

Microsemi Corporation

June 16, 2014

Customer Notification No: CAN1416**Customer Advisory Notice (CAN) – Action Required**

Subject: Writing to the Embedded Flash Block (eNVM) in SmartFusion2 SoC FPGAs and IGLOO2 FPGAs

Dear Customer,

This notification describes updates needed to enable writing to the eNVM either at runtime or as a standalone bitstream. Detailed steps are provided in this notification to help designers identify whether their designs are likely to be impacted. Not using the recommended settings can result in corrupted eNVM pages when writing to the Embedded Flash Block (eNVM) in SmartFusion2 SoC FPGAs and IGLOO2 FPGAs (refer to the Appendix for the complete list of part numbers).

Recommended Settings

The default setting of the NV_FREQRNG register needs to be set to 0x0F when performing writes to the eNVM memory array. Reads are not affected.

Areas Impacted

- The STAPL file change available in Libero SoC 11.3 SP1 will automatically adjust the NV_FREQRNG register when programming the eNVM in a standalone fashion; that is to say, when the bitstream only contains an eNVM client.
- Cortex-M3 firmware drivers will automatically adjust NV_FREQRNG for writes only.
- Updated Flash Loaders from IAR and Keil are available and Softconsole V3.4 with Flash Loader availability is at the end of June 2014.
- Any FPGA fabric master writing to the eNVM needs to adjust NV_FREQRNG to 0x0F before writing. Note that you can still set NV_FREQRNG to 7 during reads.



Suggested Workaround

- For SmartFusion2 SoC FPGAs: Update to the latest version of Libero SoC, download the latest firmware drivers and update the flash loader of your respective design entry tool.
- For IGLOO2 FPGAs: Update to the latest version of Libero SoC, update any RTL code that writes to the eNVM to adjust NV_FREQRNG to 0x0F before writes.

If you have any questions related to this topic, contact:

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Regards,

Microsemi Corporation

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Appendix

SmartFusion2 Devices		IGLOO2 Devices	
Leaded Part Numbers	Lead-Free Part Numbers	Leaded Part Numbers	Lead-Free Part Numbers
M2GL005-1FG484	M2GL005-1FGG484	M2S005-1FG484	M2S005-1FGG484
M2GL005-1FG484I	M2GL005-1FGG484I	M2S005-1FG484I	M2S005-1FGG484I
M2GL005-1VF400	M2GL005-1VFG400	M2S005-1VF400	M2S005-1VFG400
M2GL005-1VF400I	M2GL005-1VFG400I	M2S005-1VF400I	M2S005-1VFG400I
M2GL005-1VQ144	M2GL005-1VQG144	M2S005-1VQ144	M2S005-1VQG144
M2GL005-1VQ144I	M2GL005-1VQG144I	M2S005-1VQ144I	M2S005-1VQG144I
M2GL005-FG484	M2GL005-FGG484	M2S005-FG484	M2S005-FGG484
M2GL005-FG484I	M2GL005-FGG484I	M2S005-FG484I	M2S005-FGG484I
M2GL005S-1FG484I	M2GL005S-1FGG484I	M2S005S-1FG484I	M2S005S-1FGG484I
M2GL005S-1VF400I	M2GL005S-1VFG400I	M2S005S-1VF400I	M2S005S-1VFG400I
M2GL005S-1VQ144I	M2GL005S-1VQG144I	M2S005S-1VQ144I	M2S005S-1VQG144I
M2GL005-VF400	M2GL005-VFG400	M2S005-VF400	M2S005-VFG400
M2GL005-VF400I	M2GL005-VFG400I	M2S005-VF400I	M2S005-VFG400I



