



ADLE3800PC - Serial Port Setup and Test for Linux

The following steps can be used to confirm serial port operation under Linux.

For the ADLE3800PC, serial port driver support in Linux begins at kernel 3.16.0 and up, with the exception of Ubuntu and Debian which do not work beyond Kernel 3.19.8. Check with tech support for more information.)

1. First check the Linux kernel version on the target board with the following command:
uname -r

It must be 3.16.0 or above.

2. Make sure the serial ports are initialized properly in the kernel by running command:
dmesg | grep tty

You should see something similar to the following:

```
[ 0.000000] console [tty0] enabled
[ 2.159659] 0000:00:1e.3: ttyS0 at MMIO 0xd0820000 (irq = 18, base_baud = 2764800) is a 16550A
[ 2.160221] 0000:00:1e.4: ttyS1 at MMIO 0xd081e000 (irq = 19, base_baud = 2764800) is a 16550A
```

On 32 bit Ubuntu 14.04.2 there may be a message “failed to request DMA” but it should be OK. Serial ports should still work.

Note: It is important that the user checks kernel version and serial port names with commands in steps 1 & 2 before setting up Minicom. Normally, the port names show up as ttyS0 & ttyS1, but on Ubuntu 14.04.2 they are ttyS4 & ttyS5

3. Start Minicom with the following command:
sudo minicom -s

If Minicom is not already installed, install it with command:

sudo apt-get install minicom

4. On the popup menu, select “Serial port setup” -> Select “A” -> Change Serial Device to your desired COM port. E.g: /dev/ttyS0
5. Hit [Enter] twice to set serial port config information to Minicom
6. Select “Save setup as dfl”
7. Select “Exit”
8. Set up a second test station with Minicom or compatible terminal program.
9. With an RS-232 null modem cable, connect the active serial ports between both test stations
[\(Amazon: Null Modem Cable\)](#)
10. Type something on the Minicom console of the first ADLE3800PC board that data should appear on the terminal console on the second system.

Note: The procedure above has been verified on the following Linux distros:

*Debian 8.1.0 – i386 with kernel 3.16.0
Fedora 22 – x86_64 with kernel 4.1.3
Ubuntu 14.04.2 – i386 with kernel 3.16.0
Lubuntu 14.04.3 – i386 with kernel 3.19.0*

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Data subject to change without notice. 3-14-2016