



August 21, 2012

PCN Number: 1208

PCN Change Level: Minor

Subject: Datasheet updates for IGLOOe, ProASIC3E, ProASIC3L, Fusion and Extended Temperature Fusion devices

Dear Customer,

This notice is to inform you of changes in I/O DC output levels that are being implemented in the datasheets.

I/O DC output levels:

- GTL and GTL+ I/O standards have been updated for operating in the following junction temperature (T_j) ranges: $0^{\circ}\text{C} \leq T_j \leq 85^{\circ}\text{C}$, $-40^{\circ}\text{C} \leq T_j \leq 100^{\circ}\text{C}$ and $-55^{\circ}\text{C} \leq T_j \leq 100^{\circ}\text{C}$
 - Drive strength, IOL and IOH for 3.3 V GTL and 2.5 V GTL I/O standards have been updated from 25 mA to 20 mA.
 - IOL and IOH for 3.3 V GTL+ I/O standards have been updated from 51 mA to 35 mA.
 - IOL and IOH for 2.5 V GTL+ I/O standards have been updated from 40 mA to 33 mA.

The families affected are:

- IGLOO[®]e
- ProASIC3[®]E
- ProASIC3[®]L
- Fusion
- Extended Temperature Fusion

Other minor updates have also been made to the datasheets. Please refer to the List of Changes table in the respective datasheets for details.

For any clarifications or questions, please contact Microsemi SoC Technical Support by email at soc_tech@microsemi.com.

Table 1 lists the affected Microsemi parts.

Regards,

Microsemi SoC Products Group



Table 1 lists the affected part numbers.

Table 1 • Affected Part Numbers

IGLOOe – AGLE600V2		
AGLE600V2-FG256	AGLE600V2-FGG256	AGLE600V2-FG256I
AGLE600V2-FGG256I	AGLE600V2-FG484	AGLE600V2-FGG484
AGLE600V2-FG484I	AGLE600V2-FGG484I	
IGLOOe – AGLE600V5		
AGLE600V5-FG256	AGLE600V5-FGG256	AGLE600V5-FG256I
AGLE600V5-FGG256I	AGLE600V5-FG484	AGLE600V5-FGG484
AGLE600V5-FG484I	AGLE600V5-FGG484I	
IGLOOe – AGLE3000V2		
AGLE3000V2-FG484	AGLE3000V2-FGG484	AGLE3000V2-FG484I
AGLE3000V2-FGG484I	AGLE3000V2-FG896	AGLE3000V2-FGG896
AGLE3000V2-FG896I	AGLE3000V2-FGG896I	
IGLOOe – AGLE3000V5		
AGLE3000V5-FG484	AGLE3000V5-FGG484	AGLE3000V5-FG484I
AGLE3000V5-FGG484I	AGLE3000V5-FG896	AGLE3000V5-FGG896
AGLE3000V5-FG896I	AGLE3000V5-FGG896I	
IGLOOe – M1AGLE3000V2, ARM®Cortex™-M1 Enabled		
M1AGLE3000V2-FG484	M1AGLE3000V2-FGG484	M1AGLE3000V2-FG484I
M1AGLE3000V2-FGG484I	M1AGLE3000V2-FG896	M1AGLE3000V2-FGG896
M1AGLE3000V2-FG896I	M1AGLE3000V2-FGG896I	
IGLOOe – M1AGLE3000V5, Cortex-M1 Enabled		
M1AGLE3000V5-FG484	M1AGLE3000V5-FGG484	M1AGLE3000V5-FG484I
M1AGLE3000V5-FGG484I	M1AGLE3000V5-FG896	M1AGLE3000V5-FGG896
M1AGLE3000V5-FG896I	M1AGLE3000V5-FGG896I	
ProASIC3E – A3PE600		
A3PE600-FG256	A3PE600-FGG256	A3PE600-1FG256
A3PE600-1FGG256	A3PE600-2FG256	A3PE600-2FGG256
A3PE600-FG256I	A3PE600-FGG256I	A3PE600-1FG256I