SmartFusion2 Devices		IGLOO2 Devices	
Leaded Part Numbers	Lead-Free Part Numbers	Leaded Part Numbers	Lead-Free Part Numbers
M2GL005-VQ144	M2GL005-VQG144	M2S005-VQ144	M2S005-VQG144
M2GL005-VQ144I	M2GL005-VQG144I	M2S005-VQ144I	M2S005-VQG144I
M2GL010-1FG484	M2GL010-1FGG484	M2S010-1FG484	M2S010-1FGG484
M2GL010-1FG484I	M2GL010-1FGG484I	M2S010-1FG484I	M2S010-1FGG484I
M2GL010-1VF256	M2GL010-1VFG256	M2S010-1VF256	M2S010-1VFG256
M2GL010-1VF256I	M2GL010-1VFG256I	M2S010-1VF256I	M2S010-1VFG256I
M2GL010-1VF400	M2GL010-1VFG400	M2S010-1VF400	M2S010-1VFG400
M2GL010-1VF400I	M2GL010-1VFG400I	M2S010-1VF400I	M2S010-1VFG400I
M2GL010-1VQ144	M2GL010-1VQG144	M2S010-1VQ144	M2S010-1VQG144
M2GL010-1VQ144I	M2GL010-1VQG144I	M2S010-1VQ144I	M2S010-1VQG144I
M2GL010-FG484	M2GL010-FGG484	M2S010-FG484	M2S010-FGG484
M2GL010-FG484I	M2GL010-FGG484I	M2S010-FG484I	M2S010-FGG484I
M2GL010S-1FG484I	M2GL010S-1FGG484I	M2S010S-1FG484I	M2S010S-1FGG484I
M2GL010S-1VF256I	M2GL010S-1VFG256I	M2S010S-1VF256I	M2S010S-1VFG256I
M2GL010S-1VF400I	M2GL010S-1VFG400I	M2S010S-1VF400I	M2S010S-1VFG400I
M2GL010S-1VQ144I	M2GL010S-1VQG144I	M2S010S-1VQ144I	M2S010S-1VQG144I
M2GL010T-1FG484	M2GL010T-1FGG484	M2S010T-1FG484	M2S010T-1FGG484
M2GL010T-1FG484I	M2GL010T-1FGG484I	M2S010T-1FG484I	M2S010T-1FGG484I
M2GL010T-1VF256	M2GL010T-1VFG256	M2S010T-1VF256	M2S010T-1VFG256
M2GL010T-1VF256I	M2GL010T-1VFG256I	M2S010T-1VF256I	M2S010T-1VFG256I
M2GL010T-1VF400	M2GL010T-1VFG400	M2S010T-1VF400	M2S010T-1VFG400
M2GL010T-1VF400I	M2GL010T-1VFG400I	M2S010T-1VF400I	M2S010T-1VFG400I
M2GL010T-FG484	M2GL010T-FGG484	M2S010T-FG484	M2S010T-FGG484
M2GL010T-FG484I	M2GL010T-FGG484I	M2S010T-FG484I	M2S010T-FGG484I
M2GL010TS-1FG484I	M2GL010TS-1FGG484I	M2S010TS-1FG484I	M2S010TS-1FGG484I
M2GL010TS-1VF256I	M2GL010TS-1VFG256I	M2S010TS-1VF256I	M2S010TS-1VFG256I
M2GL010TS-1VF400I	M2GL010TS-1VFG400I	M2S010TS-1VF400I	M2S010TS-1VFG400I
M2GL010T-VF256	M2GL010T-VFG256	M2S010T-VF256	M2S010T-VFG256
M2GL010T-VF256I	M2GL010T-VFG256I	M2S010T-VF256I	M2S010T-VFG256I
M2GL010T-VF400	M2GL010T-VFG400	M2S010T-VF400	M2S010T-VFG400
M2GL010T-VF400I	M2GL010T-VFG400I	M2S010T-VF400I	M2S010T-VFG400I
M2GL010-VF256	M2GL010-VFG256	M2S010-VF256	M2S010-VFG256
M2GL010-VF256I	M2GL010-VFG256I	M2S010-VF256I	M2S010-VFG256I



