

PCN Overview 	
PCN Number	PCN_iMX6_R03_2017-09-20.docx
PCN Date	20.09.2017
Type of Change	Change Software
Status	Released

Change Information	
Reason of Change	In case of DHCOM i.MX6 the ENET_OUT pin of the CPU is used as Ethernet PHY reference clock. On the basis of Linux power management the clock is disabled if Ethernet link is down. This means the clock is disabled and activated again during system boot. It sometimes may need a PHY RESET to get functional after the clock had been disabled and enabled again. Failure to do this results in the link state constantly toggling between up and down: <pre>fec 02188000.ethernet eth0: Link is Up - 100Mbps/Full - flow control rx/tx fec 02188000.ethernet eth0: Link is Down fec 02188000.ethernet eth0: Link is Up - 100Mbps/Full - flow control rx/tx fec 02188000.ethernet eth0: Link is Down [...]</pre>
Description of Changes	Add PHY RESET to get Ethernet PHY functional after the clock had been disabled and enabled again.
Customer Impact	If the customer uses the 4.4.60 DHCOM i.MX6 Mainline Kernel or 4.1.15 DHCOM i.MX6 NXP Vendor Kernel, the Linux Kernel must be updated to get Ethernet working. Note: 3.10.17 DHCOM i.MX6 Vendor Kernel and 3.14.x DHCOM i.MX6 Mainline Kernel are not affected of this problem.
Suggested Measures	The customer must add the newest patches to Linux Kernel to get Ethernet working: Linux 4.4.60: https://github.com/dh-electronics/linux-imx6qdl/commit/1a07b13c51fb6fcfa8543d4c3705df4306f86213 Linux 4.1.15: https://github.com/dh-electronics/linux-imx6-vendor/commit/7a47775bac22a3eab000dfa3d428adf3363f0cec
Logistics	-

Affected Products	
HI00029	DHCM-iMX6DL-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2
HI00031	DHCM-iMX6S-C080-R102-F0409-E-T-I-01D2
HI00033	DHCM-iMX6S-C080-R051-F0051-E-I-01D2
HI00035	DHCM-iMX6Q-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2
HI00036	DHCM-iMX6S-C080-R051-F0819-E-SD-RTC-T-HS-I-01D2
HI00037	DHCM-iMX6S-C080-R051-F0409-E-T-I-01D2
HI00038	DHCM-iMX6S-C080-R051-F0409-E-RTC-T-I-01D2
HI00040	DHCM-iMX6S-C080-R102-F0409-E-RTC-I-01D2
HI00041	DHCM-iMX6DL-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2
HI00042	DHCM-iMX6S-C080-R102-F0409-E-RTC-T-I-01D2
HI00045	DHCM-iMX6Q-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2
HI00046	DHCM-iMX6S-C080-R051-F0819-E-SD-RTC-T-HS-I-01D2
HI00047	DHCM-iMX6D-C080-R102-F0409-E-I-01D2

Contacts	
Technical Contact	Tel: +49 8662 4882 0 Fax: +49 8662 4882 99 Mail: support@dh-electronics.de
Sales Contact	Tel: +49 8662 4882 0 Fax: +49 8662 4882 99 Mail: sales@dh-electronics.de