Table 1 • Affected Part Numbers

A3PE600-1FGG256I	A3PE600-2FG256I	A3PE600-2FGG256I
A3PE600-FG484	A3PE600-FGG484	A3PE600-1FG484
A3PE600-1FGG484	A3PE600-2FG484	A3PE600-2FGG484
A3PE600-FG484I	A3PE600-FGG484I	A3PE600-1FG484I
A3PE600-1FGG484I	A3PE600-2FG484I	A3PE600-2FGG484I
A3PE600-PQ208	A3PE600-PQG208	A3PE600-1PQ208
A3PE600-1PQG208	A3PE600-2PQ208	A3PE600-2PQG208
A3PE600-PQ208I	A3PE600-PQG208I	A3PE600-1PQ208I
A3PE600-1PQG208I	A3PE600-2PQ208I	A3PE600-2PQG208I
ProASIC3E – A3PE1500		
A3PE1500-FG484	A3PE1500-FGG484	A3PE1500-1FG484
A3PE1500-1FGG484	A3PE1500-2FG484	A3PE1500-2FGG484
A3PE1500-FG484I	A3PE1500-FGG484I	A3PE1500-1FG484I
A3PE1500-1FGG484I	A3PE1500-2FG484I	A3PE1500-2FGG484I
A3PE1500-FG676	A3PE1500-FGG676	A3PE1500-1FG676
A3PE1500-1FGG676	A3PE1500-2FG676	A3PE1500-2FGG676
A3PE1500-FG676I	A3PE1500-FGG676I	A3PE1500-1FG676I
A3PE1500-1FGG676I	A3PE1500-2FG676I	A3PE1500-2FGG676I
A3PE1500-PQ208	A3PE1500-PQG208	A3PE1500-1PQ208
A3PE1500-1PQG208	A3PE1500-2PQ208	A3PE1500-2PQG208
A3PE1500-PQ208I	A3PE1500-PQG208I	A3PE1500-1PQ208I
A3PE1500-1PQG208I	A3PE1500-2PQ208I	A3PE1500-2PQG208I
ProASIC3E – A3PE3000		
A3PE3000-FG324	A3PE3000-FGG324	A3PE3000-1FG324
A3PE3000-1FGG324	A3PE3000-2FG324	A3PE3000-2FGG324
A3PE3000-FG324I	A3PE3000-FGG324I	A3PE3000-1FG324I
A3PE3000-1FGG324I	A3PE3000-2FG324I	A3PE3000-2FGG324I
A3PE3000-FG484	A3PE3000-FGG484	A3PE3000-1FG484
A3PE3000-1FGG484	A3PE3000-2FG484	A3PE3000-2FGG484



