

PN Number 139 Revision 1

TITAN Toolchain fix for AEL v4i5

Issue Date:	08 MAY 2013	Circulation:	General
Board Version:	2	Board Issue:	1
ECO Reference:	NA	MODBOX:	NA

Notice:

Summary

This product notice is to highlight the following issue with the TITAN V2I1 Linux Development Kit release:

AEL v4i5 supplied for use with the TITAN V2 fails to build C & C++ applications due to a setup issue following install of the supplied AEL tools.

User Implications

The toolchain will fail to build all C & C++ applications.

Detecting the issue

Install the AEL tools and set up the paths as described.

Create a simple 'Hello World' C application.

e.g.

```
#include <stdio.h>
#include <stdlib.h>

int main(void) {
    puts("Hello World");
    return EXIT_SUCCESS;
}
```

Now try to build it

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

The compiler will generate an error saying that it cannot find `/lib/libc.so.6`.

If your release has been fixed, the compile will complete silently and have produced `a.out` which will be an ARM executable that you can run on the TITAN board.

Issue cause

In Linux, `libc.so` is actually a script. The script used by the AEL tools is located here: `opt/arcom/arm-linux/lib/libc.so`

The problem is that `opt/arcom/arm-linux/lib/libc.so` is pointing to `/lib` instead of `/opt/arcom/arm-linux/lib`

```
$ cat /opt/arcom/arm-linux/lib/libc.so
```

```
* GNU ld script
  Use the shared library, but some functions are only in
```

```
the static library, so try that secondarily. */  
OUTPUT_FORMAT(elf32-littlearm)  
GROUP ( /lib/libc.so.6 /usr/lib/libc_nonshared.a)
```

Issue resolution

Open the file for editing (with root privileges).

In the *opt/arcom/arm-linux/lib/libc.so* script, change GROUP to say:

```
GROUP (/opt/arcom/arm-linux/lib/libc.so.6 /opt/arcom/arm-linux/lib/libc_nonshared.a)
```

Save the file and exit.

Retest the toolchain as documented above.

The AEL tools should now be installed and fully functional.

We sincerely apologise for any inconvenience this may cause you and your end users.
If you have any questions about this please contact Eurotech Technical Support.