

MuntsOS Embedded Linux

Application Note #1: Development Environment Setup for Debian Linux

**Revision 16
1 January 2024**

**by Philip Munts
President, Munts Technologies
<http://tech.munts.com>**

Introduction

This application note describes how to install the application software development environment for **MuntsOS Embedded Linux** onto a computer running x86-64 or ARM64 Debian Linux **apt** based operating system.

The program files within the cross-toolchain packages are statically linked, so they should work on any variant or version of x86-64 or ARM64 Debian Linux (e.g. Ubuntu).

This procedure also works with the following environments:

- Debian Linux on Windows using [Windows Subsystem for Linux](#).
- Debian Linux on ChromeOS using [Linux on Chrome OS](#).

Installation Procedure

Step 1: Prepare the system for application software development with the following commands:

```
sudo apt -y install build-essential git gprbuild tar wget
```

Step 2: Add the **Munts Technologies Debian Package Repository** to your system, with the following commands:

```
wget http://repo.munts.com/Debian12/amd64/munts-repo.deb  
sudo dpkg -i munts-repo.deb && rm munts-repo.deb  
sudo apt update
```

Step 3: Install **MuntsOS** cross-toolchain packages, with one or more of the following commands, depending on which boards you need to target:

```
sudo apt -y install muntsos-dev-aarch64  
sudo apt -y install muntsos-dev-beaglebone  
sudo apt -y install muntsos-dev-raspberrypi1  
sudo apt -y install muntsos-dev-raspberrypi2
```

The 32-bit BeagleBone, Raspberry Pi 1, and Raspberry Pi 2 boards are all obsolete, but still supported. For new development, we recommend a 64-bit board, such as the Raspberry Pi 3/4/5 and **muntsos-dev-aarch64**.

Each **MuntsOS** cross-toolchain package installs cross-compilers for the Ada, C, C++, Fortran, Free Pascal, Go, and Modula-2 programming languages.

You can also install **all** of the **MuntsOS** cross-toolchain packages at one time with a single command:

```
sudo apt -y install muntsos-dev
```

Easy Setup Script

The script available at <http://git.munts.com/muntsos/scripts/setup-debian> makes the setup procedure even easier:

```
wget http://git.munts.com/muntsos/scripts/setup-debian  
chmod 755 setup-debian && ./setup-debian && rm setup-debian
```