

Overview of TI's MSP430-Development-/Programming-Tools and their basic capabilities (MAR2003)

	MSP-FET430Pxxx "Flash-Emulation-Tool"	MSP-PRGS430 "Serial MSP430-Programmer"	BSL430 "Boot-Strap-Loader"	MSP-EVK430S320/330 "Evaluation-Kit"	MSP-GANG430 "Gang-Programmer"
Main purpose:	Development-Tool	Programming-Tool	Programming-Tool	Development/Programming-Tool	Programming-Tool
Area of application:	Development and prototype programming Programs single units or In-System	Low-Volume-Production Programs single units or In-System	Programming in production and field Programs single units or In-System	Development and prototype programming Programs single units	Production Programs up to 8 units simultaneously, In-Circuit or units in sockets
Functions:	Integrated-Development-Environment	Erase, Program, Verify, Read-Out Program-Fuse capability	Erase: always Program, Verify and Read-Out are password-protected	Development-Environment Erase, Program, Verify, Read-Out consists of EVK + PRGS430	Erase, Program, Verify Program-Fuse capability stand-alone operability or host-controlled configurable via Serial-IF(RS232)
Limitations:	No Erase, Verify, Read-Out-Functions No program-Fuse capability No simultaneous programming EPROM-devices not supported	No simultaneous programming Not for development	No program-Fuse capability No simultaneous programming Not for development EPROM-devices not supported	No In-circuit programming No simultaneous programming Flash-devices not supported	EPROM-devices not supported
Alternatives:	Programming low volumes: PRGS430 Programming high volumes: 3rd parties Fuse-Programming: PRGS430 For EPROM-devices: EVK430S3xx	For development: Flash-Emulation-Tool Programming high volumes: 3rd parties	For development: Flash-Emulation-Tool Programming high volumes: 3rd parties Fuse-Programming: PRGS430	For flash-devices: Flash-Emulation-Tool Programming low volumes: PRGS430 Programming high volumes: 3rd parties	For development: Flash-Emulation-Tool
Supported devices:	All MSP430-Flash-devices	All MSP430 Flash+EPROM-Devices	All MSP430-Flash-devices	E/P 325, 325A, 337, 337A	All MSP430-Flash-devices
H/W-Requirements:	PC Parallel printer-port 5-wire JTAG-connection to target: TCK, TMS, TDI, TDO, GND, (Vcc, RST/NMI), 20/28pin devices: Test	PC Serial communication-port 5-wire JTAG-connection to target: TCK, TMS, TDI, TDO, GND, (Vcc, RST/NMI), 20/28pin devices: Test Power-Supply 15VDC/200mA	PC Serial communication-port 5-wire serial-connection to target: RX, TX, Test/TCK, Reset, GND, (Vcc)	PC Serial communication-port 5-wire JTAG-connection to target: TCK, TMS, TDI, TDO, GND, Vcc Power-Supply 15VDC/200mA	5-wire JTAG-connection to target: TCK, TMS, TDI, TDO, GND, Vcc 20/28pin devices: TEST Power-Supply: 8 -15VDC/300mA
S/W:	OS: Win95/98, ME, 2000, NT Embedded Workbench from Co. IAR	OS: Win95/98, ME, 2000, NT GUI or DLL from TI	OS: Win95/98, ME, 2000, NT see Application-Reports:SLAA089A and SLAA096B see also Vendors	OS: Win95/98, ME, 2000, NT Embedded Workbench from Co. IAR	OS: Win95/98, ME, 2000, NT, XP Windows-DLL available* (* Under Development)
Actual PC-S/W-version: (March 2003)	3.03	1.20	1.1.1	1.02	1.10
Programming speed:	34s for 60kBytes (1.8kByte/s)	58s for 60kBytes (1.0 kByte/s)	V1.10: 150[24]s for 60kBytes (0.40[2.50]kByte/s) V1.40: 75s for 60kBytes (0.80kByte/s) V1.60: 20s for 60kBytes (3.00kByte/s) (values in [] achieved by loadable BSL)	80s for 32kBytes (0.4 kByte/s)	12s for 60kB (5kB/sec) up to 8 units simultaneously
Vendor:	TI-Distributor	TI-Distributor	e.g.:Co. Softbaugh (www.softbaugh.com) Co. Gessler(www.gessler-electronic.de)	TI-Distributor	TI-Distributor