTG capable connection, 2 DAC (digital to analog), 2 TWI, a power jack, an SPI header, a JTAG header, a reset button and an erase button.

The board contains everything needed to support the microcontroller; simply connect it to a computer with a micro-USB cable or power it with an AC adapter or battery to get started. The Due is compatible with all Arduino shields that work at 3.3V and are compliant with the 1.0 Arduino pinout.

COD:A000062/A000056

STORE.ARDUINO.CC/ARDUINO-DUE

TECH SPECS:

MICROCONTROLLER MICROCHIP SAM3X8E (ARM CORTEX-M3 PROCESSOR)

OPERATING VOLTAGE 3.3V

INPUT VOLTAGE 7-12V

INPUT VOLTAGE (LIMITS) 6-16V

DIGITAL I/O PINS 54

ANALOG INPUT PINS 12

ANALOG OUTPUT PINS 2 (DAC)

TOTAL DC OUTPUT CURRENT ON ALL I/O LINES 130 MA

DC CURRENT FOR 3.3V PIN 800 MA

DC CURRENT FOR 5V PIN 800 MA

FLASH MEMORY 512 KB

SRAM 96 KB (TWO BANKS: 64KB AND 32KB)

CLOCK SPEED 84 MHZ

4 RELAYS SHIELD

THE ARDUINO 4 RELAYS SHIELD ALLOWS YOUR ARDUINO DRIVING HIGH POWER LOADS.

The **ARDUINO 4 RELAYS SHIELD** is a solution for driving high power loads that cannot be controlled by Arduino's digital IOs, due to the current and voltage limits of the controller. The Shield features four relays, each relay provides 2 pole changeover contacts (NO and NC); in order to increase the current limit of each output the 2 changeover contacts have been put in parallel. Four LEDs indicate the on/off state of each relay.
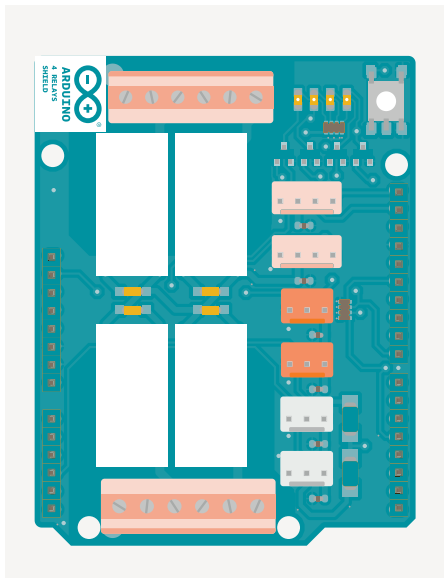
COD:A000110

HTTPS://STORE.ARDUINO.CC/ARDUI-NO-4-RELAYS-SHIELD

TECH SPECS:

THINKER KIT INTERFACE 2x TWI, 2x OUT, 2x IN
INTERFACES WITH ARDUINO BOARD DIO
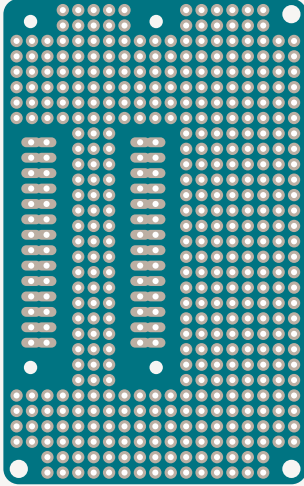Relays 4 (60W)General
OPERATING VOLTAGE 5 V
CURRENT NEEDS 140 mA (with all releays on, about 35 mA each)
PCB SIZE 53 x 68.5 mm
WEIGHT 0.044 Kg

MEGA PROTO PCB SHIELD

DESIGN CUSTOM CIRCUITS FOR THE MEGA STANDARD ARDUINO PINOUT.

The **ARDUINO MEGA PROTO PCB SHIELD** makes it easy for you to design custom circuits. You can solder parts to the prototyping area to create your project,or use it with a small solderless breadboard (not included) to quickly test circuit ideas without having to solder. It's got extra connections for all of the Arduino MEGA I/O pins, and it's got space to mount through-hole and surface mount integrated circuits. It's a convenient way to make your custom Arduino circuit into a single module.
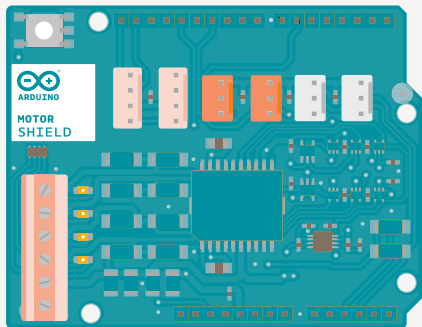
COD:A000080

STORE.ARDUINO.CC/ARDUINO-MEGA-PRO-TO-SHIELD-REV3-PCB

TECH SPECS:

PCB SIZE 101.5 X 53.3 MM
WEIGHT 0.013 KG

MOTOR SHIELD

THE ARDUINO MOTOR SHIELD ALLOWS YOUR ARDUINO TO DRIVE DC AND STEPPER MOTORS, RELAYS AND SOLENOIDS.

The **ARDUINO MOTOR SHIELD** is based on the L298, which is a dual full-bridge driver designed to drive inductive loads such as relays, solenoids, DC and stepping motors. It lets you drive two DC motors with your Arduino board, controlling the speed and direction of each one independently. You can also measure the motor current absorption of each motor, among other features. The shield is TinkerKit compatible, which means you can quickly create projects by plugging TinkerKit modules to the board.

COD:A000079

STORE.ARDUINO.CC/ARDUINO-MOTOR-SHIELD-REV3

TECH SPECS:

OPERATING VOLTAGE 5V TO 12V
MOTOR CONTROLLER L298P, DRIVES 2 DC MOTORS OR 1 STEPPER MOTOR
MAX CURRENT 2A PER CHANNEL OR 4A MAX (WITH EXTERNAL POWER SUPPLY)
CURRENT SENSING 1.65V/A
FREE RUNNING STOP AND BRAKE FUNCTION

TINKER KIT BRACCIO

PLASTIC PARTS X 21
SCREWS X 63
FLAT WASHER X 16
HEXAGON NUT X 7
SPRINGS X 2
SERVO MOTORS: 2 X SR 311, 4 X SR 431
ARDUINO COMPATIBLE SHIELD X 1
POWER SUPPLY 5V, 5A X 1
PHILLIPS SCREWDRIVER X 1
DOUBLE HEXAGON BOX WRENCH X 1
SPIRAL CABLE PROTECTION WRAP X 1

UNLOCK THE UNLIMITED POSSIBILITIES OF ROBOT-

ICS WITH BRACCIO!
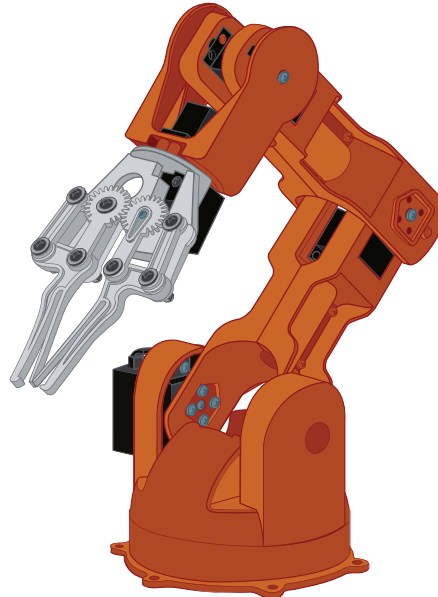
You can assemble your **BRACCIO** in a multitude of ways. Because it is designed for versatility, the BRACCIO can also support various objects on the end of the arm. The included BRACCIO shield allows you to hook up the servos directly to your Arduino board.

