



Microsemi Corporation

July 10, 2015

Product/Process Change Notification No: PCN1401 Addendum B

Change Classification: Major

Subject: PCN1401 – FPGA and SoC Product Conversion to Copper Wire (palladium coated copper wire (PCC wire))

Description of Change: Microsemi® has successfully completed qualification of the copper bond wire on selected FPGA and SoC products, per JEDEC standard.

A second copper bond wire qualification was completed to cover other SmartFusion®2 and IGLOO®2 products that are not covered in [Table 2 • Addendum A](#). Refer to [Table 3 • Addendum B](#) for the additional part number list. Mixed shipments of products listed in Addendum A and B could continue until products assembled with the gold wire are depleted from the inventory.

Conversion to PCC wire is aligned with the current industry trend. Our assembly vendors have extensive experience in the copper bond wire assembly. The copper wire is used in high volume production by our assembly vendors, and has demonstrated equal electrical and mechanical performance than the gold wire. Products assembled with the copper bond wire have no change in the products moisture sensitivity level (MSL), product functionality, performance, quality, and reliability.

Products assembled with the copper wire have a different set of materials, which is more suitable for the copper wire. However, products built with the gold wire remains with the same materials. Contact Microsemi for more details on the materials for the copper wire.

Reason for Change: FPGA and SoC Product Conversion to Copper Wire (PCC wire).

Products Affected by this Change: SmartFusion2 and IGLOO2 Products

Table 1 • Intended Schedule of Shipment

Device/Package	Assembly Location	Qualification Report	Shipment Date	Comments
M2S050/M2GL050 and smaller devices in FG896/FGG896; FG484/FGG484, and VF400/VFG400 Packages	Amkor Korea	PA-194	July. 30, 2014	All products listed in FG896/FGG896; FG484/FGG484, and VF400/VFG400 Packages listed in Addendum A
M2S025/M2GL025 and smaller devices in VF256/VFG256 Packages	Amkor Korea	PA-194 Amendment 1	Oct. 7 2015	All products in VF256/VFG256 listed in Addendum B
M2S090/M2GL090 and smaller devices in FG676/FGG676 and FG484/FGG484 Packages	Amkor Korea	PA-202	Oct. 7, 2015	M2S090/M2GL090 products in FG676/FGG676 and FG484/FGG484 listed in Addendum B

Note:

1. Refer to [Table 2 •Addendum A](#) and [Table 3 •Addendum B](#) for the complete part number list
2. M2S060/M2GL060 devices in FG76/FGG676, FG484/FGG484, and VF400/VFG400 packages have been qualified by extension with Palladium Coated Copper wire (PCC wire).
3. Shipments of M2S060/M2GL060 products can be with copper wires and/or gold wires.
4. SmartFusion2 and IGLOO2 products built with Flip chip Pb/Pb-free packages - FCS325, FCS536, FCV484, and FC1152 - do not use wire bond; therefore, this PCN is not applicable.