Table 1 • Affected Part Numbers

A3PE3000-FG484I	A3PE3000-FGG484I	A3PE3000-1FG484I
A3PE3000-1FGG484I	A3PE3000-2FG484I	A3PE3000-2FGG484I
A3PE3000-FG896	A3PE3000-FGG896	A3PE3000-1FG896
A3PE3000-1FGG896	A3PE3000-2FG896	A3PE3000-2FGG896
A3PE3000-FG896I	A3PE3000-FGG896I	A3PE3000-1FG896I
A3PE3000-1FGG896I	A3PE3000-2FG896I	A3PE3000-2FGG896I
A3PE3000-PQ208	A3PE3000-PQG208	A3PE3000-1PQ208
A3PE3000-1PQG208	A3PE3000-2PQ208	A3PE3000-2PQG208
A3PE3000-PQ208I	A3PE3000-PQG208I	A3PE3000-1PQ208I
A3PE3000-1PQG208I	A3PE3000-2PQ208I	A3PE3000-2PQG208I
ProASIC3E – M1A3PE1500, Cortex M1-Enabled		
M1A3PE1500-FG484	M1A3PE1500-FGG484	M1A3PE1500-1FG484
M1A3PE1500-1FGG484	M1A3PE1500-2FG484	M1A3PE1500-2FGG484
M1A3PE1500-FG484I	M1A3PE1500-FGG484I	M1A3PE1500-1FG484I
M1A3PE1500-1FGG484I	M1A3PE1500-2FG484I	M1A3PE1500-2FGG484I
M1A3PE1500-FG676	M1A3PE1500-FGG676	M1A3PE1500-1FG676
M1A3PE1500-1FGG676	M1A3PE1500-2FG676	M1A3PE1500-2FGG676
M1A3PE1500-FG676I	M1A3PE1500-FGG676I	M1A3PE1500-1FG676I
M1A3PE1500-1FGG676I	M1A3PE1500-2FG676I	M1A3PE1500-2FGG676I
M1A3PE1500-PQ208	M1A3PE1500-PQG208	M1A3PE1500-1PQ208
M1A3PE1500-1PQG208	M1A3PE1500-2PQ208	M1A3PE1500-2PQG208
M1A3PE1500-PQ208I	M1A3PE1500-PQG208I	M1A3PE1500-1PQ208I
M1A3PE1500-1PQG208I	M1A3PE1500-2PQ208I	M1A3PE1500-2PQG208I
ProASIC3E – M1A3PE3000, Cortex M1-Enabled		
M1A3PE3000-FG324	M1A3PE3000-FGG324	M1A3PE3000-1FG324
M1A3PE3000-1FGG324	M1A3PE3000-2FG324	M1A3PE3000-2FGG324
M1A3PE3000-FG324I	M1A3PE3000-FGG324I	M1A3PE3000-1FG324I
M1A3PE3000-1FGG324I	M1A3PE3000-2FG324I	M1A3PE3000-2FGG324I
M1A3PE3000-FG484	M1A3PE3000-FGG484	M1A3PE3000-1FG484



Table 1 • Affected Part Numbers

M1A3PE3000-1FGG484	M1A3PE3000-2FG484	M1A3PE3000-2FGG484
M1A3PE3000-FG484I	M1A3PE3000-FGG484I	M1A3PE3000-1FG484I
M1A3PE3000-1FGG484I	M1A3PE3000-2FG484I	M1A3PE3000-2FGG484I
M1A3PE3000-FG896	M1A3PE3000-FGG896	M1A3PE3000-1FG896
M1A3PE3000-1FGG896	M1A3PE3000-2FG896	M1A3PE3000-2FGG896
M1A3PE3000-FG896I	M1A3PE3000-FGG896I	M1A3PE3000-1FG896I
M1A3PE3000-1FGG896I	M1A3PE3000-2FG896I	M1A3PE3000-2FGG896I
M1A3PE3000-PQ208	M1A3PE3000-PQG208	M1A3PE3000-1PQ208
M1A3PE3000-1PQG208	M1A3PE3000-2PQ208	M1A3PE3000-2PQG208
M1A3PE3000-PQ208I	M1A3PE3000-PQG208I	M1A3PE3000-1PQ208I
M1A3PE3000-1PQG208I	M1A3PE3000-2PQ208I	M1A3PE3000-2PQG208I
ProASIC3L – A3PE600L		
A3PE600L-FG484M	A3PE600L-FGG484M	A3PE600L-1FG484M
A3PE600L-1FGG484M		
ProASIC3L – A3PE3000L		
A3PE3000L-FG324	A3PE3000L-FGG324	A3PE3000L-1FG324
A3PE3000L-1FGG324	A3PE3000L-FG324I	A3PE3000L-FGG324I
A3PE3000L-1FG324I	A3PE3000L-1FGG324I	A3PE3000L-FG484
A3PE3000L-FGG484	A3PE3000L-1FG484	A3PE3000L-1FGG484
A3PE3000L-FG484I	A3PE3000L-FGG484I	A3PE3000L-1FG484I
A3PE3000L-1FGG484I	A3PE3000L-FG484M	A3PE3000L-FGG484M
A3PE3000L-1FG484M	A3PE3000L-1FGG484M	A3PE3000L-FG896
A3PE3000L-FGG896	A3PE3000L-1FG896	A3PE3000L-1FGG896
A3PE3000L-FG896I	A3PE3000L-FGG896I	A3PE3000L-1FG896I
A3PE3000L-1FGG896I	A3PE3000L-FG896M	A3PE3000L-FGG896M
A3PE3000L-1FG896M	A3PE3000L-1FGG896M	A3PE3000L-PQ208
A3PE3000L-PQG208	A3PE3000L-1PQ208	A3PE3000L-1PQG208
A3PE3000L-PQ208I	A3PE3000L-PQG208I	A3PE3000L-1PQ208I
A3PE3000L-1PQG208I		



