

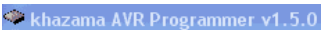



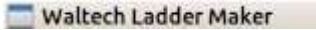



COMPARATIVE METHODS FOR AUTOMATION AND MICRO-CONTROLLERS PROGRAMING

		Arduino Uno board	Arduino atmega644p/128 4p board	Arduino Mega board
I/O expected		20 within 6 analog outputs and 6 analog inputs	32 within 6analog outputs (644p) 8 analog outputs (1284p) 8 analog inputs	64 within 16 analog inputs and 15 analog outputs
LDmicro 4.1.2 IEC 61131 No Ethernet shield compatible 	Program upload soft	Xloader USB 	Khazama USBasp 	Xloader USB 
	Library adds	NO	NO	NO
	GUI/CODE	LADDER GUI, no code, Hex file generated	LADDER GUI, no code, Hex file generated	LADDER GUI, no code, Hex file generated
	I/O reachable with the freeware	20 within 6 analog inputs and 1 analog output	32 within 6analog outputs (644p) 8 analog outputs (1284p) 8 analog inputs	64 within 16 analog inputs and 11 analog outputs
SM library on Arduino 1.6.5 IDE Ethernet shield compatible for a SCADA 	Program upload soft	Arduino IDE and USB	Arduino IDE and USBasp	Arduino IDE and USB
	Library adds	YES	YES	YES
	GUI/CODE	No GUI, C code, ino files	No GUI, C code, ino files	No GUI, C code, ino files
	I/O reachable with the freeware	20 within 6 analog outputs and 6 analog inputs	32 within 6analog outputs (644p) 8 analog outputs (1284p) 8 analog inputs	64 within 16 analog inputs and 15 analog outputs
YAKINDU 3.0 64bits/ YAKINDU 2.9 32 bits SYSML rules Ethernet shield compatible for a SCADA 	Program upload soft	Arduino IDE included and USB	Not possible	Arduino IDE included and USB
	Library adds	YES	NO	YES
	GUI/CODE	State diagram GUI, C code, ino files	Nothing	State diagram GUI, C code, ino files
	I/O reachable with the freeware	20 within 6 analog outputs and 6 analog inputs	Nothing	64 within 16 analog inputs and 15 analog outputs
Waltech Ladder Maker 1.0.4 IEC 61131 May be Ethernet shield compatible for a SCADA (complicated) 	Program upload soft	USB	Not possible	USB
	Library adds	YES, possible in the code in line, complicated	NO	YES, possible in the code in line, complicated
	GUI/CODE	LADDER GUI, C code	Nothing	LADDER GUI, C code
	I/O reachable with the freeware	8 digital outputs 5 digital inputs 4 analog inputs 2 analog outputs	Nothing	Not so much
Grafcet Studio IEC 61131 	Program upload soft	Waiting for it, not free ?		
	Library adds			
	GUI/CODE	SFC GUI (GRAF CET in french)		
	I/O reachable with the soft	Waiting for it, not free ?		