

GNU Toolchain Install Guide for HMS30C7202

Preliminary

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1. Introduction

GNU cross tool has C compiler, assembler, linker and gdb debugger

2. ARM GNU Tool

2.1 Compiler

arm-linux-binutils-2.10-1.i386.rpm

The programs in this package are used to manipulate binary and object files that may have been created on the ARM architecture.

arm-linux-glibc-2.1.3-2.i386.rpm

Contains the symlinks, headers, and object files needed to compile and link programs which use the standard C library.

arm-linux-gcc-2.95.2-2.i386.rpm

GNU C compiler, a fairly portable optimizing compiler which supports multiple languages. This package includes support for C, C++, and Objective C.

2.2 Installing the Compiler binaries

All of these are located under `/usr/local/arm-linux/`. To install the binutils, gcc, and glibc (which is the minimum development environment), use the following commands

```
# rpm -Uvh arm-linux-binutils-2.10-1.i386.rpm
# rpm -Uvh arm-linux-glibc-2.1.3-2.i386.rpm
# rpm -Uvh arm-linux-gcc-2.95.2-2.i386.rpm
```

2.3 Compiler Confirmation

gcc, binutil binary
location `/usr/local/arm-linux/bin`

standard C library
location `/usr/local/arm-linux/arm-linux/include, /usr/local/arm-linux/arm-linux/lib`

gcc lib
location `/usr/local/arm-linux/lib/gcc-lib/arm-linux/2.95.2`

The compiler is installed successfully when the associated files are in the right folder as above

2.4 Running the toolchain

Before running any of these binaries, you need to add the directory that they are installed (`/usr/local/arm-linux/bin`) into your path. Use the following command to do this:

Bash% `PATH=/usr/local/arm-linux/bin:$PATH export PATH`

Or editing to file (`~/.bash_profile`)

```
# Get the aliases and functions
if [ -f ~/.bashrc ]; then
    . ~/.bashrc
fi

# User specific environment and startup programs

PATH=/usr/local/arm-linux/bin:$PATH:$HOME/bin ← insert path
BASH_ENV=$HOME/.bashrc
USER_NAME="root"
```

All binaries have the normal GNU names, except they are prepended with "arm-linux-". For example, the compiler is called `arm-linux-gcc`

2.5 Compile Sample

```
#include <stdio.h>
int main()
{
    printf("Hello World");
}
```

`arm-linux-gcc -o hello-arm hello.c`