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PPCN 140015

PROCESS/ PRODUCT CHANGE NOTIFICATION

If you have any questions concerning this change, please contact:

NAME: Shaf Rahman

EMAIL: shafiqur.rahman@micrel.com

PHONE: (408) 955-1612

TYPE OF CHANGE

- Bonding wire change from Gold to Silver for all parts of the KSZ8081/KSZ8091 family (all MII/RMII parts)
- Silicon revision from Rev A2 to Rev A3 for RMII parts only of the KSZ8081/KSZ8091 family
- Impacted part numbers are listed under 'Product ID' section below

- **Ordering part numbers & Device markings:**
 - Silver wire bonded products:
 - For the first 6-months,
 - Order with special part numbers (SPNZxxxxxx/SPNYxxxxxx)
 - Device marking: KSZ8081xxxxx/KSZ8091xxxxx
YYWWSxxx
 - After 6-months,
 - Order with generic part numbers (KSZ8081xxxxx/KSZ8091xxxxx)
 - Device marking: KSZ8081xxxxx/KSZ8091xxxxx
YYWWSxxx
 - Gold wire bonded products:
 - For the first 6-months,
 - Order with generic part numbers (KSZ8081xxxxx/KSZ8091xxxxx)
 - Device marking: KSZ8081xxxxx/KSZ8091xxxxx
YYWWxxx
 - After 6-months,
 - Order with special part numbers (SPNZxxxxxx/SPNYxxxxxx)
 - Device marking: KSZ8081xxxxx/KSZ8091xxxxx
YYWWxxx

EFFECTIVITY

- Rev A3 (RMII parts) based Silver wire bonded products will start shipping from January 19' 2015.
 - Rev A2 (MII parts) based Silver wire bonded products will start shipping from January 19' 2015.
 - Rev A2 (MII/RMII parts) based Gold wire bonded products will continue to ship to customers until July 31' 2015
1. Before July 31' 2015, Rev A3 (RMII) & Rev A2 (MII) parts based on Silver wire bonding are available under these special part numbers:
- SPNZ801132 for KSZ8081RNDCA
 - SPNY801132 for KSZ8081RNDIA (I-Temp version)
 - SPNZ801133 for KSZ8081RNACA
 - SPNY801133 for KSZ8081RNAIA (I-Temp version)



- *SPNZ801134* for KSZ8081RNBCA
- *SPNY801134* for KSZ8081RNBIA (I-Temp version)
- *SPNZ801135* for KSZ8081MNXCA
- *SPNY801135* for KSZ8081MNXIA (I-Temp version)
- *SPNZ801136* for KSZ8081MLXCA
- *SPNY801136* for KSZ8081MLXIA (I-Temp version)

- *SPNZ801137* for KSZ8091RNDCA
- *SPNY801137* for KSZ8091RNDIA (I-Temp version)
- *SPNZ801138* for KSZ8091RNACA
- *SPNY801138* for KSZ8091RNAIA (I-Temp version)
- *SPNZ801139* for KSZ8091RNBCA
- *SPNY801139* for KSZ8091RNBIA (I-Temp version)
- *SPNZ801140* for KSZ8091MNXCA
- *SPNY801140* for KSZ8091MNXIA (I-Temp version)
- *SPNZ801141* for KSZ8091MLXCA
- *SPNY801141* for KSZ8091MLXIA (I-Temp version)

2. Before July 31st 2015, Rev A2 parts (RMII/MII) based on Gold wire bonding are available under these generic part numbers:

- KSZ8081RNDCA
- KSZ8081RNDIA
- KSZ8081RNACA
- KSZ8081RNAIA
- KSZ8081RNBCA
- KSZ8081RNBIA
- KSZ8081MNXCA
- KSZ8081MNXIA
- KSZ8081MLXCA
- KSZ8081MLXIA

- KSZ8091RNDCA
- KSZ8091RNDIA
- KSZ8091RNACA
- KSZ8091RNAIA
- KSZ8091RNBCA
- KSZ8091RNBIA
- KSZ8091MNXCA
- KSZ8091MNXIA
- KSZ8091MLXCA
- KSZ8091MLXIA

3. After August 1st, 2015, Rev A3 (RMII) & Rev A2 (MII) based on Silver wire bonding are available under these generic part numbers:

