

Type of Change		
Date: 2020.06.03 <yyyymm.dd>	Document Number: LPN-420e_1	
<input type="checkbox"/> Major Change <input checked="" type="checkbox"/> Minor Change	Condition: Customer BSP based up PHYTEC BSP PD13.2.4 (ptydist) or PD15.3.0 (yocto) and newer Otherwise: Please check the impact for your BSP	
Description of Change: Due to better availability and more flexibility in production, the 1 GByte NAND Flash S34ML08G201TFI000 (IM797) is approved as a second source for all phyCORE®-i.MX 6 and phyFLEX®-i.MX 6 modules. Standard-BOM's will be delivered with W29N08GVSIAA (IM883) or S34ML08G201TFI000 (IM797). If your software is based on a PHYTEC BSP PD13.2.4 or PD15.30 or newer version, this change has no functional impact. There is no plan to change the BOM/product version as this change is minor and the second source NAND Flash has been used before. Customer-Specific Modification (KSM/KSP) versions which have used the S34ML08G201TFI000 before without "BOM-freeze" will be supplied with both NAND Flash. PHYTEC recommends customers with a "BOM-freeze" to approve the second source to ensure continuity of supply.		
Type of Change: Component Change	Impacted Component: NAND Flash	Software Update necessary: No

Affected Product	
Affected PHYTEC product group:	phyBOARD®-Mira, phyBOARD®-Subra, phyCARD®-i.MX 6, phyCORE®-i.MX 6, phyFLEX®-i.MX 6
Affected PHYTEC product group part:	PB-00601, PB-01501, PCA-A-XL3, PCL-058, PCM-058, PFL-A-02

Possible Options	
<input checked="" type="checkbox"/>	Change to new product revision with replacement Customer with BOM-freeze
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Schedule	
Last Time Buy (current product version): (Last date to set an order for the current product version)	. . . <yyyymm.dd> ORDERS ARE NON-CANCELABLE AND NON-RETURNABLE.
Samples with the second source part orderable:	2020.06.08
Planned mass production:	2020 Q3 (depending on stock)

Anticipated Impact on Form, Fit, Function, EMC, Quality or Reliability
(1) no impact in fit or form (2) no impact in function by using an Phytec Linux BSP PD13.2.4 (ptxdist) or ≥ PD15.3.0 (yocto) (3) no impact in EMI will be expected, because all flashes use the same GPMI Frequency in the Linux BSP PD13.2.4 and PD15.3.0

Engineering Change (Component, Firmware, Process, other)		
Current Part		New Part
1 GByte NAND Flash	Description	1 GByte NAND Flash
Winbond	Manufacturer	Spansion/Cypress
W29N08GVSIAA	Manufacturer Part #	S34ML08G201TFI00
IM883 H600570	PHYTEC Internal Part #	IM797 H600520

Technical Parameters			
Parameter	Original IM883 H600570	Replacement IM797 H600520	Assess- ment ¹
Package, pitch, form (mm)	TSOP 48-Pin, 12 x 20 x 1.2 mm, 0.5 mm Pitch	TSOP 48-Pin, 12 x 20 x 1.2 mm, 0.5 mm Pitch	2
Operating temperature (°C)	-40°C to 85°C	-40°C to 85°C	2
Supply voltage (V)	2.7V to 3.6V	2.7V to 3.6V	2
Density	8 Gbit; 1 GByte	8 Gbit; 1 GByte	2
Bus width	8-bit	8-bit	2
Page size (Byte)	2048 + 64	2048 + 128	1
Eraseblock size (kByte)	128 + 4	128 + 8	1
Spare area (Byte)	64	128	1
Open NAND Flash Interface (ONFI)	1.0 compliant	1.0 compliant	2
ECC minimum	1-bit/528 byte	4-bit/528 byte	1
Read / write cycle time (tRC, tWC)	min. 25 µs	min. 25 µs	2
Block Erase Time (tBERS)	max. 10 ms	max. 10 ms	2
Programm Time (tPROG)	max. 700 µs	max. 700 µs	2
Valid blocks	min. 8032	min. 8032	2
Data retention (years)	10 years	10 year (typ)	2
Program / erase cycle	100000	100000 (typ)	2
Number of partial program cycles	4	4	2
Manufacture and device ID	0xEFD3919554	0x01D3D1955A	2
Referenced Documents: Datasheet SM34ML08G2, datasheet W29N08GV			

Note:

Technical differences and similarities in the tables above may not be complete. Please refer to the manufacture datasheets for a complete comparison.

¹ Assessments:
 1: Effects are to be expected
 2: No negative effects are to be expected

PHYTEC Qualification	
The new product(s) were qualified according to our company qualification procedure and best practices.	
<input type="checkbox"/> PCB redesign was necessary,	<input type="checkbox"/> Software adaption was necessary,
<input type="checkbox"/> Software tests were conducted with: BSP used: Test programs:	

Recommended Measures for Customer
<input type="checkbox"/> Software update or patch <input type="checkbox"/> Linux BSP: <input type="checkbox"/> backward compatible Link:
<input type="checkbox"/> Update Programming Tool
<input checked="" type="checkbox"/> Test the recommended measures in combination with your system and use case. PHYTEC recommends that customers take this opportunity to review these changes against their specifications, system design considerations, and environment conditions to assess impact (if any) to their application.

Please contact our order team to ask for an interims or final stock for components or PHYTEC products.
Please contact our support, if you need any further information.

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Purpose: This Product Change Notification (PCN) is to provide notification to PHYTEC customers of component, process, or other relevant engineering changes on a PHYTEC hardware subassembly. Impact, qualification, validation, and approval of this change shall be documented on the corresponding Customer-Specific Modification (KSM/KSP) form for the PHYTEC hardware subassembly.

Per JEDEC Standard JESD46-D Section 3.2.3; lack of acknowledgment of this PCN within 30 days constitutes acceptance of change.

Revision History of the Document
_1: Initial document