FULLY ASSEMBLED TECH SPEC:

Weight 792 g
Maximum operating distance range 80 cm
Maximum Height 52 cm
Base Width 14 cm
Gripper Width 90 mm
Cable length 40 cm
Load Capacity Maximum weight at 32 cm operating distance: 150 g
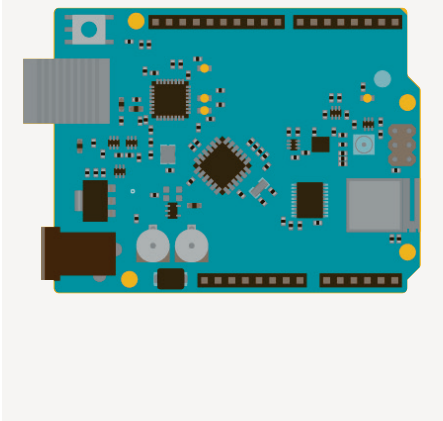Maximum weight at the minimal Braccio configuration: 400g

SERVO TECH SPEC:

SPRINGRC SR431 - DUAL OUTPUT SERVO	SPRINGRC SR311
CONTROL SIGNAL PWM ANALOG	CONTROL SIGNAL PWM ANALOG
TORQUE @ 4.8V: 169.5 OZ-IN (12.2 KG-CM)	TORQUE @ 4.8V: 43.13 OZ-IN (3.1 KG-CM) @ 6.0V: 52.86 OZ-IN (3.8 KG-CM)
@ 6.0V: 201.4 OZ-IN (14.5 KG-CM)	
WEIGHT 2.19 OZ (62.0 G)	WEIGHT 0.95 OZ (27.0 G)
DIMENTIONS 1.65×0.81×1.56 IN (42.0×20.5×39.5 MM)	DIMENTIONS 1.23×0.65×1.13 IN (31.3×16.5×28.6 MM)
SPEED @ 4.8V: 0.20 SEC/60°	SPEED @ 4.8V: 0.14 SEC/60°
@ 6.0V: 0.18 SEC/60°	@ 6.0V: 0.12 SEC/60°
ROTATION SUPPORT DUAL BEARINGS	ROTATION SUPPORT DUAL BEARINGS
GEAR MATERIAL METAL	GEAR MATERIAL METAL
ROTATION RANGE 180°	ROTATION RANGE 180°
CONNECTOR TYPE J (AKA FUTABA)	CONNECTOR TYPE J (AKA FUTABA)

UNO WIFI REV2

TAKE YOUR FIRST STEPS INTO THE INTERNET OF THINGS WORLD.

ARDUINO UNO WIFI REV 2 with its onboard IMU (Inertial Measurement Unit), a crypto-chip for secure connections and encrypted communication over the network, and WiFi is the ideal board to get started making your first Internet of Things application, or for use in the education field.

Arduino Uno WiFi Rev 2 has 14 digital input/output pins (6 of which are PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a power jack, and an ICSP header. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with an AC adapter or battery to get started.
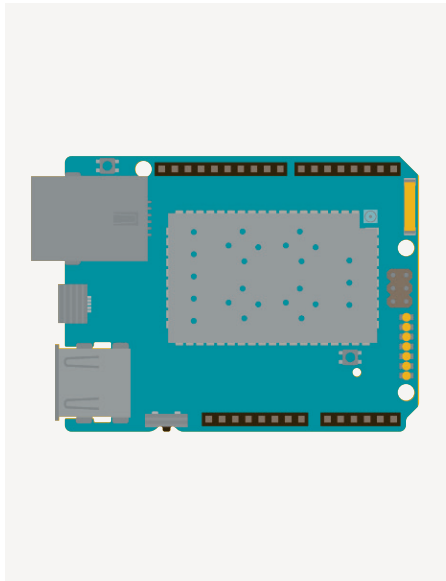
The WiFi module is a self contained SoC with an integrated TCP/IP protocol stack that can provide access to a WiFi network, or be set up as access point itself. Arduino Uno WiFi Rev 2 supports OTA (over-the-air) programming, either for transferring Arduino sketches or for upgrading the WiFi firmware.

COD:ABX00021

STORE.ARDUINO.CC/ARDUINO-UNO-WI-FI-REV2

TECH SPECS:

MICROCONTROLLER
Microchip ATmega4809

OPERATING VOLTAGE 5V

INPUT VOLTAGE (RECOMMENDED) 7-12V

INPUT VOLTAGE (LIMIT) 6-20V

DIGITAL I/O PINS 14 (6 OF WHICH PROVIDE PWM OUTPUT)

PWM DIGITAL I/O PINS 6

ANALOG INPUT PINS 6

DC CURRENT PER I/O PIN 20 mA

DC CURRENT FOR 3.3V PIN 50 mA

FLASH MEMORY 48 KB (ATMEGA4809)

SRAM 6,144 KB (ATMEGA4809)

EEPROM 256 bytes (ATMEGA4809)

CLOCK SPEED 16 MHz

YÚN REV2

LINUX POWER WITH ARDUINO EASE-OF-USE!

ARDUINO YÚN REV 2 is an improved version of the well known Linux based system board that enables advanced network connections. You can connect it either to a wireless or wired network.

Management of your board preferences and uploading sketches is seamless thanks to a dedicated Web Panel and ''YunFirstConfig'' sketch.
Arduino Yún Rev 2 is based on the Bridge library, which also extends the board capabilities by taking advantage of the Linux processor.
The hardware, software and documentation are all open-source.

COD:ABX00020

STORE.ARDUINO.CC/ARDUINO-YUN-REV-2

TECH SPECS:

 MICROCONTROLLER MICROCHIP AT-MEGA32U4
OPERATING VOLTAGE 5V
INPUT VOLTAGE 5V
DIGITAL I/O PINS 20
PWM OUTPUT 7
ANALOG I/O PINS 12
DC CURRENT PER I/O PIN 40 MA ON

I/O PINS; 50 MA ON 3.3V PIN
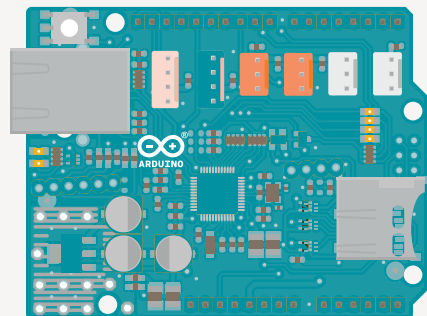FLASH MEMORY 32 KB (4 KB OF WHICH IS USED BY BOOTLOADER)
SRAM 2.5 KB
EEPROM 1 KB
CLOCK SPEED 16 MHZ

ETHERNET SHIELD 2

THE ARDUINO ETHERNET SHIELD 2 CONNECTS YOUR ARDUINO TO THE INTERNET.

The **ARDUINO ETHERNET SHIELD 2** connects your Arduino to the internet in mere minutes. Just plug this module onto your Arduino Board, connect it to your network with an RJ45 cable (not included) and follow a few simple steps to start controlling your world through the internet. As always with Arduino, every element of the platform – hardware, software and documentation – is freely available and open-source. This means you can learn exactly how it's made and use its design as the starting point for your own circuits. Hundreds of thousands of Arduino Boards are already fueling people's creativity all over the world, everyday. Join us now, Arduino is you!
*Requires an Arduino Board (not included)

COD:A000024

STORE.ARDUINO.CC/ARDUINO-ETHER-NET-SHIELD-2

TECH SPECS:

IEEE802.3AF COMPLIANT
INPUT VOLTAGE RANGE 36V TO 57V
OVERLOAD AND SHORT-CIRCUIT PROTEC-
TION 12V OUTPUT
HIGH EFFICIENCY DC/DC CONVERTER:
TYP 85% @ 80% LOAD
1500V ISOLATION (INPUT TO OUTPUT)

CTC 101

6 ARDUINO 101 BOARDS
FULL SET OF COMPONENTS AND PARTS
FOR 26 PROJECTS
IDEAL FOR A CLASSROOM OF 30 STU-
DENTS
E-LEARNING ACCESS WITH TEACHERS
AND STUDENTS TRAINING
ONLINE WEBINARS WITH OUR ARDUINO
EXPERTS
ARDUINO ONLINE SUPPORT INCLUDED
FULL ACCESS TO THE ARDUINO EDUCA-
TORS COMMUNITY!

