

Arduino-Compatible Robot

AAR Capabilities:

Cruise around via PC control

Programmable with Arduino

Follow a black or white line

Measure and control rotational speed of motors via high-resolution encoders

Move given distance

Rotate specific angles

Measure driven distance

Move in geometric paths: circles, polygons, and others

Read data sent via USB from a PC

Transfer data to a PC via USB

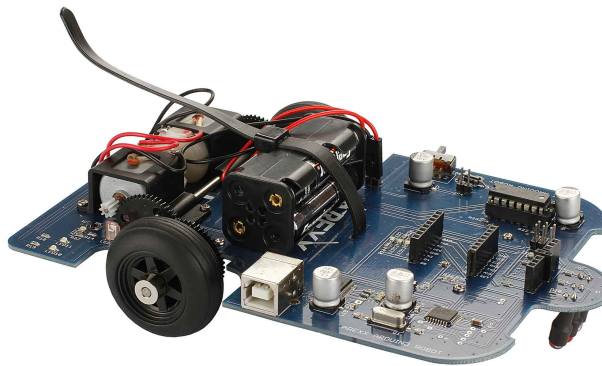
Expandable via expansion pins

With optional Bluetooth:

Read data sent via Bluetooth from a PC or Android phone

Transfer data to a PC or Android phone via Bluetooth

Cruise around via Android phone control



Features:

- ATmega328P, 8-bit AVR-RISC processor with 16 MHz clock
- Includes firmware and hardware selftest
- Delivered fully assembled (no soldering needed)
- CD with software, manual, and many extras
- Arduino open source software
- On-board odometer sensor on both wheels
- Line tracker sensor
- USB interface programming
- Expansion kits available
- I²C bus
- 2 independently controlled 3V-DC motors
- 14 digital I/Os on the processor (9 free)
- 8 analog input lines (2 free)
- ISP connector for bootloader programming
- Wireless control possible with optional Bluetooth and 433 MHz RF

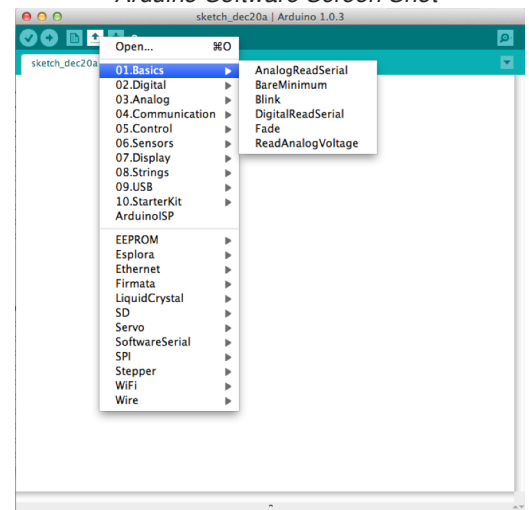
Overview:

The AAR (Arduino-Compatible) Robot is a small autonomous mobile robot which is perfect for those new to the robotics world and also for experienced Arduino fans.

Designed in the Arduino open-source prototyping platform, the AAR is easy to program and run. With many expansion kits available your creativity is the only limit to where your AAR Robot will go.

The AAR is ideal as an introduction into processor controlled hobby electronics, and also for educational projects in schools and colleges.

Arduino Software Screen Shot



AAR

Specifications

<i>AAR (Arduino-Compatible) Robot</i>	
LED indicators	13
Processor memory	32kb in-system programmable flash
Supply voltage	4 x AAA batteries (Not Included)
Supply current	Min 10mA Max 600mA
Dimension (H x W x D)	40 x 120 x 180 mm
Technical data subject to change without notice	

AAR comes with the following items:

AAR vehicle

CD

USB Cable

Available Accessories:

ARX-WRL
ARX-BT3
ARX-SNK
ARX-ULT
ARX-MSP
ARX-EXP

Training & Support Manual on CD

Chapter 1: Introduction
The Arduino robotics family
Specifications

Chapter 2: General Description

Chapter 3: Arduino Robot
Block diagram
AAR hardware
Arduino software

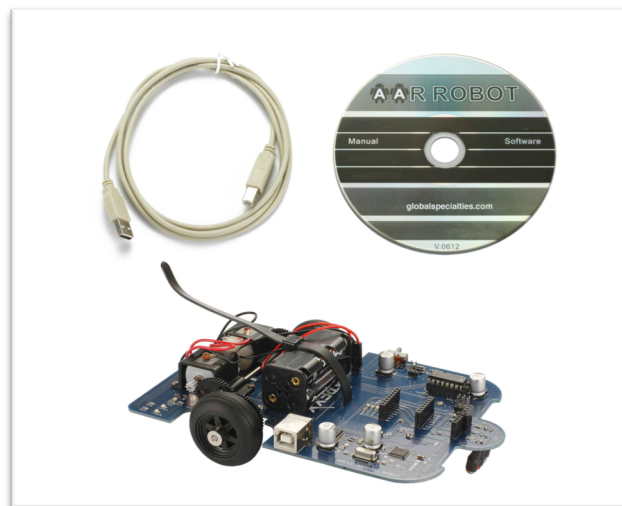
Chapter 4: The AAR
Download and installation of software
The Arduino language
Installation of a USB driver
AAR hardware
Installing the battery compartment
Arduino software
Programming with Arduino programs
Selecting an Arduino program
Selecting the correct COM-port
Program transfers to the Arduino Robot

Chapter 5: H-Bridge Circuits

Chapter 6: Odometry

Chapter 7: Programming a Boot-loader

Appendix:
Parts list
Main board—top view
Main board—bottom view
Schematics AAR



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