PCN for i.MX6 SOM Rev 1.5 to Rev 1.9 and 2.0

Product change notification (PCN) background

Like many other global companies, SolidRun has also been impacted by the industry shortages of components and supply disruption during the last 12 months. These impacts range from extended lead times and price increases due to buying stock at the open market to secure deliveries to our customers. While we have been working around the clock to make sure components are available to our partners and customers we do see some long lead items that are not expected to be improved in the near future, therefore SolidRun is offering a new revision of it's i.MX6 SOM to address supply chain issues.
Due to the limited supply visibility of the 1Gbps ethernet PHY on the existing i.MX6 SOM Rev 1.5, SolidRun is updating the hardware design to introduce components with better availability and lead times and provide a 2nd source option for the WiFi/BT chipset.

Below is the part number with limited supply and the migration to the new part number;

1. Ethernet PHY - Qualcomm, PN: AR8035 → Analog Devices, PN: ADIN1300

Affected part numbers

All i.MX6 based System on Modules.

Product phase out timeline

End of life product		**Replacement product**	
SKU	**Timeline**	**SKU**	**Estimated timeline**
SRMX6XXXXXXXXXXXXX**V15**XX	Immediately	SRMX6XXXXXXXXXXXXX**V19**XX	Samples: March, 2022
			Volume: Q2,2022
SRMX6XXXXXXXXXXXXX**V15**XX	Immediately	SRMX6XXXXXXXXXXXXX**V20**XX	Samples: March, 2022
			Volume: Q2, 2022

Description of changes

Hardware

Below is a table that summarizes all the possible combinations that SolidRun will support during the migration -

Revision	**WiFi/BT**	**PHY**
1.5	TI WL183X (WiLink8)	Qualcomm AR8035

Revision	WiFi/BT	PHY
1.9	Azurewave AW-NM372SM	Analog Devices ADIN1300
2.0	TI WL183X (WiLink8)	Analog Devices ADIN1300

⚠ Beyond the WiFi/BT and PHY changes above; the B2B_SD3_DATA0..7, B2B_SD3_CLK and B2B_SD3_CMD signals are not exported anymore in the part number that does NOT include eMMC.
I.e. those signals are floating and not connected (NC)

Migration plan

Following is the recommended migration plan for customers using the current i.MX6 SOM Rev 1.5 -

⚠ Note that both WiFi/BT and PHY are optional features that can be removed during production, therefore for customers who do not require them can order a configuration without it.

Current Revision	Using WiLink8 WiFi/BT?	Using AR8035 PHY?	Migrate to	Required Software Modifications
1.5	No	No	No migration	None
1.5	Yes	Yes	1.9	WiFi/BT and 1Gbps PHY
1.5	Yes	Yes	2.0	1Gbps PHY
1.5	No	Yes	1.9	1Gbps PHY

Migration plan to i.MX8M Plus

In general, migration to newer NXP based chipset i.MX8M Plus is being considered and prototyped. The benefits of such migration are -

1. Performance, longevity and newer features due to newer chipset.
2. Better supply of 1Gbps ADIN1300 and Murata based 11ac WiFi/BT support that are on the i.MX8 designs.
3. Better pricing for dual and quad core SKUs vs i.MX6.
4. Exact mechanical footprint as i.MX6 based SOM.

On the other hand, since the devices are different, the pinout is not 100% compatible and might require changes. Following is a link to the pinout tool and more documentation will follow once the migration study is done.

Software Impact

To simultaneously support the Analog Devices ADIN1300 and the Quallcomm AR8035 please review the following article; i.MX6 Rev 1.9 - Analog Devices PHY.

To support the AzureWave AW-NM372SM WiFi/BT chipset Linux brcmfmac driver must be used with it's corresponding firmwares; please review the following article i.MX6 PCB rev 1.9 - AzureWave AW-NM372SM

Mechanical

The newer PCBs boundaries and pinout is exactly like previous; though minor changes height wise over the newer WiFi/BT (AzureWave) chipset.

Notice that no changes are required to perform when using SolidRun's heatsink.

Pricing

- **Effective immediately, i.MX6 SOM Rev 1.5 with Qualcomm PHY is going to be increased by $30 USD for new and existing orders.**
- Rev 1.9, 2.0 and Rev 1.5 pricing will have the same list price levels for equivalent configurations.

Contact

For further information and customer specific questions about your project please contact your sales representative at SolidRun or contact our sales at: sales@solid-run.com

Support

If you require technical support during the migration or have technical questions, please contact our support team at: support@solid-run.com