

crossbuild-essential-armhf

crossbuild-essential-armhf is essentially a **convenience/meta-package** that installs the **appropriate cross-compilation components**.

What is installed

On Debian Bookworm, crossbuild-essential-armhf version 12.9 declares only these direct dependencies:

```
gcc-arm-linux-gnueabi
g++-arm-linux-gnueabi
dpkg-cross
```

The meta-package itself is tiny. Those direct dependencies pull in the actual compiler, linker, target C library, headers and C++ runtime. The significant transitive packages on a clean Bookworm installation include:

```
gcc-12-arm-linux-gnueabi
g++-12-arm-linux-gnueabi
cpp-arm-linux-gnueabi
cpp-12-arm-linux-gnueabi
binutils-arm-linux-gnueabi
```

```
libc6-armhf-cross
libc6-dev-armhf-cross
linux-libc-dev-armhf-cross
```

```
libgcc-s1-armhf-cross
libgcc-12-dev-armhf-cross
libstdc++6-armhf-cross
libstdc++-12-dev-armhf-cross
```

```
libasan8-armhf-cross
libatomic1-armhf-cross
libgomp1-armhf-cross
libubsan1-armhf-cross
```

<code>

`dpkg-cross` also brings in Debian packaging support, including `dpkg-dev`, Perl modules and `libdebiana-dpkgcross-perl`. The exact complete transaction depends on which packages are already installed.

Importantly, `crossbuild-essential-armhf` does ****not**** install arbitrary target development libraries such as:

```
<code>
libssl-dev:armhf
libcurl4-openssl-dev:armhf
libasound2-dev:armhf
```

Those must be installed separately through Debian multiarch or supplied by a target sysroot. Adding armhf as a foreign architecture is required for installing :armhf multiarch packages, but it is not required merely to install the cross-toolchain packages listed above.

Check what would be installed

To see exactly what APT would add on a particular Debian system without installing anything:

```
sudo apt update
sudo apt install --simulate crossbuild-essential-armhf
```

To inspect the direct dependencies or recursively list dependencies:

```
apt-cache depends crossbuild-essential-armhf

apt-cache depends \
  --recurse \
  --no-recommends \
  --no-suggests \
  crossbuild-essential-armhf
```

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