



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Preface – Getting Started

Welcome to the world of Grove! Grove is a collection of various modular sensors and actuators that help you dive in and enjoy the electronics world with ease. Before we discuss our Grove modules in detail, we want to outline some basic tools and preparatory steps that you will need to complete first.

For more information go to: www.seeedstudio.com

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1. What is Arduino?

Arduino is a flexible and easy-to-learn open source, development platform that is very popular among makers, hobbyists, and interactive artists. It ignited the maker movement and enabled people to bring to life tons of creative projects. It also sparked a collaborative community that provides a supportive environment and thrives on further development and innovations, like our Grove system. Moreover, Arduino is the backbone of our Grove system and is the programming environment that will be used to enable your Grove modules.

To get started, you will need to purchase an Arduino, if you haven't already. Arduino and its clones are available on countless websites and can even be found in retail stores. You can buy them at the official [Arduino site](#) or follow the links on that site to purchase them from distributors, like Seeed Studio. Google search will turn up other options, as well.

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2. Arduino IDE Installation

Arduino IDE (integrated development environment) is C/C++ based developmental programming software for the Arduino board. After purchasing your Arduino, you will need to install the Arduino IDE on your computer. The IDE can be installed on Mac OS X, Windows XP, Windows Vista, Windows 7, and various Linux operating systems. Installation instructions are broken down by operating system and sometimes more detailed instructions are provided for a specific Arduino model. Thankfully the Arduino team provides us a detailed installation guide for most environments: <http://arduino.cc/en/Guide/HomePage>.



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Getting Started with Arduino

Introduction: What Arduino is and why you'd want to use it.

Installation: Step-by-step instructions for setting up the Arduino software and connecting it to an Arduino Uno, Mega2560, Duemilanove, Mega, or Diecimila.

- + [Windows](#)
- + [Mac OS X](#)
- + [Linux](#) (on the playground wiki)

Environment: Description of the Arduino development environment and how to change the default language.

Libraries: Using and installing Arduino libraries.

Instructions for other boards:

- + [Arduino BT](#)
- + [Arduino Due](#)
- + [Arduino Fio](#)
- + [Arduino Leonardo and Micro](#)
- + [LilyPad Arduino](#)
- + [Arduino Mini](#)
- + [Arduino Nano](#)
- + [Arduino Pro](#)
- + [Arduino Pro Mini](#)
- + [Ethernet shield](#)

3. Language Reference

What if you are unfamiliar with the programming language? The Arduino team provides a well thought-out, comprehensive web site that breaks down the commands into three different categories: structure, variables and functions. Each command is explained in simple terms and illustrated with sample code. In fact, the easiest way to learn Arduino is to start with the sample code and then modify for your specific needs. For more information please see <http://arduino.cc/en/Reference/HomePage>.



The screenshot shows the Arduino Reference website. At the top is the Arduino logo, which consists of two interlocking infinity symbols, one with a minus sign and one with a plus sign, above the word "ARDUINO". To the right of the logo is a search bar with a "search" button. Below the logo is a navigation menu with links for "Buy", "Download", "Getting Started", "Learning", "Reference", "Products", "FAQ", and "Contact Us". The "Reference" link is highlighted. Below the navigation menu is a breadcrumb trail: "Reference | Language | Libraries | Comparison | Changes". The main heading is "Language Reference". Below the heading is a paragraph: "Arduino programs can be divided in three main parts: structure, values (variables and constants), and functions." There are three columns of content: "Structure", "Variables", and "Functions". Under "Structure", there are links for "setup()", "loop()", and "Control Structures" (with sub-links for "if" and "if...else"). Under "Variables", there is a "Constants" section with links for "HIGH | LOW", "INPUT | OUTPUT | INPUT_PULLUP", "true | false", and "integer constants". Under "Functions", there are "Digital I/O" (with links for "pinMode()", "digitalWrite()", and "digitalRead()") and "Analog I/O" (with a link for "analogReference()").

Now you are ready to explore the world of Grove!