SmartFusion2 Devices		IGLOO2 Devices	
Leaded Part Numbers	Lead-Free Part Numbers	Leaded Part Numbers	Lead-Free Part Numbers
M2GL010-VF400	M2GL010-VFG400	M2S010-VF400	M2S010-VFG400
M2GL010-VF400I	M2GL010-VFG400I	M2S010-VF400I	M2S010-VFG400I
M2GL010-VQ144	M2GL010-VQG144	M2S010-VQ144	M2S010-VQG144
M2GL010-VQ144I	M2GL010-VQG144I	M2S010-VQ144I	M2S010-VQG144I
M2GL025-1FCS325	M2GL025-1FCS325	M2S025-1FCS325	M2S025-1FCSG325
M2GL025-1FCS325I	M2GL025-1FCS325I	M2S025-1FCS325I	M2S025-1FCSG325I
M2GL025-1FG484	M2GL025-1FGG484	M2S025-1FG484	M2S025-1FGG484
M2GL025-1FG484I	M2GL025-1FGG484I	M2S025-1FG484I	M2S025-1FGG484I
M2GL025-1VF256	M2GL025-1VFG256	M2S025-1VF256	M2S025-1VFG256
M2GL025-1VF256I	M2GL025-1VFG256I	M2S025-1VF256I	M2S025-1VFG256I
M2GL025-1VF400	M2GL025-1VFG400	M2S025-1VF400	M2S025-1VFG400
M2GL025-1VF400I	M2GL025-1VFG400I	M2S025-1VF400I	M2S025-1VFG400I
M2GL025-FCS325	M2GL025-FCS325	M2S025-FCS325	M2S025-FCSG325
M2GL025-FCS325I	M2GL025-FCS325I	M2S025-FCS325I	M2S025-FCSG325I
M2GL025-FG484	M2GL025-FGG484	M2S025-FG484	M2S025-FGG484
M2GL025-FG484I	M2GL025-FGG484I	M2S025-FG484I	M2S025-FGG484I
M2GL025S-1FCS325I	M2GL025S-1FCS325I	M2S025S-1FCS325I	M2S025S-1FCSG325I
M2GL025S-1FG484I	M2GL025S-1FGG484I	M2S025S-1FG484I	M2S025S-1FGG484I
M2GL025S-1VF256I	M2GL025S-1VFG256I	M2S025S-1VF256I	M2S025S-1VFG256I
M2GL025S-1VF400I	M2GL025S-1VFG400I	M2S025S-1VF400I	M2S025S-1VFG400I
M2GL025T-1FCS325	M2GL025T-1FCS325	M2S025T-1FCS325	M2S025T-1FCSG325
M2GL025T-1FCS325I	M2GL025T-1FCS325I	M2S025T-1FCS325I	M2S025T-1FCSG325I
M2GL025T-1FG484	M2GL025T-1FGG484	M2S025T-1FG484	M2S025T-1FGG484
M2GL025T-1FG484I	M2GL025T-1FGG484I	M2S025T-1FG484I	M2S025T-1FGG484I
M2GL025T-1VF256	M2GL025T-1VFG256	M2S025T-1VF256	M2S025T-1VFG256
M2GL025T-1VF256I	M2GL025T-1VFG256I	M2S025T-1VF256I	M2S025T-1VFG256I
M2GL025T-1VF400	M2GL025T-1VFG400	M2S025T-1VF400	M2S025T-1VFG400
M2GL025T-1VF400I	M2GL025T-1VFG400I	M2S025T-1VF400I	M2S025T-1VFG400I
M2GL025T-FCS325	M2GL025T-FCS325	M2S025T-FCS325	M2S025T-FCSG325
M2GL025T-FCS325I	M2GL025T-FCS325I	M2S025T-FCS325I	M2S025T-FCSG325I
M2GL025T-FG484	M2GL025T-FGG484	M2S025T-FG484	M2S025T-FGG484
M2GL025T-FG484I	M2GL025T-FGG484I	M2S025T-FG484I	M2S025T-FGG484I
M2GL025TS-1FCS325I	M2GL025TS-1FCS325I	M2S025TS-1FCS325I	M2S025TS-1FCSG325I



