March 24, 2011

PCN Number: 1105

PCN Change Level: Major

Subject: SmartFusion (A2F200 and A2F500) Datasheet and Libero® Integrated Design
            Environment (IDE) v9.1 SP1 Software Update

Dear Customer,

This notice is to inform you that silicon-based timing characterization for SmartFusion A2F200
and A2F500 is now complete. This has resulted in timing specification changes, mostly in the
clock network, which may impact the timing of your designs. The SmartFusion datasheet (revision
6) and timing model in Libero IDE software (v9.1 SP1) have been updated to reflect these
changes.

Key timing changes (delays provided for –1, worst case commercial temperature range
conditions):

- Additional delay when a CLKSRC (CLKBUF / CLKINT) macro is placed: 260 ps – 1.30 ns
- Additional delay when an external memory controller I/O (EMC) is used as FPGA output:
  120 ps
- A bug fix related to bubble handling impacting ± 2% on register-to-register timing

For a complex product such as SmartFusion intelligent mixed signal FPGAs, the datasheet
reflects only a subset of all the timing parameters. For accurate and detailed timing analysis of
user designs, the SmartTime tool in Libero IDE software should be used.

**All customers must rerun static timing analysis (or Back Annotation simulation) to
revalidate timing in their SmartFusion designs**.

- Software

    – The updated Libero IDE software (v9.1 SP1) and release notes can be downloaded from
      the Microsemi SoC Products Group (formerly Actel) website:
      http://www.actel.com/download/software/libero/default.aspx

- Datasheet
    - The updated datasheet (revision 6) can be downloaded:
      http://www.actel.com/documents/SmartFusion_DS.pdf
    - Timing specifications in the following tables have been updated in the datasheet:
         Table 2-23, 2-24
         Table 2-37, 2-38, 2-39
         Table 2-43, 2-44, 2-45
         Table 2-49, 2-50, 2-51
         Table 2-55, 2-56, 2-57
         Table 2-60, 2-61
         Table 2-64, 2-67
         Table 2-79, 2-80

Several other minor updates have been made to the SmartFusion datasheet. Please refer to the List of Changes (page 6-1) for those updates.

None of the parts are affected—the silicon is unchanged. This is a software-driven change. SmartFusion designs targeting the part numbers shown in Table 1 on page 3 are affected.

If there are any questions, please contact the Microsemi Technical Support hotline at soc_tech@actel.com.

Regards,

Microsemi Corporation

![Microsemi logo]

Table 1 • Part Numbers Affected by Software Change

A2F200M3F-FG256	A2F200M3F-FG484	A2F500M3G-FG256I
A2F200M3F-FGG256	A2F200M3F-FGG484	A2F500M3G-FGG256I
A2F200M3F-CS288	A2F200M3F-1FG484	A2F500M3G-CS288I
A2F200M3F-CSG288	A2F200M3F-1FGG484	A2F500M3G-CSG288I
A2F200M3F-1FG256	A2F200M3F-FG484I	A2F500M3G-1FG256I
A2F200M3F-1FGG256	A2F200M3F-FGG484I	A2F500M3G-1FGG256I
A2F200M3F-1CS288	A2F200M3F-1FG484I	A2F500M3G-1CS288I
A2F200M3F-1CSG288	A2F200M3F-1FGG484I	A2F500M3G-1CSG288I
A2F200M3F-FG256I	A2F500M3G-FG256	A2F500M3G-FG484
A2F200M3F-FGG256I	A2F500M3G-FGG256	A2F500M3G-FGG484
A2F200M3F-CS288I	A2F500M3G-CS288	A2F500M3G-1FG484
A2F200M3F-CSG288I	A2F500M3G-CSG288	A2F500M3G-1FGG484
A2F200M3F-1FG256I	A2F500M3G-1FG256	A2F500M3G-FG484I
A2F200M3F-1FGG256I	A2F500M3G-1FGG256	A2F500M3G-FGG484I
A2F200M3F-1CS288I	A2F500M3G-1CS288	A2F500M3G-1FG484I
A2F200M3F-1CSG288I	A2F500M3G-1CSG288	A2F500M3G-1FGG484I