Table 2 • Addendum A

M2GL005-1FG484	M2GL005-1FGG484	M2GL005S-1VF400I	M2GL005S-1VFG400I	M2GL050-VF400
M2GL010-1FG484	M2GL010-1FGG484	M2GL010-1VF400I	M2GL010-1VFG400I	M2S005-VF400
M2GL010T-1FG484	M2GL010T-1FGG484	M2GL010S-1VF400I	M2GL010S-1VFG400I	M2S010T-VF400
M2GL025-1FG484	M2GL025-1FGG484	M2GL010T-1VF400I	M2GL010T-1VFG400I	M2S010-VF400
M2GL025T-1FG484	M2GL025T-1FGG484	M2GL010TS-1VF400I	M2GL010TS-1VFG400I	M2S025T-VF400
M2GL050-1FG484	M2GL050-1FGG484	M2GL025-1VF400I	M2GL025-1VFG400I	M2S025-VF400
M2GL050T-1FG484	M2GL050T-1FGG484	M2GL025S-1VF400I	M2GL025S-1VFG400I	M2S050T-VF400
M2S005-1FG484	M2S005-1FGG484	M2GL025T-1VF400I	M2GL025T-1VFG400I	M2S050-VF400
M2S010-1FG484	M2S010-1FGG484	M2GL025TS-1VF400I	M2GL025TS-1VFG400I	M2GL005-VF400I
M2S010T-1FG484	M2S010T-1FGG484	M2GL050-1VF400I	M2GL050-1VFG400I	M2GL010T-VF400I
M2S025-1FG484	M2S025-1FGG484	M2GL050S-1VF400I	M2GL050S-1VFG400I	M2GL010-VF400I
M2S025T-1FG484	M2S025T-1FGG484	M2GL050T-1VF400I	M2GL050T-1VFG400I	M2GL025T-VF400I
M2S050-1FG484	M2S050-1FGG484	M2GL050TS-1VF400I	M2GL050TS-1VFG400I	M2GL025-VF400I
M2S050T-1FG484	M2S050T-1FGG484	M2S005-1VF400I	M2S005-1VFG400I	M2GL050T-VF400I
M2GL005-1FG484I	M2GL005-1FGG484I	M2S005S-1VF400I	M2S005S-1VFG400I	M2GL050-VF400I
M2GL005S-1FG484I	M2GL005S-1FGG484I	M2S010-1VF400I	M2S010-1VFG400I	M2S005-VF400I
M2GL010-1FG484I	M2GL010-1FGG484I	M2S010S-1VF400I	M2S010S-1VFG400I	M2S010T-VF400I
M2GL010S-1FG484I	M2GL010S-1FGG484I	M2S010T-1VF400I	M2S010T-1VFG400I	M2S010-VF400I
M2GL010T-1FG484I	M2GL010T-1FGG484I	M2S010TS-1VF400I	M2S010TS-1VFG400I	M2S025T-VF400I
M2GL010TS-1FG484I	M2GL010TS-1FGG484I	M2S025-1VF400I	M2S025-1VFG400I	M2S025-VF400I
M2GL025-1FG484I	M2GL025-1FGG484I	M2S025S-1VF400I	M2S025S-1VFG400I	M2S050T-VF400I
M2GL025S-1FG484I	M2GL025S-1FGG484I	M2S025T-1VF400I	M2S025T-1VFG400I	M2S050-VF400I
M2GL025T-1FG484I	M2GL025T-1FGG484I	M2S025TS-1VF400I	M2S025TS-1VFG400I	M2GL050-VFG400
M2GL025TS-1FG484I	M2GL025TS-1FGG484I	M2S050-1VF400I	M2S050-1VFG400I	M2S005-VFG400
M2GL050-1FG484I	M2GL050-1FGG484I	M2S050S-1VF400I	M2S050S-1VFG400I	M2S010T-VFG400
M2GL050S-1FG484I	M2GL050S-1FGG484I	M2S050T-1VF400I	M2S050T-1VFG400I	M2S010-VFG400
M2GL050T-1FG484I	M2GL050T-1FGG484I	M2S050TS-1VF400I	M2S050TS-1VFG400I	M2S025T-VFG400
M2GL050TS-1FG484I	M2GL050TS-1FGG484I	M2GL005-FG484	M2GL005-FGG484	M2S025-VFG400
M2S005-1FG484I	M2S005-1FGG484I	M2GL010-FG484	M2GL010-FGG484	M2S050T-VFG400
M2S005S-1FG484I	M2S005S-1FGG484I	M2GL010T-FG484	M2GL010T-FGG484	M2S050-VFG400
M2S010-1FG484I	M2S010-1FGG484I	M2GL025-FG484	M2GL025-FGG484	M2GL005-VFG400I
M2S010S-1FG484I	M2S010S-1FGG484I	M2GL025T-FG484	M2GL025T-FGG484	M2GL010T-VFG400I
M2S010T-1FG484I	M2S010T-1FGG484I	M2GL050-FG484	M2GL050-FGG484	M2GL010-VFG400I
M2S010TS-1FG484I	M2S010TS-1FGG484I	M2GL050T-FG484	M2GL050T-FGG484	M2GL025T-VFG400I
M2S025-1FG484I	M2S025-1FGG484I	M2S005-FG484	M2S005-FGG484	M2GL025-VFG400I