CTC 101 IS THE FLAGSHIP ARDUINO EDUCATIONAL
PROGRAM FOR SCHOOLS.
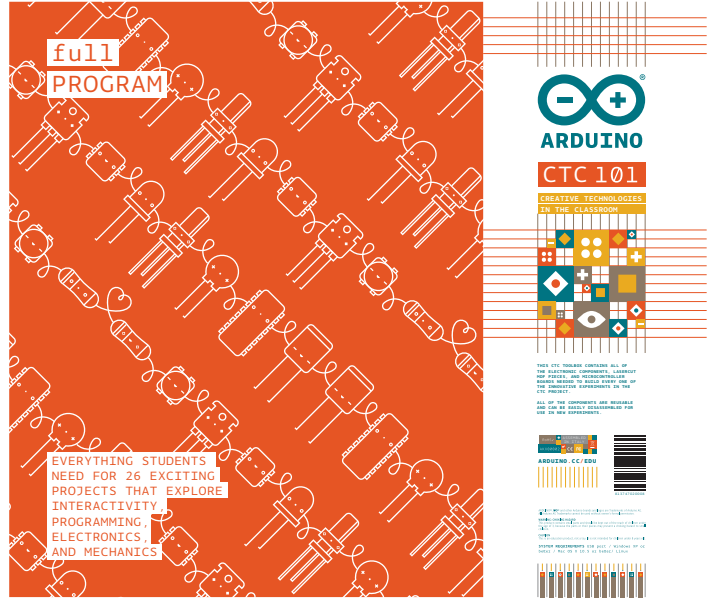
ARDUINO CTC 101 is a modular STEAM program
consisting of a toolbox with 26 projects, as well as
easy-to-assemble experiments, an online content platform,
and guided training and support for educators.

The program, tailored for ages 13 to 17, has five themed
modules that introduce students to the foundations of
programming and basic coding. Topics are: introduction
to Arduino boards, digital and analog signals, robotics,
motors, power systems, serial and wireless communication
via Bluetooth, and advanced sensors.

ABOUT THE TOOLBOX

Includes all the components needed for a class of up to
30 students: 6 Arduino 101 boards and Education Shields,
a set of more than 700 components, including motors,
plug-and-play sensors and actuators, and wooden parts for
projects' assembly.

ABOUT THE PLATFORM

Users receive access to the online platform for one year.
Up to three educators are granted access.

Educators can then add and remove students at any time—up to 30 per toolbox.

ABOUT THE EDUCATORS' TRAINING AND SUPPORT

Dedicated online communication from the Arduino Education Team is available from the start: toolbox purchase advice, online platform access, student enrollment, and further questions regarding CTC 101 deployment in the classroom.
Arduino onboarding live webinars guide educators through the content and tools available in the online platform. There are five live webinars with three available booking options per day for educators to ask questions about teacher training, student projects and upcoming challenges during the implementation phase.
Training completion certificates are available for educators.
Teachers have access to a moderated forum where educators share knowledge and experiences with other from the CTC 101 program around the world.

ENGINEERING KIT

1 ARDUINO MKR1000 BOARD

1 ARDUINO MKR MOTOR SHIELD

1 ARDUINO MKR IMU SHIELD

1 DC MOTOR

2 GEARED DC MOTORS WITH ENCODERS

1 STANDARD MICRO SERVO (180 DEGREES)

1 HALL SENSOR MODULE

1 ULTRASONIC SENSOR MODULE

1 WEBCAM

1 LIPO BATTERY

1 LIPO BATTERY CHARGER

CUSTOM-DESIGNED PARTS FOR ASSEMBLY

SCREWS, NUTS AND OTHER MECHANICAL PARTS

1-YEAR LICENSE FOR MATLAB AND SIMULINK

ACCESS TO ONLINE LEARNING MATERIALS

BRING THE POWER OF ARDUINO AND THE MKR1000 BOARD, ALONG WITH MATLAB® AND SIMULINK®.

Featuring state of the art, hands-on incorporation of Arduino technology in an educational setting, students will learn fundamental engineering concepts, key aspects of mechatronics, and MATLAB and Simulink programming using Arduino technology.

The **ARDUINO ENGINEERING KIT** is intended for introductory engineering classes and features a self-balancing motorcycle, a drawing robot, and a mobile rover. Through these challenging and engaging projects, students will learn to use Arduino hardware in the context of MATLAB and Simulink programming.

The Arduino Engineering Kit is suitable for individual students and self-taught learners, but it can also be used in a classroom setting with a kit for up to 10 students
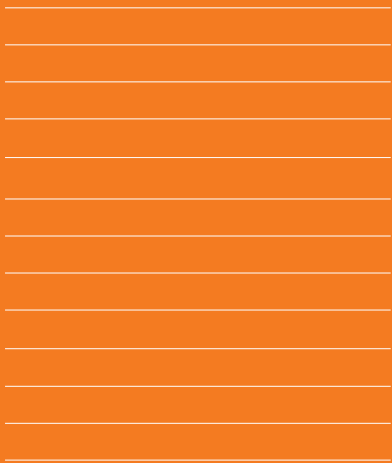
ARDUINO
MKR FAMILY

Powerful, compact, and ready to go! Easier IoT Application Development Arduino MKR boards combine the power of a 32-bit Arm microcontroller with a choice of integrated WiFi, GSM, NB-IoT, SigFox or LoRa connectivity. They're supported by the same Arduino IDE which is familiar to millions of users — making IoT accessible to beginners, and productive for professionals.
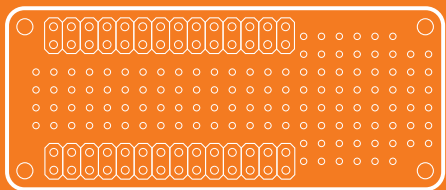
Production Ready
Arduino MKR boards are designed with end products in mind. All boards are FCC, RoHS and CE certified, with robust mechanical design ideal for industrial applications when combined with the RS 485, CAN or Ethernet shields. A dedicated crypto chip means efficient, secure Internet connectivity with TLS support.

Long Battery Life, Small Form-Factor
Arduino MKR boards can be powered by a rechargeable LiPo battery using the built-in connector and circuit protection, making it easy to create remote sensor applications. With a low-power Arm Cortex-M0+ microcontroller supporting sleep modes and wake-on-interrupt, it's designed to last longer on smaller batteries.

From agriculture to smart homes, you can find the right solution for your next IoT project.

THE PANINI CONCEPT: BUILD YOUR "A LA CARTE" CONFIGURATION

Pick up a MKR board, and mix-and-match with desired shields and carrier boards. Create custom hardware configurations for your IoT project as easily as making a sandwich!

arduino.cc/education

Pick up a MKR board, and mix-and-match with desired shields and carrier boards. Create custom hardware configurations for your IoT project as easily as making a sandwich!
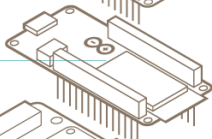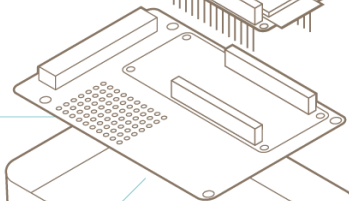
Antenna
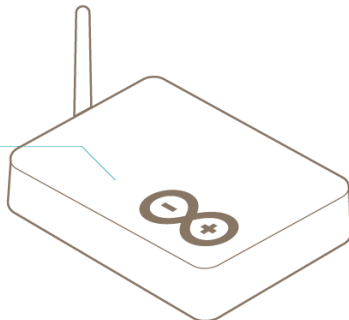
Shield
RS485, CAN, GPS, ENVIRONMENTAL
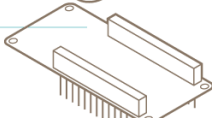
Arduino MKR board
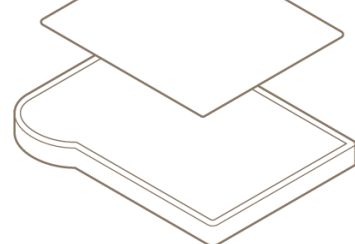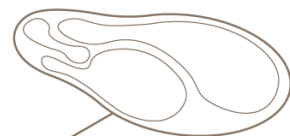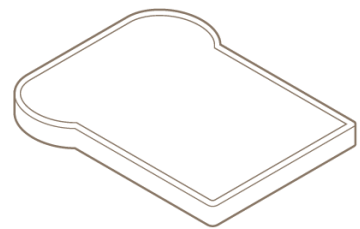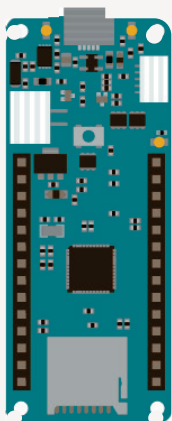WiFi, LoRa, Sigfox, GSM CATMI, NBIoT, ETH, BLE

Carrier
PROTO, Relay

Enclosure

MKR ZERO

EXPRESS YOUR CREATIVE POTENTIAL, FROM MUSIC TO ROBOTICS, WITH THE

MOST ACCESSIBLE ARDUINO BOARD BASED ON A 32-BIT ARM PROCESSOR.

