

# CPU09CMI - 2K ROM - GAL Selection Table.

Type	I/O	G1 - 20MHz card 20MHz	G1 - 16MHz card 12 MHz & 16MHz	G1 - Standard card 8MHz & 12MHz	G2 - All cards	Programmer
GAL16V8A-15LP	2		x	x	CMI_2	1, 2, 3, 4
GAL16V8B-5LP	1		x	x	CMI_2	1, 2, 3, 4
GAL16V8D-15LP	1		x	x	CMI_2	1, 2, 3, 4
GAL16V8D-25LP	1		x	x	CMI_2	1, 2, 3, 4
GAL22V10B-15LP	3	CMI-4_1	CMI-4_1	CMI_1	x	1, 2, 3, 4
GAL22V10D-15LP	3	CMI-4_1	CMI-4_1	CMI_1	x	1, 2, 3, 4
ATF16V8B-15PC	1		x	x	ATF-CMI_2	2, 3, 1, 4
ATF16V8B-25PC	1		x	x	ATF-CMI_2	2, 3, 1, 4
ATF16V8BQL-15PC	1		x	x	ATF-CMI_2	2, 3, 1, 4
ATF22V10B-15PC	1		ATF-CMI-4_1	ATF-CMI_1	x	2, 3, 1, 4
ATF22V10C-15PC	5		ATF-CMI-4_1	ATF-CMI_1	x	2, 3, 1, 4
ATF22V10CQZ-20PC	5		ATF-CMI-4_1	ATF-CMI_1	x	2, 3, 1, 4
PALCE16V8-15PC	1		x	x	CMI_2	2, 3, 4
PALCE16V8-25PC	1		x	x	CMI_2	2, 4, 3
PALCE16V8H-15PC/4	4		x	x	CMI_2	2, 3, 4
PALCE16V8H-25PC	4		x	x	CMI_2	2, 4, 3
PALCE16V8Q-15PC/4	4		x	x	CMI_2	2, 3, 4
PALCE22V10H-15PC/4	4		CMI-4_1	CMI_1	x	2, 3, 4
PALCE22V10H-25PC/4	4		CMI-4_1	CMI_1	x	2
PALCE22V10Q-25PC	4		CMI-4_1	CMI_1	x	2

Tested

Any open field means not used or tested

First nr preferred

Also tested a mix ATF / GAL / PALCE and -15 / -25

I/O:  
 1 = I/O 50K pull up  
 2 = I/O No pull up  
 3 = I/O Active pull up  
 4 = 100K|50K|No pull up  
 5 = I/O Pin keeper

Programmer:  
 1 = Xgpro TL866II Plus, Sw 12.90 - Fw 04.2.132  
 2 = GALEP-4, Galep32 Version 1.20.4  
 3 = TOP2013, Sw Topall 8.92 - Fw 6.30  
 4 = TOP3002, Sw Topall 9.21 - Fw 6.93  
 5 = TOP3100, Sw Topall 8.92 - Fw 6.02

Remarks: I/O type 4 depending on device suffix, /4 = 100K, /5 = 50K, otherwise NO pull-up  
 I/O type 2, 4 and 5 may need a pull-up on floating input pins.  
 Some ATF16V8B had errors on the TL866II Plus but not on the GALEP-4.  
 Do select the full name in the programmer A, B, C, D, H, Q, or CQZ, BQL version !  
 Otherwise you will get programming errors !  
 TOP family also select the correct speed -15 or -25 and /4 or /5 ! Check Position Tab !

Also read 'Documents\PLD and Programmers Info.pdf'.