M2S025S-1FG484I	M2S025S-1FGG484I	M2S010-FG484	M2S010-FGG484	M2GL050T-VFG400I
M2S025T-1FG484I	M2S025T-1FGG484I	M2S010T-FG484	M2S010T-FGG484	M2GL050-VFG400I
M2S025TS-1FG484I	M2S025TS-1FGG484I	M2S025-FG484	M2S025-FGG484	M2S005-VFG400I
M2S050-1FG484I	M2S050-1FGG484I	M2S025T-FG484	M2S025T-FGG484	M2S010T-VFG400I
M2S050S-1FG484I	M2S050S-1FGG484I	M2S050-FG484	M2S050-FGG484	M2S010-VFG400I
M2S050T-1FG484I	M2S050T-1FGG484I	M2S050T-FG484	M2S050T-FGG484	M2S025T-VFG400I
M2S050TS-1FG484I	M2S050TS-1FGG484I	M2GL005-FG484I	M2GL005-FGG484I	M2S025-VFG400I
M2GL050-1FG896	M2GL050-1FGG896	M2GL010-FG484I	M2GL010-FGG484I	M2S050T-VFG400I
M2GL050T-1FG896	M2GL050T-1FGG896	M2GL010T-FG484I	M2GL010T-FGG484I	M2S050-VFG400I
M2S050-1FG896	M2S050-1FGG896	M2GL025-FG484I	M2GL025-FGG484I	M2GL010T-1FG484M
M2S050T-1FG896	M2S050T-1FGG896	M2GL025T-FG484I	M2GL025T-FGG484I	M2GL025T-1FG484M
M2GL050-1FG896I	M2GL050-1FGG896I	M2GL050-FG484I	M2GL050-FGG484I	M2GL050T-1FG484M
M2GL050S-1FG896I	M2GL050S-1FGG896I	M2GL050T-FG484I	M2GL050T-FGG484I	M2GL010TS-1FG484M
M2GL050T-1FG896I	M2GL050T-1FGG896I	M2S005-FG484I	M2S005-FGG484I	M2GL025TS-1FG484M
M2GL050TS-1FG896I	M2GL050TS-1FGG896I	M2S010-FG484I	M2S010-FGG484I	M2GL050TS-1FG484M
M2S050-1FG896I	M2S050-1FGG896I	M2S010T-FG484I	M2S010T-FGG484I	M2S010T-1FG484M
M2S050S-1FG896I	M2S050S-1FGG896I	M2S025-FG484I	M2S025-FGG484I	M2S025T-1FG484M
M2S050T-1FG896I	M2S050T-1FGG896I	M2S025T-FG484I	M2S025T-FGG484I	M2S050T-1FG484M
M2S050TS-1FG896I	M2S050TS-1FGG896I	M2S050-FG484I	M2S050-FGG484I	M2S010TS-1FG484M
M2GL005-1VF400	M2GL005-1VFG400	M2S050T-FG484I	M2S050T-FGG484I	M2S025TS-1FG484M
M2GL010-1VF400	M2GL010-1VFG400	M2GL050-FG896	M2GL050-FGG896	M2S050TS-1FG484M
M2GL010T-1VF400	M2GL010T-1VFG400	M2GL050T-FG896	M2GL050T-FGG896	M2GL010T-1FGG484M
M2GL025-1VF400	M2GL025-1VFG400	M2S050-FG896	M2S050-FGG896	M2GL025T-1FGG484M
M2GL025T-1VF400	M2GL025T-1VFG400	M2S050T-FG896	M2S050T-FGG896	M2GL050T-1FGG484M
M2GL050-1VF400	M2GL050-1VFG400	M2GL050-FG896I	M2GL050-FGG896I	M2GL010TS-1FGG484M
M2GL050T-1VF400	M2GL050T-1VFG400	M2GL050T-FG896I	M2GL050T-FGG896I	M2GL025TS-1FGG484M
M2S005-1VF400	M2S005-1VFG400	M2S050-FG896I	M2S050-FGG896I	M2GL050TS-1FGG484M
M2S010-1VF400	M2S010-1VFG400	M2S050T-FG896I	M2S050T-FGG896I	M2S010T-1FGG484M
M2S010T-1VF400	M2S010T-1VFG400	M2GL005-VF400	M2GL005-VFG400	M2S025T-1FGG484M
M2S025-1VF400	M2S025-1VFG400	M2GL010T-VF400	M2GL010T-VFG400	M2S050T-1FGG484M
M2S025T-1VF400	M2S025T-1VFG400	M2GL010-VF400	M2GL010-VFG400	M2S010TS-1FGG484M
M2S050-1VF400	M2S050-1VFG400	M2GL025T-VF400	M2GL025T-VFG400	M2S025TS-1FGG484M
M2S050T-1VF400	M2S050T-1VFG400	M2GL025-VF400	M2GL025-VFG400	M2S050TS-1FGG484M
M2GL005-1VF400I	M2GL005-1VFG400I	M2GL050T-VF400	M2GL050T-VFG400	