MKR ZERO offers everything you need to release your creative potential: advanced audio and analog processing capabilities, low power consumption, and a real-time clock, all at a convenient price. Robotics applications, art installations, and other sophisticated projects will also benefit from the MKR Zero's capabilities.
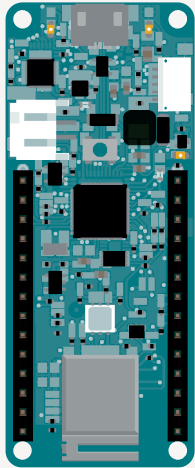
The board is powered by the Microchip ATSAMD21 microcontroller, which features a 32-bit Arm Cortex®-M0+ processor. The board contains everything needed to support the microcontroller; simply connect it to a computer with a micro-USB cable or power it by a Lithium battery.

COD:ABX00012

STORE.ARDUINO.CC/ARDUINO-MKRZERO

TECH SPECS:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)	ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)
BOARD POWER SUPPLY (USB/VIN) 5V	ANALOG OUTPUT PINS 1 (DAC 10 BIT)
SUPPORTED BATTERY(*) LI-PO SINGLE CELL, 3.7V, 700MAH MINIMUM	EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)
DC CURRENT FOR 3.3V PIN 600MA	DC CURRENT PER I/O PIN 7 MA
DC CURRENT FOR 5V PIN 600MA	FLASH MEMORY 256 KB
CIRCUIT OPERATING VOLTAGE 3.3V	FLASH MEMORY FOR BOOTLOADER 8 KB
DIGITAL I/O PINS 22	SRAM 32 KB
PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)	EEPROM N/A
UART 1	CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ
SPI 1	LED_BUILTIN 32
I2C 1	

MKR WIFI 1010

ARDUINO MKR WIFI 1010 IS THE NEWEST VERSION OF THE MKR1000 WITH AN ESP32 MODULE FROM U-BLOX.

Arduino MKR WiFi 1010 is the evolution of the MKR1000 and is equipped with an ESP32 module from u-blox. The MKR WiFi 1010 aims to accelerate and simplify the prototyping of WiFi-based IoT applications thanks to the flexibility of the ESP32 module and its low power consumption.

The Board is composed of three main blocks:
Microchip ATSAMD21 MCU based on an Arm Cortex-M0+ processor
u-blox NINA-W10 series low power 2.4GHz IEEE® 802.11 b/g/n Wi-Fi
ECC508 CryptoAuthentication
The design includes a Li-Po charging circuit that allows Arduino MKR WiFi 1010 to run on battery power or external 5V, charging the Li-Po battery while running on external power. Switching from one source to the other is done automatically.

COD:ABX00023

STORE.ARDUINO.CC/ARDUINO-MKR-WI-FI-1010

TECH SPECS:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)
WIFI U-BLOX NINA-W102 (ESP32)
BOARD POWER SUPPLY (USB/VIN) 5V
SUPPORTED BATTERY(*) LI-PO SINGLE CELL, 3.7V, 700MAH
MINIMUM CIRCUIT OPERATING VOLTAGE 3.3V
DIGITAL I/O PINS 8
PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)
UART 1
SPI 1
I2C 1
I2S 1
CONNECTIVITY WIFI, BLE (COMING SOON)

ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)
ANALOG OUTPUT PINS 1 (DAC 10 BIT)
EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)
DC CURRENT PER I/O PIN 7 MA
FLASH MEMORY 256 KB
SRAM 32 KB
EEPROM NO
CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ
LED_BUILTIN 6
FULL-SPEED USB DEVICE AND EMBEDDED HOST INCLUDED

MKR VIDOR 4000

ENTER THE WORLD OF FPGA, AND ENDLESS PROJECT POSSIBILITIES.

The power and flexibility of FPGA is now accessible to everyone! Add custom peripherals for your project, or learn about the fundamentals of chip design, all from within an easy-to-use Arduino environment.

Connect a MIPI camera for machine vision applications, or drive a video display via micro HDMI. Control precision robotics systems with a quadrature encoder, or high resolution PWM. Add more hardware UARTs, quad SPI, I2C, I2S audio, Sigma Delta DACs... each FPGA pin can toggle up to 150 MHz, and be configured to whatever function you need.

As a MKR board, **VIDOR 4000** also has a familiar MCU onboard, and standard MKR pinout. An additional MiniPCI Express connector gives the FPGA even more I/O options. Last but not least, an onboard BLE and WiFi module means you can easily connect your applications. Vidor 4000 offers more project possibilities than ever before.

COD:ABX00022

STORE.ARDUINO.CC/ARDUINO-VI-DOR-4000

TECH SPECS FPGA:

INTEL CYCLONE 10CL016, MINI PCI EXPRESS PORT WITH PROGRAMMABLE PINS
CAMERA CONNECTOR MIPI CAMERA CONNECTOR
CIRCUIT OPERATING VOLTAGE 3.3V
DIGITAL I/O PINS 22 HEADERS + 25 MINI PCI EXPRESS
PWM PINS ALL PINS
UART UP TO 7
SPI UP TO 7
I2C UP TO 7
ANALOG INPUT PINS N/A
ANALOG OUTPUT PINS N/A
EXTERNAL INTERRUPTS N/A
DC CURRENT PER I/O PIN 4MA OR 8MA
FLASH MEMORY 2 MB
SRAM 8 MB

EEPROM N/A
CLOCK SPEED 48 MHZ - UP TO 200 MHZ
VIDEO OUTPUT MINI HDMI

TECH SPECS MICROCONTROLLER:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)
WIFI U-BLOX NINA-W102
BOARD POWER SUPPLY (USB/VIN) 5V
SUPPORTED BATTERY LI-PO SINGLE CELL, 3.7V, 700MAH MINIMUM
CIRCUIT OPERATING VOLTAGE 3.3V
DIGITAL I/O PINS 22
PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)
UART 1
SPI 1
I2C 1

ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)
ANALOG OUTPUT PINS 1 (DAC 10 BIT)
EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)
DC CURRENT PER I/O PIN 7 MA
FLASH MEMORY 256 KB
SRAM 32 KB
EEPROM N/A
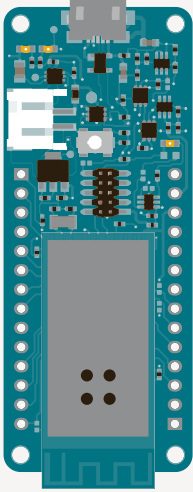CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ
LED_BUILTIN 32
FULL-SPEED USB DEVICE AND EMBEDDED HOST INCLUDED

MKR 1000 WIFI

STEP INTO THE INTERNET OF THINGS WORLD, WITH THIS

POWERFUL, ROBUST BOARD IN THE COMPACT MKR FORM FACTOR.

Arduino **MKR1000** has been designed to offer a practical and cost effective solution for anyone seeking to add WiFi connectivity to their projects with minimal experience in networking. The design includes a Li-Po charging circuit that allows the Arduino MKR1000 to run on battery power or external 5V, charging the Li-Po battery while running on external power. Switching from one source to the other is done automatically.

The MKR1000 has an 32-bit Arm Cortex-M0+ processor, the usual rich set of I/O interfaces, and low power WiFi with a crypto-chip for secure communication. You can program it using the familiar, easy-to-use Arduino Software (IDE). All of these features make this board the preferred choice for the emerging IoT battery-powered projects in a compact form factor.

