
Linux Serial Driver Patch Code for SCH322x

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INTRODUCTION

This document provides information on using the Linux Serial Driver in SCH322x devices. The Linux serial driver is compiled as part of the kernel (and is not a loadable module) by default, the kernel must be rebuilt in order to update the serial driver.

PROCEDURE IN LINUX

Apply the patch file (linux-2.6.0-21-Microchip-highspeed-serial.patch) by copying it to the main source directory for the kernel. Then run the following patch command:

```
patch -Np1 -i linux-2.6.0-21-microchip-highspeed-serial.patch
```

This will update the kernel's serial driver source. Then take the appropriate steps to rebuild the kernel, then add the new kernel to the boot menu and reboot the system with the new kernel.

VALIDATION

The patch is tested under the 2.6.17 kernel (2.6.17-14 is the latest ubuntu kernel) and it worked on their system. The onboard transceiver doesn't support the 921,600 and 1,500,000 baud rates thus the signal was distorted. In order to get the high speed baud rates to work, the enhanced frequency select bits, bit 3 and 2, must be set to '1' in the serial port mode register (0xF0) in configuration space. This must be done in BIOS. The BIOS should also make sure the enable high speed bit, bit 1, is set as well.

The patch is also tested on the 2.6.0 (earliest 2.6 kernel) and 2.6.21 (latest 2.6 kernel) sources and it patched the code correctly. Due to a lack of systems with these various kernels, only the 2.6.17 patched kernel was tested using the customer's system.

AN1985

APPENDIX A: APPLICATION NOTE REVISION HISTORY

TABLE A-1: REVISION HISTORY

Revision	Section/Figure/Entry	Correction
DS00001985A (08-11-15)		Document Release

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