Table 3 • Addendum B

M2S005-VF256	M2S005-VFG256	M2GL005-VF256	M2GL005-VFG256
M2S010-VF256	M2S010-VFG256	M2GL010-VF256	M2GL010-VFG256
M2S025-VF256	M2S025-VFG256	M2GL025-VF256	M2GL025-VFG256
M2S010T-VF256	M2S010T-VFG256	M2GL010T-VF256	M2GL010T-VFG256
M2S025T-VF256	M2S025T-VFG256	M2GL025T-VF256	M2GL025T-VFG256
M2S005S-VF256	M2S005S-VFG256	M2GL005S-VF256	M2GL005S-VFG256
M2S010TS-VF256	M2S010TS-VFG256	M2GL010TS-VF256	M2GL010TS-VFG256
M2S025TS-VF256	M2S025TS-VFG256	M2GL025TS-VF256	M2GL025TS-VFG256
M2S005-1VF256	M2S005-1VFG256	M2GL005-1VF256	M2GL005-1VFG256
M2S010-1VF256	M2S010-1VFG256	M2GL010-1VF256	M2GL010-1VFG256
M2S025-1VF256	M2S025-1VFG256	M2GL025-1VF256	M2GL025-1VFG256
M2S010T-1VF256	M2S010T-1VFG256	M2GL010T-1VF256	M2GL010T-1VFG256
M2S025T-1VF256	M2S025T-1VFG256	M2GL025T-1VF256	M2GL025T-1VFG256
M2S005S-1VF256	M2S005S-1VFG256	M2GL005S-1VF256	M2GL005S-1VFG256
M2S010TS-1VF256	M2S010TS-1VFG256	M2GL010TS-1VF256	M2GL010TS-1VFG256
M2S025TS-1VF256	M2S025TS-1VFG256	M2GL025TS-1VF256	M2GL025TS-1VFG256
M2S005-VF256I	M2S005-VFG256I	M2GL005-VF256I	M2GL005-VFG256I
M2S010-VF256I	M2S010-VFG256I	M2GL010-VF256I	M2GL010-VFG256I
M2S025-VF256I	M2S025-VFG256I	M2GL025-VF256I	M2GL025-VFG256I
M2S010T-VF256I	M2S010T-VFG256I	M2GL010T-VF256I	M2GL010T-VFG256I
M2S025T-VF256I	M2S025T-VFG256I	M2GL025T-VF256I	M2GL025T-VFG256I
M2S005S-VF256I	M2S005S-VFG256I	M2GL005S-VF256I	M2GL005S-VFG256I
M2S010TS-VF256I	M2S010TS-VFG256I	M2GL010TS-VF256I	M2GL010TS-VFG256I
M2S025TS-VF256I	M2S025TS-VFG256I	M2GL025TS-VF256I	M2GL025TS-VFG256I
M2S005-1VF256I	M2S005-1VFG256I	M2GL005-1VF256I	M2GL005-1VFG256I
M2S010-1VF256I	M2S010-1VFG256I	M2GL010-1VF256I	M2GL010-1VFG256I
M2S025-1VF256I	M2S025-1VFG256I	M2GL025-1VF256I	M2GL025-1VFG256I
M2S010T-1VF256I	M2S010T-1VFG256I	M2GL010T-1VF256I	M2GL010T-1VFG256I
M2S025T-1VF256I	M2S025T-1VFG256I	M2GL025T-1VF256I	M2GL025T-1VFG256I
M2S005S-1VF256I	M2S005S-1VFG256I	M2GL005S-1VF256I	M2GL005S-1VFG256I
M2S010TS-1VF256I	M2S010TS-1VFG256I	M2GL010TS-1VF256I	M2GL010TS-1VFG256I
M2S025TS-1VF256I	M2S025TS-1VFG256I	M2GL025TS-1VF256I	M2GL025TS-1VFG256I
M2S090-FG484	M2S090-FGG484	M2GL090-FG484	M2GL090-FGG484
M2S090-FG676	M2S090-FGG676	M2GL090-FG676	M2GL090-FGG676
M2S090T-FG484	M2S090T-FGG484	M2GL090T-FG484	M2GL090T-FGG484
M2S090T-FG676	M2S090T-FGG676	M2GL090T-FG676	M2GL090T-FGG676
M2S090TS-FG484	M2S090TS-FGG484	M2GL090TS-FG484	M2GL090TS-FGG484
M2S090TS-FG676	M2S090TS-FGG676	M2GL090TS-FG676	M2GL090TS-FGG676