COD:ABX00004/ABX00011

STORE.ARDUINO.CC/ARDUINO-MKR1000

TECH SPECS:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)
BOARD POWER SUPPLY (USB/VIN) 5V
SUPPORTED BATTERY(*) LI-PO SINGLE CELL, 3.7V, 700MAH
MINIMUM CIRCUIT OPERATING VOLTAGE 3.3V
DIGITAL I/O PINS 8
PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)
UART 1
SPI 1
I2C 1

ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)
ANALOG OUTPUT PINS 1 (DAC 10 BIT)
EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)
DC CURRENT PER I/O PIN 7 MA
FLASH MEMORY 256 KB
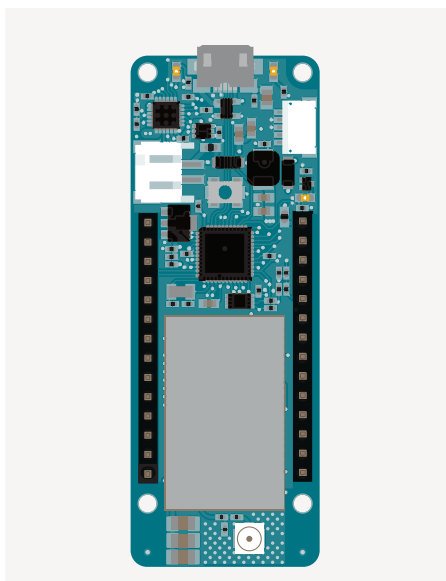SRAMÌ 32 KB
EEPROM N/A
CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ
LED_BUILTIN 6

MKR GSM 1400

A POWERFUL GSM MODULE EMBEDDED INTO A MKR BOARD

IDEAL FROM AUTOMOTIVE TO SMART CITIES APPLICATIONS.

MKR GSM 1400 has been designed to offer a practical and cost effective solution to add 3G/2G connectivity to your projects. It's based on the Microchip ATSAMD21 and u-blox SARA-U201 GSM module. The SARA-U201 module is ideal for connected automotive, transport, wearables, smart cities, smart home and buildings. It supports HSPA/GSM for global coverage.
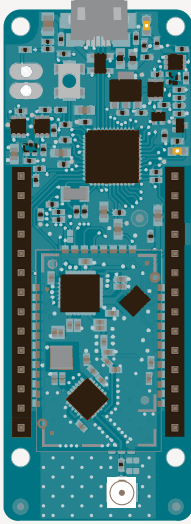
The design includes the ability to power the board using a LiPo battery or external power source rated 5V. Switching from one source to another is done automatically.

COD:ABX00018-B

STORE.ARDUINO.CC/ARDUINO-GSM-1400

TECH SPEC:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)

BOARD POWER SUPPLY (USB/VIN) 5V

SUPPORTED BATTERIES(*) 2X AA OR AAA

CIRCUIT OPERATING VOLTAGE 3.3V

DIGITAL I/O PINS 8

PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)

UART 1

SPI 1

I2C 1

ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)

ANALOG OUTPUT PINS 1 (DAC 10 BIT)

EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)

DC CURRENT PER I/O PIN 7 MA

FLASH MEMORY 256 KB

SRAM 32 KB

EEPROM N/A

CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ

LED_BUILTIN 6

FULL-SPEED USB DEVICE AND EMBEDDED HOST

ANTENNA POWER 2DB

CARRIER FREQUENCY 433/868/915 MHZ

WORKING REGION EU/US

MKR FOX 1200

ARDUINO MKR POSSIBILITIES WITH SIGFOX CONNECTIVITY

MKR FOX 1200 has been designed to offer a practical and cost effective solution to add Sigfox connectivity to your projects with minimal experience in networking.

A 2-year free subscription to Sigfox network is included in the package, for up to 140 messages per day. Free access to Spot'it geolocation service is also included to allow you to track the board without GPS or additional hardware. Refer to sigfox.com for details of network coverage in your area.

MKR FOX 1200 is based on the Microchip ATSAMD21 and a Microchip ATA8520 SigFox module. The board can be powered with two 1.5V AA or AAA batteries or external 5V, the switch from one power source to another is done automatically.

COD:ABX00014-B

STORE.ARDUINO.CC/ARDUINO-MKRFOX1200

TECH SPECS:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)

BOARD POWER SUPPLY (USB/VIN) 5V

SUPPORTED BATTERIES(*) 2X AA OR AAA

CIRCUIT OPERATING VOLTAGE 3.3V

DIGITAL I/O PINS 8

PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)

UART 1

SPI 1

I2C 1

ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)

ANALOG OUTPUT PINS 1 (DAC 10 BIT)

EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)

DC CURRENT PER I/O PIN 7 MA

FLASH MEMORY 256 KB

SRAM 32 KB

EEPROM N/A

CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ LED_BUILTIN 6
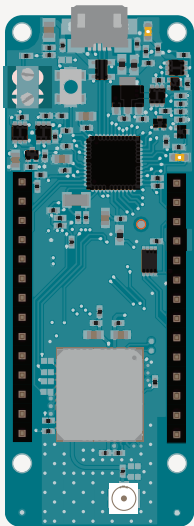
FULL-SPEED USB DEVICE AND EMBED-DED HOST

LED_BUILTIN 6

ANTENNA POWER 2DB

CARRIER FREQUENCY 868 MHZ

WORKING REGION EU

MKR WAN 1300

LOW POWER, LONG RANGE CONNECTIVITY IN THE COMPACT

MKR FORM FACTOR.

MKR WAN 1300 is a practical and cost effective solution to add LoRa connectivity to your projects. It is based on a Microchip ATSAMD21 MCU and Murata CMWX1ZZABZ LoRa module. This board is ideal for projects that require low power consumption over long distances, in dense urban or indoor areas, or rural regions. You can check www.lora-alliance.org for operators covering your area, or setup your own gateway.

The design includes the ability to power the board using two 1.5V AA or AAA batteries or external 5V. Switching from one source to another is done automatically. MKR WAN 1300 is able to run, however, with or without the batteries connected.
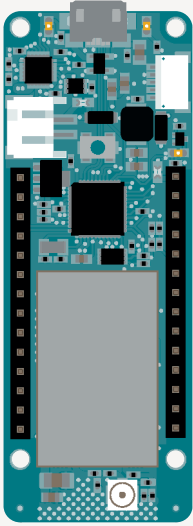
COD:ABX00017-B

STORE.ARDUINO.CC/ARDUI-
NO-MKR-WAN-1300

TECH SPEC:

MICROCONTROLLER MICROCHIP ATSAMD21 (ARM CORTEX-M0+ PROCESSOR)

BOARD POWER SUPPLY (USB/VIN) 5V

SUPPORTED BATTERIES(*) 2X AA OR AAA

CIRCUIT OPERATING VOLTAGE 3.3V

DIGITAL I/O PINS 8

PWM PINS 12 (0, 1, 2, 3, 4, 5, 6, 7, 8, 10, A3 - OR 18 -, A4 -OR 19)

UART 1

SPI 1

I2C 1

ANALOG INPUT PINS 7 (ADC 8/10/12 BIT)

ANALOG OUTPUT PINS 1 (DAC 10 BIT)

EXTERNAL INTERRUPTS 8 (0, 1, 4, 5, 6, 7, 8, A1 -OR 16-, A2 - OR 17)

DC CURRENT PER I/O PIN 7 MA

FLASH MEMORY 256 KB

SRAM 32 KB

EEPROM N/A

CLOCK SPEED 32.768 KHZ (RTC), 48 MHZ

LED_BUILTIN 6

FULL-SPEED USB DEVICE AND EMBED-DED HOST

ANTENNA POWER 2DB

CARRIER FREQUENCY 433/868/915 MHZ

WORKING REGION EU/US

MKR NB 1500

NARROWBAND IOT (NB-IOT) WITH THE EASE OF USE OF THE ARDUINO ECOSYSTEM.

MKR NB 1500 is ideal for IoT applications in remote areas with limited access to the Internet, and low-power requirements. NB-IoT uses existing LTE cellular networks and this board is for global use, with a u-blox module supporting Cat M1/NB1 deployed bands 2, 3, 4, 5, 8, 12, 13, 20, 28 (Vodafone, AT&T, T-Mobile USA, Telstra, Verizon).

