

CN20021: PolarFire LSRAM Timing Change

September 10, 2020

Description

The following changes were made to the PolarFire LSRAM timing model:

- Adjusted the minimum period requirement in SmartTime to be aligned with the datasheet by accounting for ECC/NoECC and Pipeline/Bypass.
- Updated the enable signal setup/hold timing model when the LSRAM is used in the following mode: 2-port x33, ECC-Register non-pipelined, and output port pipelined.
- Updated the reset signal removal/recovery timing model when the LSRAM is used in the following mode: 2-port x33, ECC-Register non-pipelined, and output port pipelined.

Reason for Change

- Minimum period change: The software was too optimistic without accounting for ECC/NoECC and Pipeline/Bypass modes.
- Enable and reset timing models: Change made to reflect silicon requirements.

Application Impact

Impact on regression designs was very minor below 1%.

Action Required

No action is required as the impact due to the change is lower than our built-in timing margin.

Products Affected

MPF100T-FCG484E	MPF300TL-FCG1152E	MPF300T-FCVG484I	MPF200T-1FCSG325I	MPF200TS-FCG484I
MPF100T-FCVG484E	MPF500TL-FCG784E	MPF300T-FCG784I	MPF200T-1FCSG536I	MPF200TS-FCVG484I
MPF100T-FCSG325E	MPF500TL-FCG1152E	MPF300T-FCSG536I	MPF300T-1FCG484I	MPF200TS-FCG784I
MPF200T-FCG484E	MPF100T-1FCG484E	MPF300T-FCG1152I	MPF300T-1FCVG484I	MPF200TS-FCSG325I
MPF200T-FCVG484E	MPF100T-1FCVG484E	MPF500T-FCG784I	MPF300T-1FCG784I	MPF200TS-FCSG536I
MPF200T-FCG784E	MPF100T-1FCSG325E	MPF500T-FCG1152I	MPF300T-1FCSG536I	MPF300TS-FCG484I
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MPF100TL-FCVG484E	MPF500T-1FCG784E	MPF300TL-FCG784I	MPF200TSL-FCSG536I	MPF200TS-1FCVG484I
MPF100TL-FCSG325E	MPF500T-1FCG1152E	MPF300TL-FCSG536I	MPF300TSL-FCG484I	MPF200TS-1FCG784I
MPF200TL-FCG484E	MPF100T-FCG484I	MPF300TL-FCG1152I	MPF300TSL-FCVG484I	MPF200TS-1FCSG325I
MPF200TL-FCVG484E	MPF100T-FCVG484I	MPF500TL-FCG784I	MPF300TSL-FCG784I	MPF200TS-1FCSG536I
MPF200TL-FCG784E	MPF100T-FCSG325I	MPF500TL-FCG1152I	MPF300TSL-FCSG536I	MPF300TS-1FCG484I
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MPF300TL-FCVG484E	MPF200T-FCSG325I	MPF200T-1FCG484I	MPF100TS-FCG484I	MPF300TS-1FCG1152I
MPF300TL-FCG784E	MPF200T-FCSG536I	MPF200T-1FCVG484I	MPF100TS-FCVG484I	MPF500TS-1FCG784I
MPF300TL-FCSG536E	MPF300T-FCG484I	MPF200T-1FCG784I	MPF100TS-FCSG325I	MPF500TS-1FCG1152I
				MPF300XT-1FCG484I

Contact Information

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Regards,

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