

NFS on AM437

Wednesday, December 14, 2022 10:24 AM

JJD 13 days ago TL_Guru 54790 points

Siva,

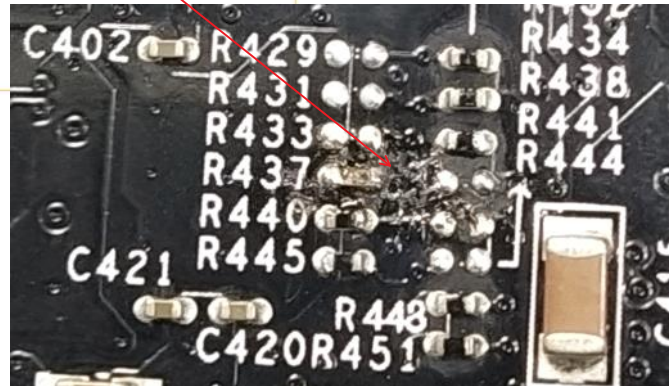
The mode strapping on the GP EVM for the Ethernet PHY is setup to support all modes of operation (10/100/1000Mbps, half and full duplex). However, the Ethernet Controller on AM437x does not support 1G, half duplex.

This ultimately affects Ethernet booting with the GP EVM. If the remote Ethernet PHY you connect does support 1Gbit, half duplex mode (which is the case with most PCs and ethernet switches), then during boot the EVM Eth PHY will auto-negotiate to 1Gbit, half duplex, and the ROM will never send out a BOOTP packet to initiate Ethernet boot. Because of this limitation in the AM437x Ethernet controller, this mode needs to be precluded in the Ethernet PHY boot strapping options.

Specifically on the GP EVM, the strapping option should be MODE[3:0] = 1110 (RGMII mode - advertise all capabilities (10/100/1000 speed half-/full-duplex), except 1000Base-T half-duplex), which means the default resistor stuffing should be **install R437, remove R438**.

Regards,
James

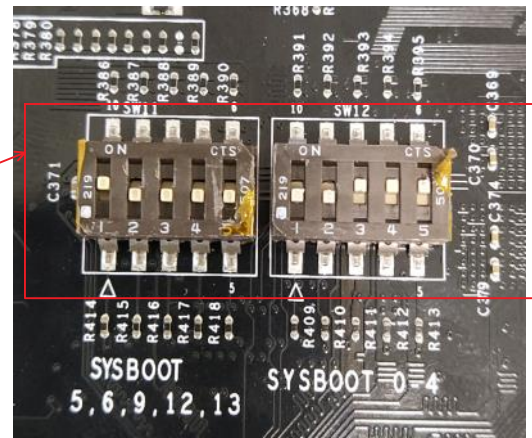
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Table 5-10. SYSBOOT Configuration Pins (continued)

SYS BOOT [18] (18)	SYS BOOT [17] (17)	SYS BOOT [16] (16)	SYS BOOT [15:14] (15:14)	SYS BOOT [13:12] (13:12)	SYS BOOT [11] (11)	SYS BOOT [9] (9)	SYS BOOT [8] (8)	SYS BOOT [7] (7)	SYS BOOT [6] (6)	SYS BOOT [4:0] (4:0)
0b = Do not route EXTDEV_PL L to CLKOUT2 1b = Route EXTDEV_PL L to CLKOUT2	0b = CLKOUT1 disabled 1b = CLKOUT1 enabled	don't care	00b = 13:2 01b = 24 10b = 25 11b = 26	00b	0b = non-mused device 1b = mused device	NCR: 0 = WAIT signal not monitored during boot 1 = WAIT signal monitored during boot	NCR: 0b = Wait mux option 0 1b = Wait mux option 1	NCR: 0b = pinmux option 0 1b = pinmux option 1 2b = pinmux option 2 11b = reserved	EMAC: 0b = MII 1b = RMI	11011b EMAC1 UART0 NOR
0b = Do not route EXTDEV_PL L to CLKOUT2 1b = Route EXTDEV_PL L to CLKOUT2	0b = CLKOUT1 disabled 1b = CLKOUT1 enabled	don't care	00b = 13:2 01b = 24 10b = 25 11b = 26	00b	don't care	don't care	don't care	don't care	EMAC: 0b = MII 1b = RMI	11100b EMAC1
don't care	0b =	USB MS	00b =	00b	don't	don't	don't	don't care	don't	11101b USB CL



SYSBOOT Setting on Hardware? Is this correct (HW is AM437x REV-1.5B)