COD:ABX00019

STORE.ARDUINO.CC/ARDUI-
NO-MKR-NB-1500

TECH SPECS:

	SPI 1
MICROCONTROLLER MICROCHIP ATSAMD21	PINOUT (DIGITAL, PWM, ANALOG) 22
(ARM CORTEX-M0+ PROCESSOR)	I/O DIGITAL (12 PWM), 7 ANALOG
CELLULAR MODULE U-BLOX SARA-R410M	INPUT
OPERATING VOLTAGE 3.3 V	COMPATIBILITY MKR
I2S 1	
I2C 1	
UART 1	

MKR IOT BUNDLE

YOUR ENTRY TO THE INTERNET OF THINGS WORLD; WITH EASY ACCESS TO 5 ENGAGING PROJECTS.
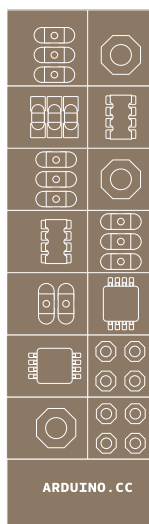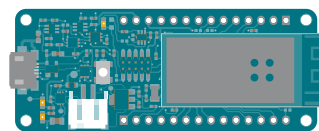
EACH MKR IOT BUNDLE INCLUDES:

1 ARDUINO MKR1000
1 MICRO USB CABLE
1 400 POINTS BREADBOARD
70 SOLID CORE JUMPER WIRES
1 EASY-TO-ASSEMBLE WOODEN BASE
1 9V BATTERY SNAP
1 STRANDED JUMPER WIRES (BLACK)
1 STRANDED JUMPER WIRES (RED)
6 PHOTORESISTOR [VT90N2 LDR]
3 POTENTIOMETER 10KOHMS
10 PUSHBUTTONS
1 TEMPERATURE SENSOR [TMP36]
1 TILT SENSOR
1 ALPHANUMERIC LCD (16X2 CHARACTERS)
1 LED (BRIGHT WHITE)
1 LED (RGB)
8 LEDS (RED)
8 LEDS (GREEN)
8 LEDS (YELLOW)
3 LEDS (BLUE)
1 SMALL DC MOTOR 6/9V
1 SMALL SERVO MOTOR
1 PIEZO CAPSULE [PKM17EPP-4001-BO]
1 H-BRIDGE MOTOR DRIVER [L293D]
1 OPTOCOUPLERS [4N35]
2 MOSFET TRANSISTORS [IRF520]
5 CAPACITORS 100UF
5 DIODES [1N4007]
3 TRANSPARENT GELS (RED, GREEN, BLUE)
1 MALE PINS STRIP (40X1)
20 RESISTORS 220 OHM
5 RESISTORS 560 OHM
5 RESISTORS 1K OHM
5 RESISTORS 4.7K OHM
20 RESISTORS 10K OHM
5 RESISTORS 1M OHM
5 RESISTORS 10M OHM

The **MKR IOT BUNDLE** includes all the components you need to get started, with five IoT projects available on the Arduino Project Hub online platform to get started with networking, data representation, and connected app development.

The MKR IoT Bundle is based on the MKR1000, a powerful WiFi board with low power consumption, based on a Microchip ATSAMD21 microcontroller with a 32-bit Arm Cortex-M0+ processor.

MKR RELAY PROTO SHIELD

THE MKR RELAY PROTO SHIELD ALLOWS YOU TO EASILY

COMMAND RELAYS WITH YOUR MKR BOARD.

MKR RELAY PROTO shield allows you to add easily relays to MKR board based projects. The shield provides two relays, and an easy connection with screw terminal blocks from A1 to A4 analog inputs, I2C and supply voltages.

OVERVIEW:

OPERATING VOLTAGE 3.3V (SUPPLIED FROM THE HOST BOARD)

TWO RELAYS WITH NO, COM AND NC CONNECTIONS

WORKS WITH BATTERY POWERED BOARD

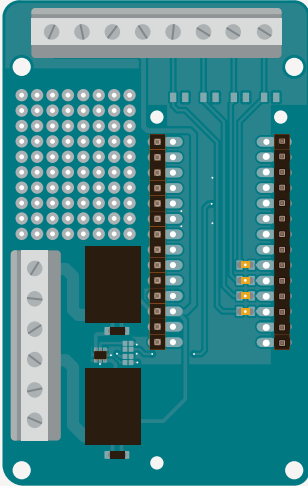SCREW TERMINAL BLOCKS FOR EASY CONNECTIONS

CARRY CURRENT: 2 A

MAX. OPERATING VOLTAGE: 125 VAC, 60 VDC

MAX. OPERATING CURRENT: 1 A

MAX. SWITCHING CAPACITY: 62.50 VA, 30W

COD:TSX00003

STORE.ARDUINO.CC/ARDUINO-MKR-RE-LAY-PROTO-SHIELD

MKR MEM SHIELD

ADD FLASH MEMORY AND MICROSD STORAGE TO YOUR

MKR BOARD.

Short on memory? **MKR MEM SHIELD** can help! Additional flash memory and MicroSD storage won't be a problem anymore. It's designed for your MKR board.

OVERVIEW:

INTERFACE   SPI
MICRO SD CARD SLOT   1
MICRO SD CARD NOT INCLUDED
SPI FLASH MEMORY   2 MB
CIRCUIT OPERATING VOLTAGE   3.3 V
COMPATIBILITY MKR

COD:ASX00008

STORE.ARDUINO.CC/MKR-MEM-SHIELD
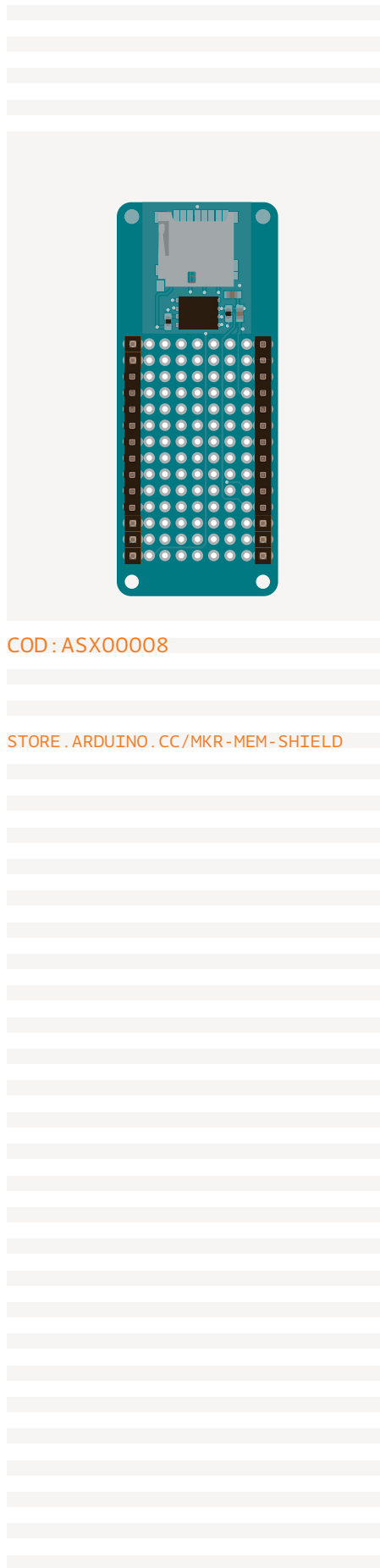
MKR CAN SHIELD

THE ARDUINO MKR CAN SHIELD WILL PROVIDE AUTOMOTIVE CAN CONNECTIVITY.

The **MKR CAN SHIELD** has been developed to simplify the connection of the MKR boards to industrial, robotics and automotive systems. It give your MKR board access to the CAN ecosystem and many industrial grade sensors, motors and displays.

