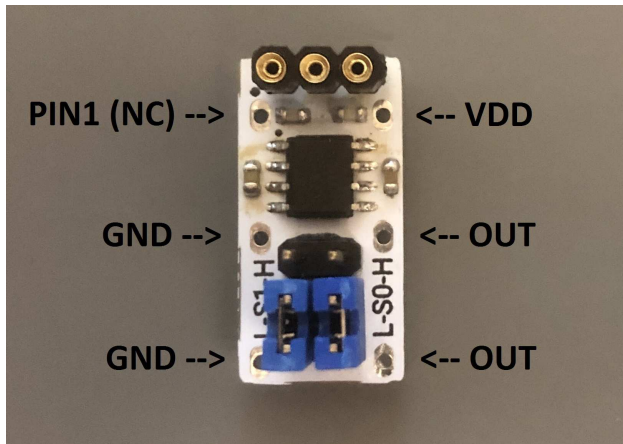


Version H

Designed to be used in Horizontal Orientation.

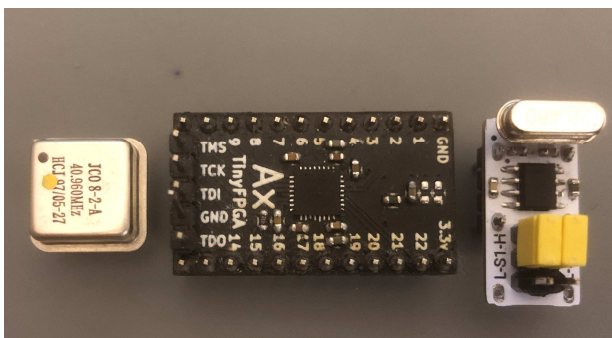


Ideal Drop-In replacement for DIP-8 and DIP-14 oscillators! (3.3v or 5.0v)



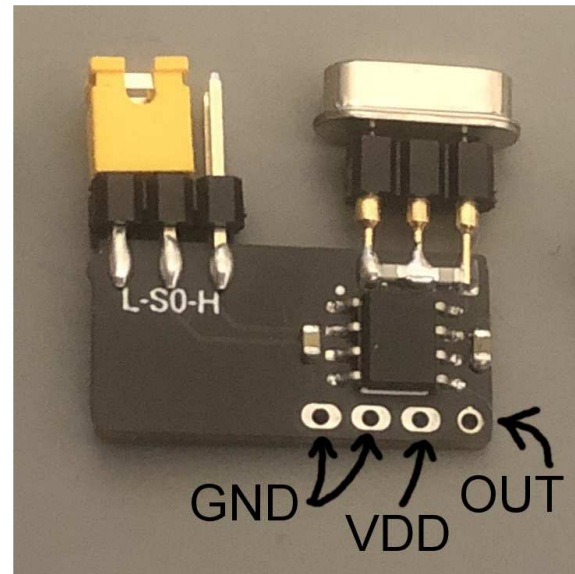
Can also be glued on the M/Bs then connected with short wires.

Also useful for prototyping with FPGAs on breadboards, PCBs, development boards.



Version V

Designed to be used in Vertical Orientation.



Ideally placed as a replacement of a three position jumper. This Jumper needs to have a GND-Select-VDD configuration and will be set permanently to GND. Finally the output should be connected with a wire.



MiGron Any_Clk - General Information

The device uses an external reference crystal.

The crystal is placed in the socket on top.

The device multiplies the reference frequency and generates the output.

The multiplier has 9 options and is selected using two jumpers (each has 3 possible positions).

The device can either be powered with a V_{DD} of $3.3V \pm 10\%$ or $5.0V \pm 5\%$.

The output can drive both TTL and CMOS33 / CMOS50 (CMOS rail-to-rail with capacitive loads).

Short circuit current: $\pm 70ma$.

Output Impedance: 20Ω

Rise/Fall time: 1ns (Typ)

CLOCK MULTIPLIER SELECT TABLE

S1*	S0*	CLKOUT Multiplier
L	L	4X Input
L	M	5.333X Input
L	H	5X Input
M	L	2.5X Input
M	M	2X Input
M	H	3.333X Input
H	L	6X Input
H	M	3X Input
H	H	8X Input

*Pins S1 and S0 default to M when open

L = GND

H = VDD

M = OPEN (unconnected; will default to $V_{DD}/2$)

With the device you get two basic crystals for free 4.0Mhz and 20.0Mhz.

With these you can generate 18 different frequencies in the 8.0-160.0MHz range.

Crystal	Multiplier	S1/S0	Fout	Fcpu(/2)	Fcpu(/4)
4.0	2.00	M - M	8.0	4.0	2.0
4.0	2.50	M - L	10.0	5.0	2.5
4.0	3.00	H - M	12.0	6.0	3.0
4.0	3.33	M - H	13.3	6.7	3.3
4.0	4.00	L - L	16.0	8.0	4.0
4.0	5.00	L - H	20.0	10.0	5.0
4.0	5.33	L - M	21.3	10.7	5.3
4.0	6.00	H - L	24.0	12.0	6.0
4.0	8.00	H - H	32.0	16.0	8.0
20.0	2.00	M - M	40.0	20.0	10.0
20.0	2.50	M - L	50.0	25.0	12.5
20.0	3.00	H - M	60.0	30.0	15.0
20.0	3.33	M - H	66.7	33.3	16.7
20.0	4.00	L - L	80.0	40.0	20.0
20.0	5.00	L - H	100.0	50.0	25.0
20.0	5.33	L - M	106.7	53.3	26.7
20.0	6.00	H - L	120.0	60.0	30.0
20.0	8.00	H - H	160.0	80.0	40.0

You can get more options by using other values of crystals.

Minimum – Maximum tested crystals: 2.0Mhz – 33.0Mhz.

Minimum – Maximum tested generated Fout: 4.0Mhz – 200.0Mhz (maybe higher?).

By using 20+ different crystal values it is possible to get <1Mhz steps in Fcpu(/2).

This full packet will be offered in the future as an extra.