


PCN Overview			
			
PCN Number	DHCOR-iMX6ULL-002		
PCN Date	11.02.2020		
Type of Change	Change Software		
History			
Revision	Date	Description	Name
R01	11.02.2020	First draft	CN
R01	18.02.2020	Released	AG

Change Information	
Reason of Change	<p>The DHCOM/DHCOR i.MX6ULL BSP Kernel 4.19.25 doesn't read the speed grading during boot. It follows that the Kernel uses the full range of available frequencies:</p> <ul style="list-style-type: none"> ▪ 198 MHz ▪ 396 MHz ▪ 528 MHz ▪ 792 MHz (only industrial) ▪ 900 MHz (only commercial) <p>There is a problem with CPUs that are not designed for 900 MHz, because this overclocking can make the CPU unstable.</p>
Description of Changes	There are patches that fixes this behavior. See below.
Customer Impact	If customers use a CPU type whose maximum frequency is below 900 MHz and use an old version of the 4.19.25 DHCOM/DHCOR i.MX6ULL Linux Kernel, they should check if the patches are already included in the kernel sources. Also affected are old versions of the update kernel.
Suggested Measures	<p>Affected customers must add the following patches to the Linux Kernel to prevent an unstable CPU:</p> <p>Linux 4.19.25:</p> <p>https://github.com/dh-electronics/linux-imx6qdl/commit/f201c1c118e38bacdcb35ba232670e1569575745</p> <p>https://github.com/dh-electronics/linux-imx6qdl/commit/f201c1c118e38bacdcb35ba232670e1569575745</p> <p>https://github.com/dh-electronics/linux-imx6qdl/commit/23abe37789ea6d3cd2e275441f1677dc415c8b</p>

	<p>Update Kernel: The patches were integrated into the DHCOM/DHCOR Update Kernel version 2020-02-10.</p> <p>If customers use their own Linux Kernel they can check if they are also affected by displaying the used frequency in the Linux console: # cat /sys/bus/cpu/devices/cpu0/cpufreq/stats/time_in_state</p>
Logistics	-

Affected Products	
HI00067	DHCR-iMX6ULL-C052-R025-SPI-C-01LG
HI00069	DHCR-iMX6ULL-C052-R025-SPI-WBT-C-01LG
HI00072	DHCR-iMX6ULL-C080-R051-SPI-WBT-I-01LG
HI00076	DHCM-iMX6ULL-C052-R025-F0409-SPI-E-RTC-C-01D2
HI00077	DHCM-iMX6ULL-C052-R025-F0012-SPI-E-SD-RTC-C-01D2

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