OVERVIEW:

CONNECTIVITY CAN BUS
INTERFACE SPI DRIVEN CAN CONTROLLER
AT 5V WITH 16V VIN MAX BUCK ON-BOARD CONVERTER
CIRCUIT OPERATING VOLTAGE 3.3 V
COMPATIBILTY MKR SIZE

COD:ASX00005

STORE.ARDUINO.CC/MKR-CAN-SHIELD

MKR ETH SHIELD

## AN ETHERNET CONNECTION CAN SOMETIMES BE STABLER, FASTER, AND MORE SECURE.

The **MKR ETH SHIELD** adds wired Ethernet connection to your MKR board. This is particularly useful for IoT projects in environments unsuited to wireless connectivity, such as locations subject to electromagnetic noise or special safety requirements. The MKR ETH shield uses internal 32 KB Memory for Tx/Rx Buffers, and 10BaseT/100BaseTX Ethernet PHY embedded. It also has a MicroSD card socket for storing data.

OVERVIEW:

CONNECTIVITY ETHERNET
CONNECTOR RJ45 FEMALE
SPI SD CARD SLOT YES
CIRCUIT OPERATING VOLTAGE 3.3 V
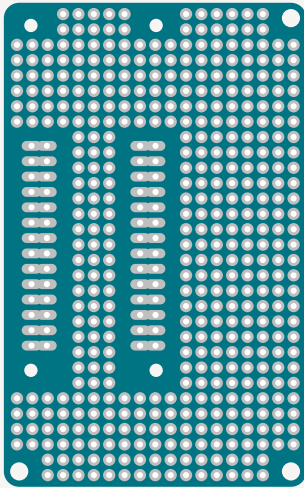COMPATIBILITY UNO, MEGA, MKR, ETC.

COD:ASX00006

STORE.ARDUINO.CC/MKR-MEM-SHIELD
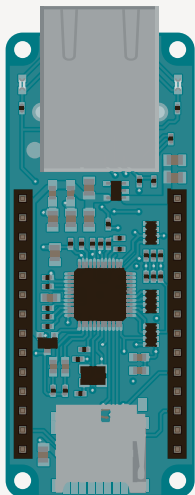
MKR PROTO LARGE SHIELD

NEED MORE ROOM FOR YOUR MKR PROTO SHIELD?

COD:TSX00002

Create peripherals for any Arduino MKR board with the

MKR PROTO LARGE shield.

This shield features a prototyping area with more than 300 solder points and makes connecting components to your board super simple, thanks to silk that indicates the MKR board dimensions and pinout. Both female and male headers are provided, so it can be connected to either the top or the bottom of a MKR board, with mounting holes so you can fix it wherever you want.

OVERVIEW:

DIGITAL I/O PINS 21
PWM DIGITAL I/O PINS DEPENDING ON THE BOARD
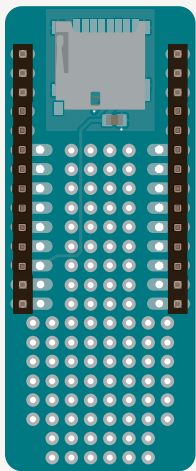ANALOG INPUT PINS 7
ANALOG OUTPUT PINS DEPENDING ON THE BOARD
DC CURRENT PER I/O PINDEPENDING ON THE BOARD
DC CURRENT FOR 3.3V PIN DEPENDING ON THE BOARD
DC CURRENT FOR 5V PIN DEPENDING ON THE BOARD

MKR SD PROTO SHIELD

ADD A SD SLOT AND PROTOTYPING AREA IN A SINGLE SHIELD.

The Arduino **MKR SD PROTO SHIELD** allows you to easily connect an SD card to your MKR form factor board. Use it to enhance the IoT features of your MKR1000, as well as store data coming from the web or sensors read by your board! There's also a small prototyping area for soldering components.

OVERVIEW:

DIGITAL I/O PINS 21
PWM DIGITAL I/O PINS DEPENDING ON THE BOARD
ANALOG INPUT PINS 7
ANALOG OUTPUT PINS DEPENDING ON THE BOARD
DC CURRENT PER I/O PINDEPENDING ON THE BOARD
DC CURRENT FOR 3.3V PIN DEPENDING ON THE BOARD
DC CURRENT FOR 5V PIN DEPENDING ON THE BOARD

COD:TSX00004

STORE.ARDUINO.CC/MKR-SD-PROTO-SHIELD

MKR 485 SHIELD

THE ARDUINO MKR 485 SHIELD WILL PROVIDE THE INDUSTRIAL CONNECTIVITY YOU NEED.

Connect to compatible industrial automation systems using any Arduino MKR board, and extend wired serial

communication over a much longer range. This **RS 485** shield supports half and full duplex, with or without biasing and termination, master slave configuration.

OVERVIEW:

CONNECTIVITY RS-485 BUS
INTERFACE FULL/HALF DUPLEX ISOLATED TRANSCEIVER
AT 5V WITH 16V VIN MAX BUCK ON-BOARD CONVERTER
CIRCUIT OPERATING VOLTAGE 3.3 V
COMPATIBILTY MKR SIZE

COD:ASX00004

STORE.ARDUINO.CC/ARDUI-NO-MKR-485-SHIELD

MKR2UNO ADAPTER

SIMPLY MOUNT YOUR MKR1000 TO THIS NEW ADAPTER

AND PLUG IN ANY OF YOUR UNO SHIELDS!

The **MKR2UNO ADAPTER** allows you to turn your Arduino UNO form factor based project into a MKR based one without too much effort! You can so upgrade your project with a powerful board with integrated LiPo battery charger. Please note that currently the MKR2UNO adapter is compatible only with MKR1000 without headers

OVERVIEW:

OPERATING VOLTAGE 3.3V
INPUT VOLTAGE (RECOMMENDED) 7-12V
INPUT VOLTAGE (LIMIT) 6-16V
ANALOG INPUT PINS 6
ANALOG OUTPUT PINS 1
DIGITAL I/O PINS 14
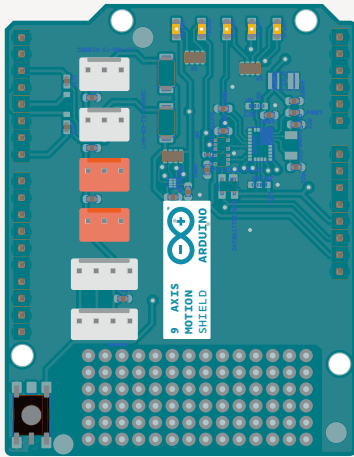DC CURRENT FOR 3.3V PIN 700 MA
DC CURRENT FOR 5V PIN 700 MA

COD:TSX00005

STORE.ARDUINO.CC/MKR2UNO-ADAPTER

9 AXES MOTION SHIELD

ALLOW YOUR ARDUINO TO MEASURE MOVEMENT:

ORIENTATION, ACCELERATION AND MAGNETIC FIELD!

The Arduino **9 AXES MOTION SHIELD** is based on the BNO055 absolute orientation sensor from Bosch Sensortec GmbH which integrates a triaxial 14-bit accelerometer, a triaxial 16-bit gyroscope with a range of ±2000 degrees per second and a triaxial geomagnetic sensor with a 32-bit microcontroller running the BSX3.0 FusionLib software. The sensor features three-dimensional acceleration, yaw rate and magnetic field strength data each in 3 perpendicular axes.

COD:A000070

STORE.ARDUINO.CC/ARDUINO-9-AX-IS-MOTION-SHIELD
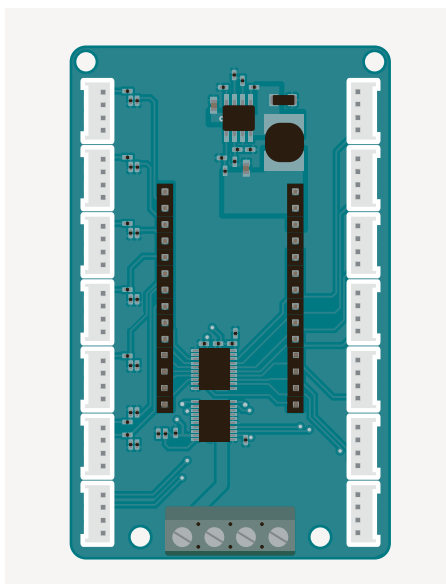
MKR CONNECTOR CARRIER

THE MKR CONNECTOR CARRIER IS THE PERFECT COMPANION

FOR ARDUINO MKR BOARDS AND A GROVE ECOSYSTEM.

