

11.18 SPIM Electrical specification

11.18.1 Timing specifications

Symbol	Description	Min.	Typ.	Max.	Units
f_{SPIM}	Bit rates for SPIM ⁸			8	Mbps
$f_{\text{SPIM,HS}}$	Bit rates for high-speed SPIM instances ⁹			32 ¹⁰	Mbps
$t_{\text{SPIM,START}}$	Time from START task to transmission started		1		μs
$t_{\text{SPIM,CCLK}}$	SCK period	31.25			ns
$t_{\text{SPIM,RSCK,LD}}$	SCK rise time, standard drive ¹¹			$t_{\text{RF},25\text{pF}}$	
$t_{\text{SPIM,RSCK,HD}}$	SCK rise time, high drive ¹¹			$t_{\text{HRF},25\text{pF}}$	
$t_{\text{SPIM,FSCK,LD}}$	SCK fall time, standard drive ¹¹			$t_{\text{RF},25\text{pF}}$	
$t_{\text{SPIM,FSCK,HD}}$	SCK fall time, high drive ¹¹			$t_{\text{HRF},25\text{pF}}$	
$t_{\text{SPIM,WHCK}}$	SCK high time ¹¹	$(t_{\text{CCLK}}/2) -$ $t_{\text{RSCK}} - 1.5$ ns			
$t_{\text{SPIM,WLCK}}$	SCK low time ¹¹	$(t_{\text{CCLK}}/2) -$ $t_{\text{FSCK}} - 1.5 \text{ ns}$			

⁸ High bit rates may require GPIOs to be set as High Drive or Extra High Drive, see GPIO chapter for more details.

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¹⁰ For SPIM00 using GPIO port P2.

¹¹ At 25pF load, including GPIO pin capacitance, see GPIO spec.