

Notes for I.MX5 parts

The MX51 MSL has been modified to add MX53 support. The platform device init has been restructured to put all devices and resources in devices.c and to put all platform_data and registration in the board init files. This change to have common MX5x MSL results in arch/arm/mach-mx51 being renamed to arch/arm/mach-mx5. In addition, this is aligned with MX51 support in mainline kernel. The addresses defined in arch/arm/plat-mxc/include/mach/mx5x.h for AIPS and SPBA bus are the MX51 address. The addresses are fixed-up at runtime for MX53 by subtracting 0x20000000 from the address. See the usages about MX53_BASE_ADDR, MX53_OFFSET in arch/arm/mach-mx5/. Using the base address defines directly with ioremap require adjustment. Using IO_ADDRESS does not require any adjustment. The clock code has numerous changes to add MX53 specific clocks and separate MX51 clocks. The clock initialization has separate functions for MX51 and MX53. There are several changes to handle the differences in the clock tree mainly for PLL4, ESDHC and TVE. MX51 pin definition creation macro has been renamed to distinguish between MX51 and MX53 differences.

Building a single kernel binary for MX51 and MX53 is supported. Support is dependent on a runtime phyoffset patch to allow a variable RAM start address. The single kernel support is automatically enabled when both MX51 and MX53 boards are enabled in the config. The built uImage has a fixed load address corresponding to the correct address for MX53 (0x70008000). For MX51, the latest version of u-boot must be used as the load address is adjusted if the address is invalid for MX51. Alternatively, mkimage can be used with zImage to create a uImage with the correct load address. zImages are completely position independent.

Furthermore, after MX50 has been added to MX5x MSL, building a single kernel binary for MX50/MX51/MX53 is supported. Since MX50 is derived from MX53, it shares plenty of codes of MX53, for example, MX53_BASE_ADDR, MX53_OFFSET. Many things just stay the same. For simplicity, just regard MX50 and MX53 as a twin in new MX5x family.