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M2GL025TS-1FG484I	M2GL025TS-1FGG484I	M2S025TS-1FG484I	M2S025TS-1FGG484I
M2GL025TS-1VF256I	M2GL025TS-1VFG256I	M2S025TS-1VF256I	M2S025TS-1VFG256I
M2GL025TS-1VF400I	M2GL025TS-1VFG400I	M2S025TS-1VF400I	M2S025TS-1VFG400I
M2GL025T-VF256	M2GL025T-VFG256	M2S025T-VF256	M2S025T-VFG256
M2GL025T-VF256I	M2GL025T-VFG256I	M2S025T-VF256I	M2S025T-VFG256I
M2GL025T-VF400	M2GL025T-VFG400	M2S025T-VF400	M2S025T-VFG400
M2GL025T-VF400I	M2GL025T-VFG400I	M2S025T-VF400I	M2S025T-VFG400I
M2GL025-VF256	M2GL025-VFG256	M2S025-VF256	M2S025-VFG256
M2GL025-VF256I	M2GL025-VFG256I	M2S025-VF256I	M2S025-VFG256I
M2GL025-VF400	M2GL025-VFG400	M2S025-VF400	M2S025-VFG400
M2GL025-VF400I	M2GL025-VFG400I	M2S025-VF400I	M2S025-VFG400I
M2GL050-1FCS325	M2GL050-1FCS325	M2S050-1FCS325	M2S050-1FCSG325
M2GL050-1FCS325I	M2GL050-1FCS325I	M2S050-1FCS325I	M2S050-1FCSG325I
M2GL050-1FG484	M2GL050-1FGG484	M2S050-1FG484	M2S050-1FGG484
M2GL050-1FG484I	M2GL050-1FGG484I	M2S050-1FG484I	M2S050-1FGG484I
M2GL050-1FG896	M2GL050-1FGG896	M2S050-1FG896	M2S050-1FGG896
M2GL050-1FG896I	M2GL050-1FGG896I	M2S050-1FG896I	M2S050-1FGG896I
M2GL050-1VF400	M2GL050-1VFG400	M2S050-1VF400	M2S050-1VFG400
M2GL050-1VF400I	M2GL050-1VFG400I	M2S050-1VF400I	M2S050-1VFG400I
M2GL050-FCS325	M2GL050-FCS325	M2S050-FCS325	M2S050-FCSG325
M2GL050-FCS325I	M2GL050-FCS325I	M2S050-FCS325I	M2S050-FCSG325I
M2GL050-FG484	M2GL050-FGG484	M2S050-FG484	M2S050-FGG484
M2GL050-FG484I	M2GL050-FGG484I	M2S050-FG484I	M2S050-FGG484I
M2GL050-FG896	M2GL050-FGG896	M2S050-FG896	M2S050-FGG896
M2GL050-FG896I	M2GL050-FGG896I	M2S050-FG896I	M2S050-FGG896I
M2GL050S-1FCS325I	M2GL050S-1FCS325I	M2S050S-1FCS325I	M2S050S-1FCSG325I
M2GL050S-1FG484I	M2GL050S-1FGG484I	M2S050S-1FG484I	M2S050S-1FGG484I
M2GL050S-1FG896I	M2GL050S-1FGG896I	M2S050S-1FG896I	M2S050S-1FGG896I
M2GL050S-1VF400I	M2GL050S-1VFG400I	M2S050S-1VF400I	M2S050S-1VFG400I
M2GL050T-1FCS325	M2GL050T-1FCS325	M2S050T-1FCS325	M2S050T-1FCSG325
M2GL050T-1FCS325I	M2GL050T-1FCS325I	M2S050T-1FCS325I	M2S050T-1FCSG325I
M2GL050T-1FG484	M2GL050T-1FGG484	M2S050T-1FG484	M2S050T-1FGG484
M2GL050T-1FG484I	M2GL050T-1FGG484I	M2S050T-1FG484I	M2S050T-1FGG484I



