

CSM65: GMII Pad Set



Libraries

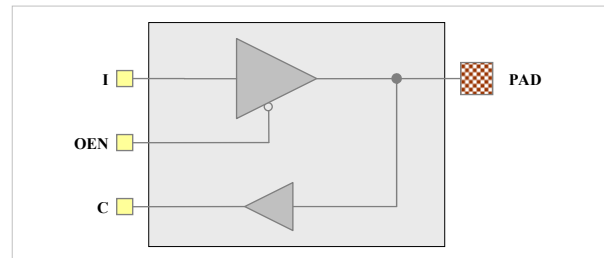
Name	Process	CUP	Form Factor
RG0_CSM65_25V33_G_30C_GMII	G	yes	staggered
RG0_CSM65_25V33_LP_30C_GMII	LP	yes	staggered
RG0_CSM65_25V33_G_50C_GMII	G	yes	Inline
RG0_CSM65_25V33_LP_50C_GMII	LP	yes	Inline

Summary

This library includes MIP_BI_001_33V_NC pad, designed to conform to the Gigabit Media Independent Interface™ (GMII™) specification intended for use between Ethernet PHYs and Switch ASICs. Under IEEE 802.3-2005 a GMII comprised of 8 pins for data and control is defined.

Power bus architecture and physical dimensions of this library are fully compatible with Aragio's standard I/O libraries (RG0_CSM65_25V33_xx_30C and RG0_CSM65_25V33_xx_50C).

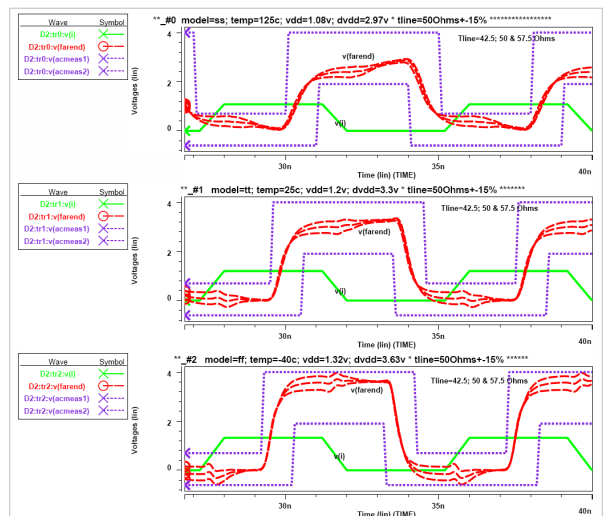
Mix_BI_001_33V_NC – MII I/O Pad



AC Characteristics

Symbol	Parameter	Max	Unit
F	Max frequency	125	MHz
P _{DISS}	Power dissipation	40.1	μW / MHz

Simulation Results



Absolute maximum ratings

Symbol	Description	Value	Units
V _{VDD}	Core supply voltage range	-0.5 to 1.6	V
V _{DVDD}	I/O supply voltage range	-0.5 to 3.8	V
V _{PAD}	Voltage range at PAD	-0.5 to (V _{DVDD} + 0.5)	V
T _J	Junction operating temperature range	-55 to 150	°C

Recommended operating conditions

Symbol	Description	Min	Nom	Max	Units
V _{DVDD}	I/O supply voltage	2.97	3.30	3.63	V
T _A	Ambient operating temperature	0	25	100	°C
V _{VDD}	Core supply voltage	0.9	1.0 to 1.2	1.32	V
T _J	Junction temperature	-40	25	125	°C
V _{PAD}	Voltage at PAD	0	-	V _{DVDD}	V
V _{IH}	Input logic high	1.7	-	-	V
V _{IL}	Input logic low	-	-	0.9	V
V _{IL AC}	Input high voltage AC	1.9	-	-	V
V _{IH AC}	Input low voltage AC	-	-	0.7	V
V _{OH}	Output high	2.1	-	3.6	V
V _{OL}	Output low	0	-	0.5	V
F	Frequency	125 - 100ppm	-	125 + 100ppm	MHz

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Characterization Corners

Nominal VDD	Model	VDD	DVDD = 3.3V	Temperature
1.2 ^[1]	FF	+10%	+10%	-40°C
	FF	+10%	+10%	125°C
	TT	nominal	nominal	25°C
	SS	-10%	-10%	-40°C
	SS	-10%	-10%	125°C
1.1 ^[2]	FF	+10%	+10%	-40°C
	FF	+10%	+10%	125°C
	TT	nominal	nominal	25°C
	SS	-10%	-10%	-40°C
	SS	-10%	-10%	125°C
1.0	FF	+10%	+10%	-40°C
	FF	+10%	+10%	125°C
	TT	nominal	nominal	25°C
	SS	-10%	-10%	-40°C
	SS	-10%	-10%	125°C

^[1] LP process only.

^[2] G process only

Cell summary

Name	Description
MIP_BI_001_33V_NC	GMII pad (staggered configuration)
MIC_BI_001_33V_NC	GMII pad (inline configuration)

Physical size

Name	Width	Height	Units
MIP_BI_001_33V_NC	30	180	µm
MIC_BI_001_33V_NC	50	120	µm

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