



Front View



Back and Inside View

CheckSum MultiWriter pps OEM

Made in U.S.A.

The MultiWriter⁺ pps on-board gang programming system uses patented simultaneous programming technology to program up to 96 chips at one time with up to 4 different types, in seconds instead of the minutes required by conventional programmers.

Compared to other part programming solutions, MultiWriter delivers significant speed and cost advantages over conventional in-circuit tester-based programmers when parts already mounted on circuit boards must be programmed in a single pass, making it especially effective for multi-board panels.

The MultiWriter pps OEM version features:

- **Simultaneous programming of up to 24 devices and expansion to 96 devices with additional options**
- **Universal programming capability for all device families supported by an extensive protocol library**
- **Integrated, universal power supply**
- **USB cable connection to any PC**
- **Simultaneous programming for multiple devices, 1 part or 384 parts all at the same time**
- **Non-multiplexed, parallel programming at the maximum rated device speed**
- **Each control module can provide programming signals to up to 24 programmable devices**
- **Controls the buffer module relay-switched isolation for signals and power to the programmed device**
- **Supports PCB panels with selective power and programming signals**
- **Daisy-chain control signal design for expansion to additional buffer modules**
- **Designed for twisted-pair wiring for all critical signals**
- **Designed to work with ICT (In-Circuit Test) applications**
- **28 Differential signals pairs for SCLK, DATA0 to devices, MODE and 25 DATA1 from devices, with series impedance for protection and to eliminate ringing**
- **24 relay drive control outputs**
- **On board +5V power input regulator to 3.3V and 1.8V for stable control module power**
- **FPGA design to soft load the programming algorithm and transfer data in parallel to/from all buffer modules**
- **Comprehensive device and bus algorithm library; bus algorithms include I2C, SPI, Microwire, JTAG, and PIC, with more under development.**
- **Smart ISPTM ensures failed boards are not programmed — even when part of a multi-up assembly**
- **Unique data may be programmed on a per-device basis — even on panelized boards**
- **Fixture-mounted buffer boards ensure the highest signal quality**
- **User Data Protection Encryption Option**
- **Buffer modules designed for specific applications; -075, -075, -105, and -107**
- **Designed for 19-inch rack-mount**



CheckSum MultiWriter™ Device Support

- Universal, In-System (ISP) and Standalone Stations
- Simultaneous Device Programming



Actel Nonvolatile FPGA IGLOO ProASIC Programmable System Chip Fusion	Altera EPC Series - FPGA configuration MAX 3000A CPLD Family MAX 7000 CPLD Family MAX 7000A CPLD Family MAX 7000B CPLD Family MAX 9000 CPLD Family	Analog Devices ADE71XX (UART)	Atmel AT24 Series (I2C) AT25 Series (SPI) AT26 Series (SPI) AT45 Family AT91 Family AT93 Series (Microwire) AT90 (AVR8) ATMEGA (AVR8 SPI / JTAG) ATtiny (AVR8)	Catalyst CAT24 Series (I2C) CAT25 Series (SPI) CAT93 Series (Microwire) CATxxxx Series Digital Pots (SPI)	Cypress Delta39K Ultra37000 Series P5J CPLDs P5oC
Fairchild NM24 Series (I2C) NM93 Series (Microwire)	Freescale HC908 Series (UART) HLC908 HC9508 Series (BDM) HC9512 Series (BDM) HC9512XD HC9512XE HC9512XS HC912	Fujitsu MB90387 Family (USART)	Infineon XC86X Series XC16X Family	Integrated Silicon Solution IS24 Series (I2C) IS25 Series (SPI) IS34 Series (I2C) IS93 Series (Microwire)	Lattice MachXO Family LatticeXP2 Family LA4000 (JTAG)
Macronix MX25LX Family	Maxim DS1086L	Micron P5Q PCM Series (SPI)	NEC 70F Series (SPI+UART) 78F Series (SPI) v850 Series (SPI+UART) 78K05	NXP PCA24 Series LPC ARM7 Series (UART+JTAG) PCF79xx Series 89LPC9XX Series LPC ARM9	Ramtron Serial Flash/EEPROM/FRAM FM24 Series (I2C) FM25 Series (SPI)
Microchip 24 Series (I2C) 25 Series (SPI) 93 Series (Microwire) PIC10F PIC12F PIC16F PIC18F PIC24F MCP4xxxxx Digital Pots (SPI) dsPIC30F dsPIC33F	Micron P5Q PCM Series (SPI)	NEC 70F Series (SPI+UART) 78F Series (SPI) v850 Series (SPI+UART) 78K05	NXP PCA24 Series LPC ARM7 Series (UART+JTAG) PCF79xx Series 89LPC9XX Series LPC ARM9	Ramtron Serial Flash/EEPROM/FRAM FM24 Series (I2C) FM25 Series (SPI)	Renesas H8S Family M16C Family R8C Family
Microchip 24 Series (I2C) 25 Series (SPI) 93 Series (Microwire) PIC10F PIC12F PIC16F PIC18F PIC24F MCP4xxxxx Digital Pots (SPI) dsPIC30F dsPIC33F	ROHM BR24 Series (I2C) BR25 Series (SPI) BR93 Series (Microwire)	Seiko S-24 Series (I2C) S-25 Series (SPI)	Silicon Storage Technology SST25 Series (SPI)	Spansion S25FL Series (SPI)	STMicroelectronics M24 Series (I2C) M25 Series (SPI) M34 Series (I2C) M45 Series (SPI) M93 Series (Microwire) M95 Series (SPI) ST7 Family STM8 Family STM32 (CORTEX M3) STR7 Family STR10 Family
Texas Instruments TMS470 MSP430	Winbond W25 Family SpiFlash	Xilinx XC18V00 ISP PROM XCF Series Platform Flash XC9500 Series CPLD Family CoolRunner II CPLD Family CoolRunner XPLA3 CPLD Family	ziLOG Z8 Family		

Note: Devices not listed can normally be supported upon request. Please contact CheckSum for more information:
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Available
Planned

MultiWriter pps OEM version Specifications

- Controller module(s) are connected to computer via USB 2.0.
- 66.66MHz FPGA clock rate
- Input Voltage from buffer modules 5.5V (max.)
- Nominal output impedance: 200 Ohms (to buffer modules)
- Nominal sensor input impedance >100K Ohms (buffer to control module)
- Twisted pair wiring recommended between control module(s) and buffer modules
- Designed for CheckSum buffer boards typically mounted in a bed-of-nails test fixture
- ESD Protection Exceeds JESD 22
- Rear panel connection for two external UUT power supplies
- Front panel probe connection
- Approximately 17 in. (W) x 20 in. (D) x 1.75 in. (H) / 432mm x 508mm x 45mm, designed for 19-inch rack-mount
- Power input: 100 - 240 VAC, 3A (max), front panel On/Off switch

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† MultiWriter Technology is protected under U.S. Patent No. 7,802,021.

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