SmartFusion2 Devices		IGLOO2 Devices	
Leaded Part Numbers	Lead-Free Part Numbers	Leaded Part Numbers	Lead-Free Part Numbers
M2GL050T-1FG896	M2GL050T-1FGG896	M2S050T-1FG896	M2S050T-1FGG896
M2GL050T-1FG896I	M2GL050T-1FGG896I	M2S050T-1FG896I	M2S050T-1FGG896I
M2GL050T-1VF400	M2GL050T-1VFG400	M2S050T-1VF400	M2S050T-1VFG400
M2GL050T-1VF400I	M2GL050T-1VFG400I	M2S050T-1VF400I	M2S050T-1VFG400I
M2GL050T-FCS325	M2GL050T-FCS325	M2S050T-FCS325	M2S050T-FCSG325
M2GL050T-FCS325I	M2GL050T-FCS325I	M2S050T-FCS325I	M2S050T-FCSG325I
M2GL050T-FG484	M2GL050T-FGG484	M2S050T-FG484	M2S050T-FGG484
M2GL050T-FG484I	M2GL050T-FGG484I	M2S050T-FG484I	M2S050T-FGG484I
M2GL050T-FG896	M2GL050T-FGG896	M2S050T-FG896	M2S050T-FGG896
M2GL050T-FG896I	M2GL050T-FGG896I	M2S050T-FG896I	M2S050T-FGG896I
M2GL050TS-1FCS325I	M2GL050TS-1FCS325I	M2S050TS-1FCS325I	M2S050TS-1FCSG325I
M2GL050TS-1FG484I	M2GL050TS-1FGG484I	M2S050TS-1FG484I	M2S050TS-1FGG484I
M2GL050TS-1FG896I	M2GL050TS-1FGG896I	M2S050TS-1FG896I	M2S050TS-1FGG896I
M2GL050TS-1VF400I	M2GL050TS-1VFG400I	M2S050TS-1VF400I	M2S050TS-1VFG400I
M2GL050T-VF400	M2GL050T-VFG400	M2S050T-VF400	M2S050T-VFG400
M2GL050T-VF400I	M2GL050T-VFG400I	M2S050T-VF400I	M2S050T-VFG400I
M2GL050-VF400	M2GL050-VFG400	M2S050-VF400	M2S050-VFG400
M2GL050-VF400I	M2GL050-VFG400I	M2S050-VF400I	M2S050-VFG400I
M2GL090-1FCS325	M2GL090-1FCS325	M2S090-1FCS325	M2S090-1FCSG325
M2GL090-1FCS325I	M2GL090-1FCS325I	M2S090-1FCS325I	M2S090-1FCSG325I
M2GL090-1FG484	M2GL090-1FGG484	M2S090-1FG484	M2S090-1FGG484
M2GL090-1FG484I	M2GL090-1FGG484I	M2S090-1FG484I	M2S090-1FGG484I
M2GL090-1FG676	M2GL090-1FGG676	M2S090-1FG676	M2S090-1FGG676
M2GL090-1FG676I	M2GL090-1FGG676I	M2S090-1FG676I	M2S090-1FGG676I
M2GL090-FCS325	M2GL090-FCS325	M2S090-FCS325	M2S090-FCSG325
M2GL090-FCS325I	M2GL090-FCS325I	M2S090-FCS325I	M2S090-FCSG325I
M2GL090-FG484	M2GL090-FGG484	M2S090-FG484	M2S090-FGG484
M2GL090-FG484I	M2GL090-FGG484I	M2S090-FG484I	M2S090-FGG484I
M2GL090-FG676	M2GL090-FGG676	M2S090-FG676	M2S090-FGG676
M2GL090-FG676I	M2GL090-FGG676I	M2S090-FG676I	M2S090-FGG676I
M2GL090S-1FCS325I	M2GL090S-1FCS325I	M2S090S-1FCS325I	M2S090S-1FCSG325I
M2GL090S-1FG484I	M2GL090S-1FGG484I	M2S090S-1FG484I	M2S090S-1FGG484I
M2GL090S-1FG676I	M2GL090S-1FGG676I	M2S090S-1FG676I	M2S090S-1FGG676I



