Lineo Warp!!
for ConnectCore6 SBC
Evaluation Kit

Release Note

Version 1.2

LINEO
Solutions

Rev.	Date	Changed Conetnts
1.0	2015/10/30	First release
1.1	2016/01/25	Added clear_bootf to 2.2.1 Extended Command Modified 3.1 eMMC Map Added 4.3 Snapshot Clearing Modified 5. How to Write Binary
1.2	2016/02/10	Modefied Android Version of 1.1.2 Software Modified 5.1 u-boot writing procedure

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1. Before Using Warp!! for ConnectCore6 SBC Evaluation Kit

This Evaluation Kit shall be used strictly in accordance with the Software Evaluation License Agreement.

This document is exclusively for Warp!! version 4.0 for ConnectCore6SBC. Please refer to the relavant section.

1.1 Evaluation Kit Configuration

1.1.1 Hardware

Android version

Evaluation Board	ConnectCore6 SBC Early Availability Kit
CPU	Freescale i.MX6 1GHz
SDRAM	1GByte (64bit)
Storage Device	eMMC 4GByte
HDMI	Android version: 1920x1080 60fps
LCD Option	LCD Application Kit, including Fusion 10” WSVGA(1024x600)LCD panel with PCAP touch

1.1.2 Software

Android version

Warp!!	4.0
Boot loader	u-boot 2013.04 + Warp!! patch
Kernel	3.0.35 + Warp!! patch
Android	4.2.2

2. Operating Instructions

2.1 Startup Setting

2.1.1 Boot Option

MicroSD and eMMC boot are switched by J5.

J5 open	eMMC boot
J5 close	microSD boot

2.1.2 Auto-Boot Option

U-boot for Warp!! automatically carries out Warp!! boot.

To stop auto-boot and move to u-boot prompt, execute serial input after power-on.

2.2 u-boot Operation

2.2.1 Extended Command

Command	Description
warp	Carry out Warp!! boot by using snapshoot Example: => warp
clear_bootf	Disable Warp!! boot by deleting snapshot. Example: => clear_bootf

3. Software

3.1 eMMC Map

Android version

Part	Start	End	Block	ID	Content
1	16	999999	499992	0x0C	kernel/ uramdisk.img
2	1000000	5999999	2500000	0x83	rootfs
3	6000000	7733247	866614	0xA0	Warp!!

Note: Warp!! will fail to operate if area for Warp!! is rewritten.

3.2 Supported Kernel Drivers

Operation after Warp!! boot is confirmed for devices marked as ○ in the following list.

Android version

Device	Android
CPU : i.MX6	○
SDRAM	○
LCD	○
HDMI	○
UART4	○
USB(Host)	○
SD/MMC	○
SDMA	○
PMIC(I2C)	○
Touch Panel	○
SATA	○
Ethernet	○
WDT	○
eMMC	○
RTC(I2C)	○
GPU	○
VPU	○
IPU	○
Timer	○
Audio Head Phone	○
User LED x3 (GPIO)	○

4. Limited Operations of Evaluation Kit

4.1 Operation After Warp!! Boot

This Evaluation Kit is set limitations on its operation.
The system stops (freezes) after 3 minutes from Warp!! boot.

4.2 Snapshot Save

Snapshot save is not available with the Evaluation Kit.
With regural Warp!! product, snapshot can be saved (including to microSD card) at any boot point.

4.3 Snapshot Clearing

Delete snapshot by executing the following command in u-boot prompt.

=> clear_bootf

By deleting snapshot, carry out normal boot insatead of Warp!! boot. To run Warp!! boot again after clearing snapshot, execute what is described in 5.2 warp_emmc.bin writing procedure and rebuild eMMC.

4.4 Module Load

Module load is not allowed with the Evaluation Kit.

5. How to Write Binary

To write binary, microSD card for boot is required. Write bootsd.bin to microSD card of 2GB or more.

$ dd if=bootsd.bin of=/dev/sdX conv=notrunc

5.1 u-boot writing procedure

Allocate u-boot-ccimx6sbc-warp.imx to the first partition of an microSD card for boot. Run microSD boot, execute the following command in u-boot prompt and carry out writing.

=>update uboot mmc 1:1 fat u-boot-ccimx6sbc-warp.imx

5.2 warp_emmc.bin writing procedure

Save warp_emmc.bin to USB storage (EXT4 format recommended) and insert it to a target. Run microSD boot and move to kernel prompt. Mount USB storage, then execute the following command in kernel prompt and carry out writing.

Android version

$ dd if=warp_emmc.bin of=/dev/block/mmcblk0 conv=notrunc; sync; sync