

miniLA subversions

The miniLA was originally developed only for 100 MHz input clock. Due to problems with obtaining a 100MHz 3.3V crystal oscillator, 3 subversions of miniLA for standard crystal speeds were made.

Subversion were made in such a way that almost no modification is necessary in the control software. The only exception is at frequencies above 20 Mhz (80 MHz can not be integrally divided by 50 MHz).

Timebase selector

Table below shows sampling frequencies for versions with different crystal speeds.

Timebase selector		Output frequency 100MHz version	Output frequency 80MHz version	Output frequency 40MHz version	Output frequency 20MHz version
bin	dec				
00000	0	100 MHz	80 MHz	40 MHz	20 MHz
00001	1	50 MHz	40 MHz	40 MHz	20 MHz
00010	2	20 MHz	20 MHz	20 MHz	20 MHz
00011	3	10 MHz	10 MHz	10 MHz	10 MHz
00100	4	5 MHz	5 MHz	5 MHz	5 MHz
00101	5	2 MHz	2 MHz	2 MHz	2 MHz
00110	6	1 MHz	1 MHz	1 MHz	1 MHz
00111	7	500 kHz	500 kHz	500 kHz	500 kHz
01000	8	200 kHz	200 kHz	200 kHz	200 kHz
01001	9	100 kHz	100 kHz	100 kHz	100 kHz
01010	10	50 kHz	50 kHz	50 kHz	50 kHz
01011	11	20 kHz	20 kHz	20 kHz	20 kHz
01100	12	10 kHz	10 kHz	10 kHz	10 kHz
01101	13	5 kHz	5 kHz	5 kHz	5 kHz
01110	14	2 kHz	2 kHz	2 kHz	2 kHz
01111	15	1 kHz	1 kHz	1 kHz	1 kHz
10000	16	500 Hz	500 Hz	500 Hz	500 Hz
10001	17	200 Hz	200 Hz	200 Hz	200 Hz
10010	18	100 Hz	100 Hz	100 Hz	100 Hz
11110	30	external input	external input	external input	external input
11111	31	memory read clk	memory read clk	memory read clk	memory read clk
other		50 MHz	40 MHz	20 MHz	10 MHz