SmartFusion2 Devices		IGLOO2 Devices	
Leaded Part Numbers	Lead-Free Part Numbers	Leaded Part Numbers	Lead-Free Part Numbers
M2GL090T-1FCS325	M2GL090T-1FCS325	M2S090T-1FCS325	M2S090T-1FCSG325
M2GL090T-1FCS325I	M2GL090T-1FCS325I	M2S090T-1FCS325I	M2S090T-1FCSG325I
M2GL090T-1FG484	M2GL090T-1FGG484	M2S090T-1FG484	M2S090T-1FGG484
M2GL090T-1FG484I	M2GL090T-1FGG484I	M2S090T-1FG484I	M2S090T-1FGG484I
M2GL090T-1FG676	M2GL090T-1FGG676	M2S090T-1FG676	M2S090T-1FGG676
M2GL090T-1FG676I	M2GL090T-1FGG676I	M2S090T-1FG676I	M2S090T-1FGG676I
M2GL090T-FCS325	M2GL090T-FCS325	M2S090T-FCS325	M2S090T-FCSG325
M2GL090T-FCS325I	M2GL090T-FCS325I	M2S090T-FCS325I	M2S090T-FCSG325I
M2GL090T-FG484	M2GL090T-FGG484	M2S090T-FG484	M2S090T-FGG484
M2GL090T-FG484I	M2GL090T-FGG484I	M2S090T-FG484I	M2S090T-FGG484I
M2GL090T-FG676	M2GL090T-FGG676	M2S090T-FG676	M2S090T-FGG676
M2GL090T-FG676I	M2GL090T-FGG676I	M2S090T-FG676I	M2S090T-FGG676I
M2GL090TS-1FCS325I	M2GL090TS-1FCS325I	M2S090TS-1FCS325I	M2S090TS-1FCSG325I
M2GL090TS-1FG484I	M2GL090TS-1FGG484I	M2S090TS-1FG484I	M2S090TS-1FGG484I
M2GL090TS-1FG676I	M2GL090TS-1FGG676I	M2S090TS-1FG676I	M2S090TS-1FGG676I
M2GL100-1FC1152	M2GL100-1FCG1152	M2S100-1FC1152	M2S100-1FCG1152
M2GL100-1FC1152I	M2GL100-1FCG1152I	M2S100-1FC1152I	M2S100-1FCG1152I
M2GL100-1FCV484	M2GL100-1FCVG484	M2S100-1FCV484	M2S100-1FCVG484
M2GL100-1FCV484I	M2GL100-1FCVG484I	M2S100-1FCV484I	M2S100-1FCVG484I
M2GL100-FC1152	M2GL100-FCG1152	M2S100-FC1152	M2S100-FCG1152
M2GL100-FC1152I	M2GL100-FCG1152I	M2S100-FC1152I	M2S100-FCG1152I
M2GL100-FCV484	M2GL100-FCVG484	M2S100-FCV484	M2S100-FCVG484
M2GL100-FCV484I	M2GL100-FCVG484I	M2S100-FCV484I	M2S100-FCVG484I
M2GL100S-1FC1152I	M2GL100S-1FCG1152I	M2S100S-1FC1152I	M2S100S-1FCG1152I
M2GL100S-1FCV484I	M2GL100S-1FCVG484I	M2S100S-1FCV484I	M2S100S-1FCVG484I
M2GL100T-1FC1152	M2GL100T-1FCG1152	M2S100T-1FC1152	M2S100T-1FCG1152
M2GL100T-1FC1152I	M2GL100T-1FCG1152I	M2S100T-1FC1152I	M2S100T-1FCG1152I
M2GL100T-1FCV484	M2GL100T-1FCVG484	M2S100T-1FCV484	M2S100T-1FCVG484
M2GL100T-1FCV484I	M2GL100T-1FCVG484I	M2S100T-1FCV484I	M2S100T-1FCVG484I
M2GL100T-FC1152	M2GL100T-FCG1152	M2S100T-FC1152	M2S100T-FCG1152
M2GL100T-FC1152I	M2GL100T-FCG1152I	M2S100T-FC1152I	M2S100T-FCG1152I
M2GL100T-FCV484	M2GL100T-FCVG484	M2S100T-FCV484	M2S100T-FCVG484
M2GL100T-FCV484I	M2GL100T-FCVG484I	M2S100T-FCV484I	M2S100T-FCVG484I