Table 1 • Affected Part Numbers

ProASIC3L – M1A3PE3000L, Cortex M1-Enabled		
M1A3PE3000L-FG484	M1A3PE3000L-FGG484	M1A3PE3000L-1FG484
M1A3PE3000L-1FGG484	M1A3PE3000L-FG484I	M1A3PE3000L-FGG484I
M1A3PE3000L-1FG484I	M1A3PE3000L-1FGG484I	M1A3PE3000L-FG484M
M1A3PE3000L-FGG484M	M1A3PE3000L-1FG484M	M1A3PE3000L-1FGG484M
M1A3PE3000L-FG896	M1A3PE3000L-FGG896	M1A3PE3000L-1FG896
M1A3PE3000L-1FGG896	M1A3PE3000L-FG896I	M1A3PE3000L-FGG896I
M1A3PE3000L-1FG896I	M1A3PE3000L-1FGG896I	M1A3PE3000L-FG896M
M1A3PE3000L-FGG896M	M1A3PE3000L-1FG896M	M1A3PE3000L-1FGG896M
M1A3PE3000L-PQ208	M1A3PE3000L-PQG208	M1A3PE3000L-1PQ208
M1A3PE3000L-1PQG208	M1A3PE3000L-PQ208I	M1A3PE3000L-PQG208I
M1A3PE3000L-1PQ208I	M1A3PE3000L-1PQG208I	
Fusion – AFS090		
AFS090-FG256	AFS090-FGG256	AFS090-1FG256
AFS090-1FGG256	AFS090-2FG256	AFS090-2FGG256
AFS090-FG256I	AFS090-FGG256I	AFS090-1FG256I
AFS090-1FGG256I	AFS090-2FG256I	AFS090-2FGG256I
AFS090-QNG108	AFS090-1QNG108	AFS090-2QNG108
AFS090-QNG108I	AFS090-1QNG108I	AFS090-2QNG108I
AFS090-QNG180	AFS090-1QNG180	AFS090-2QNG180
AFS090-QNG180I	AFS090-1QNG180I	AFS090-2QNG180I
Fusion – AFS250		
AFS250-FG256	AFS250-FGG256	AFS250-1FG256
AFS250-1FGG256	AFS250-2FG256	AFS250-2FGG256
AFS250-FG256I	AFS250-FGG256I	AFS250-1FG256I
AFS250-1FGG256I	AFS250-2FG256I	AFS250-2FGG256I
AFS250-PQ208	AFS250-PQG208	AFS250-1PQ208
AFS250-1PQG208	AFS250-2PQ208	AFS250-2PQG208
AFS250-PQ208I	AFS250-PQG208I	AFS250-1PQ208I



