Product Change Notification (PCN)

Transition from Ixora V1.1A to Ixora V1.2A

Date of Publication: 2020-01-09

1. Toradex Product Numbers Affected

EOL Product		Replacement Product	
Part Number	Product Name	Part Number	Product Name
01331100	Ixora V1.1A	01331200	Ixora V1.2A

2. Product Phase in / Phase out Schedule

EOL Product		Replacement Product	
Part Number	Estimated Schedule	Part Number	Estimated Schedule
01331100	LTB (Last Time Buy): 2020-07-10 non-cancellable and non-returnable LTS (Last Time Ship): 2020-12-31	01331200	Sample Production: Limited numbers available now. Volume Production: June 2020

Customers are strongly encouraged to convert their designs to the replacement parts listed above. Toradex also advises customers to carefully validate the new product version before their production release.

3. Description of Changes

The hardware design of the Ixora V1.2A carrier board is fully open source. Customers can review all changes in the respective schematics and PCB design data:
https://developer.toradex.com/products/ixora-carrier-board#design-resources

Changes from 01331100 Ixora V1.1A to 01331200 Ixora V1.2A:

- New DC-DC Buck / Step-down regulators are being used to increase the output power and efficiency of the 3.3V and 5V_SW power supply.
- Board ID EEPROM (IC14; AT34C02D-XHM-B) has been assembled by default.
- The Micro USB connector (X9) was changed to Hirose ZX62-AB-5PA(31).
- Ethernet connector (X11) was changed to BEL Fuse A829-1J1T-KM; allowing for -40°C to +100°C operating temperature.
- New Voltage Level translator and ESD protection solution (IC9; Nexperia IP4786CZ32) has been implemented for the HDMI interface.
- SD card circuit has been modified:
  - Load switch IC (IC22; Microchip MIC94070YMT-TR) has been added to control SD card interface power rail. The MXM3_148 (MMC1_D4) pin can be used to control SD card power.
  - SD card interface pull-up resistors (R60, R61, R62, R63, and R64) are not assembled by default anymore. Pull-ups were not needed as they are integrated internally on the System

on Module (SoM). This also allows voltage switching for high-speed SD modes with the SoMs supporting this feature.

- Load switch ICs (IC18, IC19, IC20, IC21; Microchip MIC94070YMT-TR) have been added to control CAN1 and CAN2 interface power rails. MXM3_158 (MMC1_D7) and MXM3_35 (SATA1_ACT#) pins can be used to control CAN1 and CAN2 power respectively. This allows power saving up to 300mW when CAN isn't used.
- Additional capacitors C162, C163, C164, and C165 (not assembled by default) have been added to 3.3V_PCIE1 and 3.3V_mSATA1 power rails.
- Shared pads resistors (R154, R155) connected to SD1_CD# / MXM3_190 pin to eliminate false interrupts as the SD1 interface isn't used on Ixora.
- Improved EMC design:
  - SH1 and SH2 pins of switches SW1, SW2, SW3 are connected to CHASSIS_GND
  - Connection to shield pins of connectors X7, X8, X9, X10, X11, X17 has been modified.
  - Mounting holes on the carrier board are connected to the CHASSIS_GND.

4. Customer Impact

4.1. Hardware Design

- Changed Micro USB (X9, new Hirose ZX62-AB-5PA(31)) and Ethernet (X11, new BEL Fuse A829-1J1T-KM) connectors. The shape of the connectors has slightly changed.
  Customers who designed their own housing for the Ixora carrier board need to review these minor changes in dimension carefully.
- The new EEPROM is attached to the standard I2C interface (I2C1_SCL, I2C1_SDA), also used on the Ixora for the RTC clock. Customers who have attached other I2C peripherals to this bus need to check for any slave address conflicts. The EEPROM uses the I2C (7bit) address 0x50 by default. It could be changed by assembly options on the Ixora. See Ixora schematics for details.
- The new HDMI protection chip provides a 100mA (typical) overcurrent protection on the 5V output. HDMI accessories drawing more may not work.

4.2. Software

- All changes do not have any impact on Software. The newly added features (MMC1 and CAN power switches, and EEPROM) won't be usable out of the box with older BSPs. The changes implemented in V1.2A will behave the same way as on V1.1A with Toradex' standard BSPs. The new features will be implemented in future Linux BSP offerings in 2019. For Windows Embedded Compact BSPs, the new features can be accessed through Toradex' standard libraries (GPIO and I2C) if required.

5. Definitions

LTB: Last Time Buy

LTS: Last Time Ship

EOL: End Of Life

6. Contact

Please contact Toradex if you have any questions.

For commercial and sales questions please contact shop@toradex.com

For technical questions please contact support@toradex.com