Want to connect several Seeed Studio Grove modules to your Arduino board?

The Arduino **MKR CONNECTOR CARRIER** is the perfect companion for Arduino MKR boards and a Grove ecosystem.
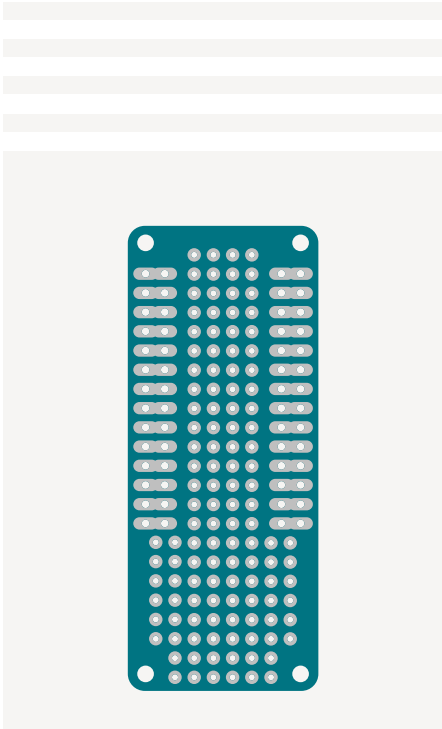
OVERVIEW:

INTERFACEFOURTEEN GROVE CONNECTORS
ANALOG INPUTS SIX AT 5 VOLTS
DIGITAL INPUT/OUTPUT SIX AT 5 VOLTS
OTHER CONNECTORS ONE 5V I2C, ONE 5V UART
VOLTAGE5V
CIRCUIT OPERATING VOLTAGE 3.3V
COMPATIBILITY MKR

COD:ASX00007

STORE.ARDUINO.CC/ARDUINO-MKR-CON-NECTOR-CARRIER

MKR PROTO SHIELD

THE PROTOTYPING SHIELD DESIGNED FOR YOUR MKR BOARD!

The **MKR PROTO SHIELD** is a prototyping shield designed for your MKR board. This shield easily plugs onto your MKR using its provided female/male headers, and offers a duplicate breakout for each pin on the board along with many solderable through-holes on a standard 0.1" grid (2.54mm).

OVERVIEW:

DIGITAL I/O PINS 21
PWM DIGITAL I/O PINS DEPENDING ON THE BOARD
ANALOG INPUT PINS 7
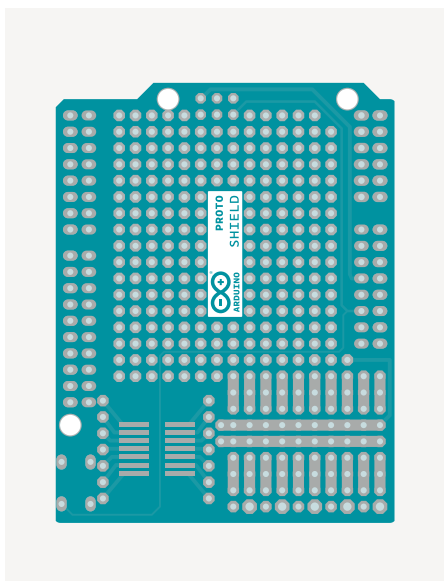ANALOG OUTPUT PINS DEPENDING ON THE BOARD
DC CURRENT PER I/O PINDEPENDING ON THE BOARD
DC CURRENT FOR 3.3V PIN DEPENDING ON THE BOARD
DC CURRENT FOR 5V PIN DEPENDING ON THE BOARD

COD: TSX00001

STORE.ARDUINO.CC/MKR-PROTO-SHIELD

PROTO SHIELD

MAKE YOUR PROJECTS ROCK SOLID WITH THE PROTOTYPING SHIELD

The **PROTOSHIELD** makes it easy for you to design custom circuits. You can easily solder TH or SMD ICs on the prototyping area to test them with your Arduino board. The SMD area is designed for a maximum of 24 pins SOIC integrated circuit and the TH area contains a lot of space for the needed components around your project. You can even stick a mini breadboard (not included) on the protoarea for solderless operation. The proto area includes also two power lines (IOREF and GND), two LEDs pads and SPI signals breakout pads for boards with SPI only on the ICSP header like Zero.

COD:TSX00083

STORE.ARDUINO.CC/PROTO-SHIELD-REV3-UNO-SIZE
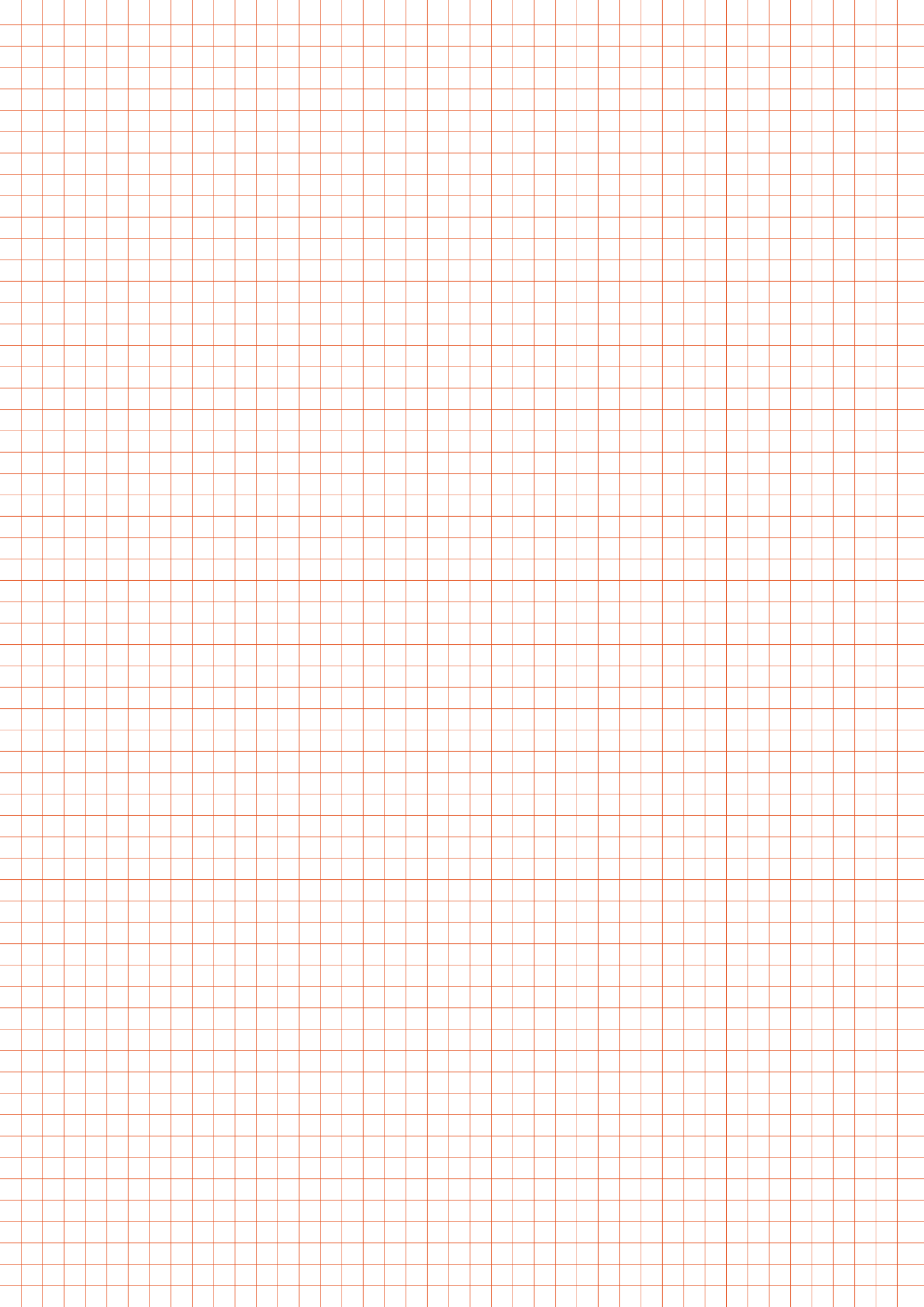
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