Table 1 • Affected Part Numbers

AFS250-1PQG208I	AFS250-2PQG208I	AFS250-2PQG208I
AFS250-QNG180	AFS250-1QNG180	AFS250-2QNG180
AFS250-QNG180I	AFS250-1QNG180I	AFS250-2QNG180I
Fusion – AFS600		
AFS600-FG256	AFS600-FGG256	AFS600-1FG256
AFS600-1FGG256	AFS600-2FG256	AFS600-2FGG256
AFS600-FG256I	AFS600-FGG256I	AFS600-1FG256I
AFS600-1FGG256I	AFS600-2FG256I	AFS600-2FGG256I
AFS600-FG484	AFS600-FGG484	AFS600-1FG484
AFS600-1FGG484	AFS600-2FG484	AFS600-2FGG484
AFS600-FG484I	AFS600-FGG484I	AFS600-1FG484I
AFS600-1FGG484I	AFS600-2FG484I	AFS600-2FGG484I
AFS600-PQG208	AFS600-PQG208	AFS600-1PQ208
AFS600-1PQG208	AFS600-2PQ208	AFS600-2PQG208
AFS600-PQG208I	AFS600-PQG208I	AFS600-1PQ208I
AFS600-1PQG208I	AFS600-2PQ208I	AFS600-2PQG208I
Extended Temperature Fusion – AFS600		
AFS600-FG256K	AFS600-FGG256K	AFS600-1FG256K
AFS600-1FGG256K	AFS600-FG484K	AFS600-FGG484K
AFS600-1FG484K	AFS600-1FGG484K	
Fusion – AFS1500		
AFS1500-FG256	AFS1500-FGG256	AFS1500-1FG256
AFS1500-1FGG256	AFS1500-2FG256	AFS1500-2FGG256
AFS1500-FG256I	AFS1500-FGG256I	AFS1500-1FG256I
AFS1500-1FGG256I	AFS1500-2FG256I	AFS1500-2FGG256I
AFS1500-1FG484	AFS1500-FG484	AFS1500-FGG484
AFS1500-2FGG484	AFS1500-1FGG484	AFS1500-2FG484
AFS1500-1FG484I	AFS1500-FG484I	AFS1500-FGG484I
AFS1500-2FGG484I	AFS1500-1FGG484I	AFS1500-2FG484I



Table 1 • Affected Part Numbers

AFS1500-FGG676	AFS1500-1FG676	AFS1500-FG676
AFS1500-2FG676	AFS1500-2FGG676	AFS1500-1FGG676
AFS1500-FGG676I	AFS1500-1FG676I	AFS1500-FG676I
AFS1500-2FG676I	AFS1500-2FGG676I	AFS1500-1FGG676I
Extended Temperature Fusion – AFS1500		
AFS1500-FG256K	AFS1500-FGG256K	AFS1500-1FG256K
AFS1500-1FGG256K	AFS1500-FG484K	AFS1500-FGG484K
AFS1500-1FG484K	AFS1500-1FGG484K	
Fusion – M1AFS250, Cortex-M1 Enabled		
M1AFS250-FG256	M1AFS250-FGG256	M1AFS250-1FG256
M1AFS250-1FGG256	M1AFS250-2FG256	M1AFS250-2FGG256
M1AFS250-FG256I	M1AFS250-FGG256I	M1AFS250-1FG256I
M1AFS250-1FGG256I	M1AFS250-2FG256I	M1AFS250-2FGG256I
M1AFS250-PQ208	M1AFS250-PQG208	M1AFS250-1PQ208
M1AFS250-1PQG208	M1AFS250-2PQ208	M1AFS250-2PQG208
M1AFS250-PQ208I	M1AFS250-PQG208I	M1AFS250-1PQ208I
M1AFS250-1PQG208I	M1AFS250-2PQ208I	M1AFS250-2PQG208I
M1AFS250-QNG180	M1AFS250-1QNG180	M1AFS250-2QNG180
M1AFS250-QNG180I	M1AFS250-1QNG180I	M1AFS250-2QNG180I
Fusion – M1AFS600, Cortex-M1 Enabled		
M1AFS600-FG256	M1AFS600-FGG256	M1AFS600-1FG256
M1AFS600-1FGG256	M1AFS600-2FG256	M1AFS600-2FGG256
M1AFS600-FG256I	M1AFS600-FGG256I	M1AFS600-1FG256I
M1AFS600-1FGG256I	M1AFS600-2FG256I	M1AFS600-2FGG256I
M1AFS600-1FG484	M1AFS600-FG484	M1AFS600-FGG484
M1AFS600-2FGG484	M1AFS600-1FGG484	M1AFS600-2FG484
M1AFS600-1FG484I	M1AFS600-FG484I	M1AFS600-FGG484I
M1AFS600-2FGG484I	M1AFS600-1FGG484I	M1AFS600-2FG484I
M1AFS600-PQG208	M1AFS600-1PQ208	M1AFS600-PQ208