M2S090-1FG484	M2S090-1FGG484	M2GL090-1FG484	M2GL090-1FGG484
M2S090-1FG676	M2S090-1FGG676	M2GL090-1FG676	M2GL090-1FGG676
M2S090T-1FG484	M2S090T-1FGG484	M2GL090T-1FG484	M2GL090T-1FGG484
M2S090T-1FG676	M2S090T-1FGG676	M2GL090T-1FG676	M2GL090T-1FGG676
M2S090TS-1FG484	M2S090TS-1FGG484	M2GL090TS-1FG484	M2GL090TS-1FGG484
M2S090TS-1FG676	M2S090TS-1FGG676	M2GL090TS-1FG676	M2GL090TS-1FGG676
M2S090-FG484I	M2S090-FGG484I	M2GL090-FG484I	M2GL090-FGG484I
M2S090-FG676I	M2S090-FGG676I	M2GL090-FG676I	M2GL090-FGG676I
M2S090T-FG484I	M2S090T-FGG484I	M2GL090T-FG484I	M2GL090T-FGG484I
M2S090T-FG676I	M2S090T-FGG676I	M2GL090T-FG676I	M2GL090T-FGG676I
M2S090TS-FG484I	M2S090TS-FGG484I	M2GL090TS-FG484I	M2GL090TS-FGG484I
M2S090TS-FG676I	M2S090TS-FGG676I	M2GL090TS-FG676I	M2GL090TS-FGG676I
M2S090-1FG484I	M2S090-1FGG484I	M2GL090-1FG484I	M2GL090-1FGG484I
M2S090-1FG676I	M2S090-1FGG676I	M2GL090-1FG676I	M2GL090-1FGG676I
M2S090T-1FG484I	M2S090T-1FGG484I	M2GL090T-1FG484I	M2GL090T-1FGG484I
M2S090T-1FG676I	M2S090T-1FGG676I	M2GL090T-1FG676I	M2GL090T-1FGG676I
M2S090TS-1FG484I	M2S090TS-1FGG484I	M2GL090TS-1FG484I	M2GL090TS-1FGG484I
M2S090TS-1FG676I	M2S090TS-1FGG676I	M2GL090TS-1FG676I	M2GL090TS-1FGG676I
M2S090T-1FG484M	M2S090T-1FGG484M	M2GL090T-1FG484M	M2GL090T-1FGG484M
M2S090TS-1FG484M	M2S090TS-1FGG484M	M2GL090TS-1FG484M	M2GL090TS-1FGG484M

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Regards,

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Any projected dates in this PCN are based on the most current product information at the time this PCN is being issued, but they may change due to unforeseen circumstances. For the latest schedule and any other information, please contact your local Microsemi Sales Office, the factory contact shown above, or your local distributor.

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