

Updated Compilation Procedure for T-Blade3 v1.2

1 Directory Structure

In this document, \$ROOT refers to the top level of the T-Blade3 directory containing the following files:

- [Copyright.txt](#) - file containing information pertaining to the use and distribution of T-Blade3
- [documentation](#) - subdirectory which contains additional documentation for T-Blade3
- [GitHub.address](#) - file containing the address of the GitHub page with the T-Blade3 git repository
- [inputs](#) - subdirectory containing example cases for T-Blade3
- [license.txt](#) - file containing T-Blade3 license information
- [Makefile](#) - master makefile for compiling T-Blade3/test suite/ESP UDPs
- [README](#) - main readme file for T-Blade3
- [source](#) - subdirectory containing source code for T-Blade3 and ESP UDPs (also contains sub makefiles for T-Blade3 and ESP)
- [tests](#) - subdirectory containing unit and regression tests for T-Blade3 (also contains sub makefile for the test suite)

```
mayank@qtilearch~/D/T-Blade3> ls
Copyright.txt  documentation/  GitHub.address  inputs/  license.txt  Makefile  README  source/  tests/
```

Figure 1: T-Blade3 top-level directory

2 Compilation

2.1 Compiling T-Blade3

In \$ROOT, run:

```
$ make
```

This will create the T-Blade3 binary in a new subdirectory, [bin](#).

To clean object files, module files and binary files, run:

```
$ make clean
```

2.2 Running Test Suite

2.2.1 Installing pFUnit

pFUnit (pfunit.sourceforge.net) needs to be installed to run test suite. To build pFUnit for serial use after obtaining the code, run the following commands in the top-level pFUnit directory:

```
$ export F90=gfortran
$ export F90_VENDOR=GNU
$ make tests
```

To perform a serial installation of pFUnit, run the following commands in the top-level pFUnit directory:

```
$ mkdir pfunit-serial
$ make install INSTALL_DIR=pfunit-serial
```

After the installation is complete, set the PFUNIT global environment variable (depending on your shell) required by T-Blade3. If using bash, add the following to your ~/.bashrc:

```
export PFUNIT=/path/to/pfunit-serial
```

and then, run

```
$ source ~/.bashrc
```

2.2.2 Compiling and Running T-Blade3 Tests

After pFUnit has been installed and the PFUNIT environment variable has been set, in \$ROOT, run:

```
$ make tests
```

The tests can be run only after T-Blade3 has been compiled (see **2.1**)

2.3 Compiling with ESP

To compile T-Blade3 with ESP (including T-Blade3 related UDPs), in \$ROOT, run:

```
$ make clean_esp
```

```
$ make esp
```