TN08003

LPC21xx/22xx, 2104/5/6 revision detect

Rev. 01 — 13 October 2008 Technical note

Document information

Info	Content
Keywords	LPC21xx/22xx, 2104/5/6 revision detect

Revision history

Rev	Date	Description
01	20081013	Initial version.

Contact information

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1. Introduction

The associated Keil uVision project (RevDetect.uv2) demonstrates how, through a simple software routine, the user can detect a "/01 Revision" part of the LPC21xx/22xx and LPC2104/5/6 series devices.

The code was written for the LPC2129 device and can be easily adapted for the other devices in the series.

1.1 Revision Detection Sample Code

In the code, the serial port (UART0 or UART1) is used as a Console so a message can be shown on a PC terminal program (Hyperterminal or Teraterm).

The Terminal program must be configured with 9600-8-N-1-None. A variable called ‘rev’ is defined to hold the result, so debugging the program and inspecting its value, can also be used to distinguish revisions;

```
rev = -1    //  the test has not begun yet
rev =  0    //  the part is an "old" part
rev =  1    //  the part is a "/01" part
```

In addition, the variable ‘rev’ can be used to take the desired actions in the user application software.

After the revision detection test, P0.4 is used to blink a led as a "board activity" indicator.

1.2 Revision Detection Algorithm

The "/01" revision devices incorporate an autobaud feature for the UARTs. This new register may be used to differentiate them from the "old" parts. Bit 1 (Mode bit) of the UxACR register must be written with both a '1' and a '0' value. Verifying (reading back the same value) each of the above operations will test for the revision. That is, for the old parts, where this register doesn't exist, one of the above operations will fail. If both operations succeed, this means the register exist, and a /01 revision part was detected.

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