- KSZ8081RNDCA (Rev A3)
- KSZ8081RNDIA (Rev A3)
- KSZ8081RNACA (Rev A3)



- KSZ8081RNAIA (Rev A3)
- KSZ8081RNBCA (Rev A3)
- KSZ8081RNBIA (Rev A3)
- KSZ8081MNXCA (Rev A2)
- KSZ8081MNXIA (Rev A2)
- KSZ8081MLXCA (Rev A2)
- KSZ8081MLXIA (Rev A2)

- KSZ8091RNDCA (Rev A3)
- KSZ8091RNDIA (Rev A3)
- KSZ8091RNACA (Rev A3)
- KSZ8091RNAIA (Rev A3)
- KSZ8091RNBCA (Rev A3)
- KSZ8091RNBIA (Rev A3)
- KSZ8091MNXCA (Rev A2)
- KSZ8091MNXIA (Rev A2)
- KSZ8091MLXCA (Rev A2)
- KSZ8091MLXIA (Rev A2)

4. After August 1st, 2015, Rev A2 parts (RMII/MII) based on Gold wire bonding are available under these special part numbers::

- *SPNZ801142* for KSZ8081RNDCA
- *SPNY801142* for KSZ8081RNDIA (I-Temp version)
- *SPNZ801143* for KSZ8081RNACA
- *SPNY801143* for KSZ8081RNAIA (I-Temp version)
- *SPNZ801144* for KSZ8081RNBCA
- *SPNY801144* for KSZ8081RNBIA (I-Temp version)
- *SPNZ801145* for KSZ8081MNXCA
- *SPNY801145* for KSZ8081MNXIA (I-Temp version)
- *SPNZ801146* for KSZ8081MLXCA
- *SPNY801146* for KSZ8081MLXIA (I-Temp version)

- *SPNZ801147* for KSZ8091RNDCA
- *SPNY801147* for KSZ8091RNDIA (I-Temp version)
- *SPNZ801148* for KSZ8091RNACA
- *SPNY801148* for KSZ8091RNAIA (I-Temp version)
- *SPNZ801149* for KSZ8091RNBCA
- *SPNY801149* for KSZ8091RNBIA (I-Temp version)
- *SPNZ801150* for KSZ8091MNXCA
- *SPNY801150* for KSZ8091MNXIA (I-Temp version)
- *SPNZ801151* for KSZ8091MLXCA
- *SPNY801151* for KSZ8091MLXIA (I-Temp version)

PRODUCT ID (DESCRIPTION)

- KSZ8081RNDCA
- KSZ8081RNDIA
- KSZ8081RNACA



- KSZ8081RNAIA
- KSZ8081RNBCA
- KSZ8081RNBIA
- KSZ8081MNXCA
- KSZ8081MNXIA
- KSZ8081MLXCA
- KSZ8081MLXIA

- KSZ8091RNDCA
- KSZ8091RNDIA
- KSZ8091RNACA
- KSZ8091RNAIA
- KSZ8091RNBCA
- KSZ8091RNBIA
- KSZ8091MNXCA
- KSZ8091MNXIA
- KSZ8091MLXCA
- KSZ8091MLXIA

DESCRIPTION OF CHANGE/EFFECT OF CHANGE

1. Gold to Silver bonding wire transition:

There is no device performance change due to the bonding wire transition from Gold to Silver. Gold-wire and silver-wire parts are drop-in pin compatible.

2. Silicon revision from Rev A2 to Rev A3 for RMII parts only of the KSZ8081/KSZ8091 family

No.	Description of the Change	Customer Impact & Recommended Action
1	The silicon revision number in PHY Register 3h, Bits [3:0] is changed from 0x0 for rev-A2 to 0x1 for rev-A3.	If software checks the silicon revision number, software changes might be needed.
2	<p>For rev-A2, in RMII – 25MHz Clock Mode, RMII transmit errors can occur at the RMII transmit FIFO when the internal 25MHz read clock and 50MHz write clock are phase aligned after chip power-up or after exiting software power-down.</p> <p>Rev-A3 locks the 25/50MHz clocks at the RMII transmit FIFO to one clock phase after every chip power-up and after every software power-down exit to fix the aforementioned problem in rev-A2.</p>	If board design uses the KSZ8081 / KSZ8091 PHY in RMII – 25MHz Clock Mode, a change to rev-A3 is highly recommended.