Table 1 • Affected Part Numbers

M1AFS600-2PQ208	M1AFS600-2PQG208	M1AFS600-1PQG208
M1AFS600-PQG208I	M1AFS600-1PQ208I	M1AFS600-PQ208I
M1AFS600-2PQ208I	M1AFS600-2PQG208I	M1AFS600-1PQG208I
Extended Fusion – M1AFS600, Cortex-M1 Enabled		
M1AFS600-FG256K	M1AFS600-FGG256K	M1AFS600-1FG256K
M1AFS600-1FGG256K	M1AFS600-FG484K	M1AFS600-FGG484K
M1AFS600-1FG484K	M1AFS600-1FGG484K	
Fusion – M1AFS1500, Cortex-M1 Enabled		
M1AFS1500-FG256	M1AFS1500-FGG256	M1AFS1500-1FG256
M1AFS1500-1FGG256	M1AFS1500-2FG256	M1AFS1500-2FGG256
M1AFS1500-FG256I	M1AFS1500-FGG256I	M1AFS1500-1FG256I
M1AFS1500-1FGG256I	M1AFS1500-2FG256I	M1AFS1500-2FGG256I
M1AFS1500-1FG484	M1AFS1500-FG484	M1AFS1500-FGG484
M1AFS1500-2FGG484	M1AFS1500-1FGG484	M1AFS1500-2FG484
M1AFS1500-1FG484I	M1AFS1500-FG484I	M1AFS1500-FGG484I
M1AFS1500-2FGG484I	M1AFS1500-1FGG484I	M1AFS1500-2FG484I
M1AFS1500-FGG676	M1AFS1500-2FG676I	M1AFS1500-2FGG676I
M1AFS1500-2FG676	M1AFS1500-1FG676	M1AFS1500-FG676
M1AFS1500-FGG676I	M1AFS1500-2FGG676	M1AFS1500-1FGG676
M1AFS1500-1FGG676I	M1AFS1500-1FG676I	M1AFS1500-FG676I
Extended Fusion – M1AFS1500, Cortex-M1 Enabled		
M1AFS1500-FG256K	M1AFS1500-FGG256K	M1AFS1500-1FG256K
M1AFS1500-1FGG256K	M1AFS1500-FG484K	M1AFS1500-FGG484K
M1AFS1500-1FG484K	M1AFS1500-1FGG484K	
Pigeon Point-Enabled Fusion Solutions		
P1AFS600-2FG256	P1AFS600-2FGG256	P1AFS600-2FG256I
P1AFS600-2FGG256I	P1AFS600-2FG484	P1AFS600-2FGG484
P1AFS600-2FG484I	P1AFS600-2FGG484I	P1AFS1500-2FG256
P1AFS1500-2FGG256	P1AFS1500-2FG256I	P1AFS1500-2FGG256I



Table 1 • Affected Part Numbers

P1AFS1500-2FG484	P1AFS1500-2FGG484	P1AFS1500-2FG484I
P1AFS1500-2FGG484I		
MicroBlade-Enabled Fusion Solutions		
U1AFS250-FG256	U1AFS250-FGG256	U1AFS250-FG256I
U1AFS250-FGG256I	U1AFS600-FG256	U1AFS600-FGG256
U1AFS600-FG256I	U1AFS600-FGG256I	U1AFS1500-FG256
U1AFS1500-FGG256	U1AFS1500-FG256I	U1AFS1500-FGG256I