SmartFusion2 Devices		IGLOO2 Devices	
Leaded Part Numbers	Lead-Free Part Numbers	Leaded Part Numbers	Lead-Free Part Numbers
M2GL100TS-1FC1152I	M2GL100TS-1FCG1152I	M2S100TS-1FC1152I	M2S100TS-1FCG1152I
M2GL100TS-1FCV484I	M2GL100TS-1FCVG484I	M2S100TS-1FCV484I	M2S100TS-1FCVG484I
M2GL150-1FC1152	M2GL150-1FCG1152	M2S150-1FC1152	M2S150-1FCG1152
M2GL150-1FC1152I	M2GL150-1FCG1152I	M2S150-1FC1152I	M2S150-1FCG1152I
M2GL150-1FCV484	M2GL150-1FCVG484	M2S150-1FCV484	M2S150-1FCVG484
M2GL150-1FCV484I	M2GL150-1FCVG484I	M2S150-1FCV484I	M2S150-1FCVG484I
M2GL150-FC1152	M2GL150-FCG1152	M2S150-FC1152	M2S150-FCG1152
M2GL150-FC1152I	M2GL150-FCG1152I	M2S150-FC1152I	M2S150-FCG1152I
M2GL150-FCV484	M2GL150-FCVG484	M2S150-FCV484	M2S150-FCVG484
M2GL150-FCV484I	M2GL150-FCVG484I	M2S150-FCV484I	M2S150-FCVG484I
M2GL150S-1FC1152I	M2GL150S-1FCG1152I	M2S150S-1FC1152I	M2S150S-1FCG1152I
M2GL150S-1FCV484I	M2GL150S-1FCVG484I	M2S150S-1FCV484I	M2S150S-1FCVG484I
M2GL150T-1FC1152	M2GL150T-1FCG1152	M2S150T-1FC1152	M2S150T-1FCG1152
M2GL150T-1FC1152I	M2GL150T-1FCG1152I	M2S150T-1FC1152I	M2S150T-1FCG1152I
M2GL150T-1FCV484	M2GL150T-1FCVG484	M2S150T-1FCV484	M2S150T-1FCVG484
M2GL150T-1FCV484I	M2GL150T-1FCVG484I	M2S150T-1FCV484I	M2S150T-1FCVG484I
M2GL150T-FC1152	M2GL150T-FCG1152	M2S150T-FC1152	M2S150T-FCG1152
M2GL150T-FC1152I	M2GL150T-FCG1152I	M2S150T-FC1152I	M2S150T-FCG1152I
M2GL150T-FCV484	M2GL150T-FCVG484	M2S150T-FCV484	M2S150T-FCVG484
M2GL150T-FCV484I	M2GL150T-FCVG484I	M2S150T-FCV484I	M2S150T-FCVG484I
M2GL150TS-1FC1152I	M2GL150TS-1FCG1152I	M2S150TS-1FC1152I	M2S150TS-1FCG1152I
M2GL150TS-1FCV484I	M2GL150TS-1FCVG484I	M2S150TS-1FCV484I	M2S150TS-1FCVG484I
M2GL010T-1FG484M	M2GL010T-1FGG484M	M2S010T-1FG484M	M2S010T-1FGG484M
M2GL025T-1FG484M	M2GL025T-1FGG484M	M2S025T-1FG484M	M2S025T-1FGG484M
M2GL050T-1FG484M	M2GL050T-1FGG484M	M2S050T-1FG484M	M2S050T-1FGG484M
M2GL090T-1FG484M	M2GL090T-1FGG484M	M2S090T-1FG484M	M2S090T-1FGG484M
M2GL150T-1FC1152M	M2GL150T-1FCG1152M	M2S150T-1FC1152M	M2S150T-1FCG1152M
M2GL010TS-1FG484M	M2GL010TS-1FGG484M	M2S010TS-1FG484M	M2S010TS-1FGG484M
M2GL025TS-1FG484M	M2GL025TS-1FGG484M	M2S025TS-1FG484M	M2S025TS-1FGG484M
M2GL050TS-1FG484M	M2GL050TS-1FGG484M	M2S050TS-1FG484M	M2S050TS-1FGG484M
M2GL090TS-1FG484M	M2GL090TS-1FGG484M	M2S090TS-1FG484M	M2S090TS-1FGG484M
M2GL150TS-1FC1152M	M2GL150TS-1FCG1152M	M2S150TS-1FC1152M	M2S150TS-1FCG1152M