Product category

miriac® MPX-LS1046A
miriac® MPX-LS1043A
miriac® MPX-LS1088A

Question

We are using MicroSys LS1046 CPU board, and we built our own baseboard, now we have a problem with ethernet. We are using only one Marvell 88E1512 PHY which has RGMII interface, the PHY address was set to 5'h0, but your CRX05 Baseboard has 4 88E1512 PHYs, 1 PHY in RGMII, and it is PHY address is 5'h03, so our Ethernet doesn't work. My question:

1) How can we set the our 88E1512 PHY address to 5'h03 to match your software, (as I downloaded the latest 88E1512 Datasheet, Marvell says this PHY address can only be 5'h0 or 5'h1, how did you set your RGMII PHY address to 5'h3)

2) Or What SW code needs to be changed to tell the SW(Unoot/Linux) to use RGMII PHY at address 5'h3 to make it work, we tried to change your hardcoded PHY address mapping to 5'h0 (in uboot\git\include\ configs \mpxls1046.h), but it still doesn't work.

Answer

First, a general comment. Whenever you design your own carrier board it is 99% certain that you will have to modify the software we provide so that it matches your new carrier. Normally it is U-Boot and the Device Tree which will need modifying, however if you have added new devices, which are not on our carrier, then you may also need a Linux device driver if that device is not currently supported by the Linux kernel.

Now to answer your specific questions.

1) My assumption here is that you are using the MV88E1512 PHY whereas we are using the MV88E1512P. As you correctly noted, the MV88E1512 only allows PHYAD[0] to be set via the CONFIG pin, whereas the MV88E1512P allows PHYAD[3:0] to be set via CONFIG and other strapping pins. In other words, our PHY address of 0×3 is fixed in hardware and you cannot change it. Since your carrier is also presumably finished, that leaves the software option. This is the normal procedure anyway – see above.

2) I believe there are only 2 places you need to change the address. One is the file you already mentioned in U-Boot sources include/configs/mpxls1046.h and the other is the device tree in Linux sources kernel-source/arch/arm64/boot/dts/freescale/mpxls10xx_crx05.dtsi

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