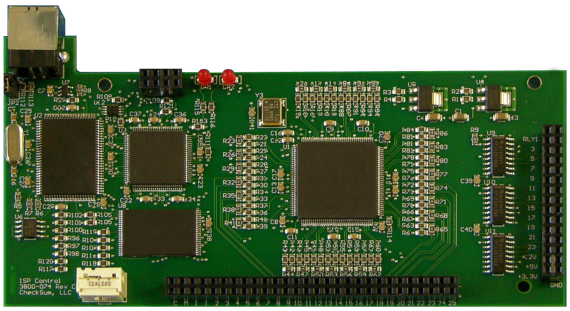
CheckSum

MultiWriter Control Module



MultiWriter Control Module (-74)
Made in U.S.A.

The MultiWriter† on-board gang programming system uses patented simultaneous programming technology to program up to 384 chips at one time with up to 16 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 control module provides the interface between the system software and the buffer modules to insure device programming meets the required critical timing and voltage device specifications.

The MultiWriter Control Module features:

- **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**
- **Up to 16 control modules can be addressed from a USB hub**
- **Each 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, DATAO to devices, MODE and 25 DATAI 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 ISP™ 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**

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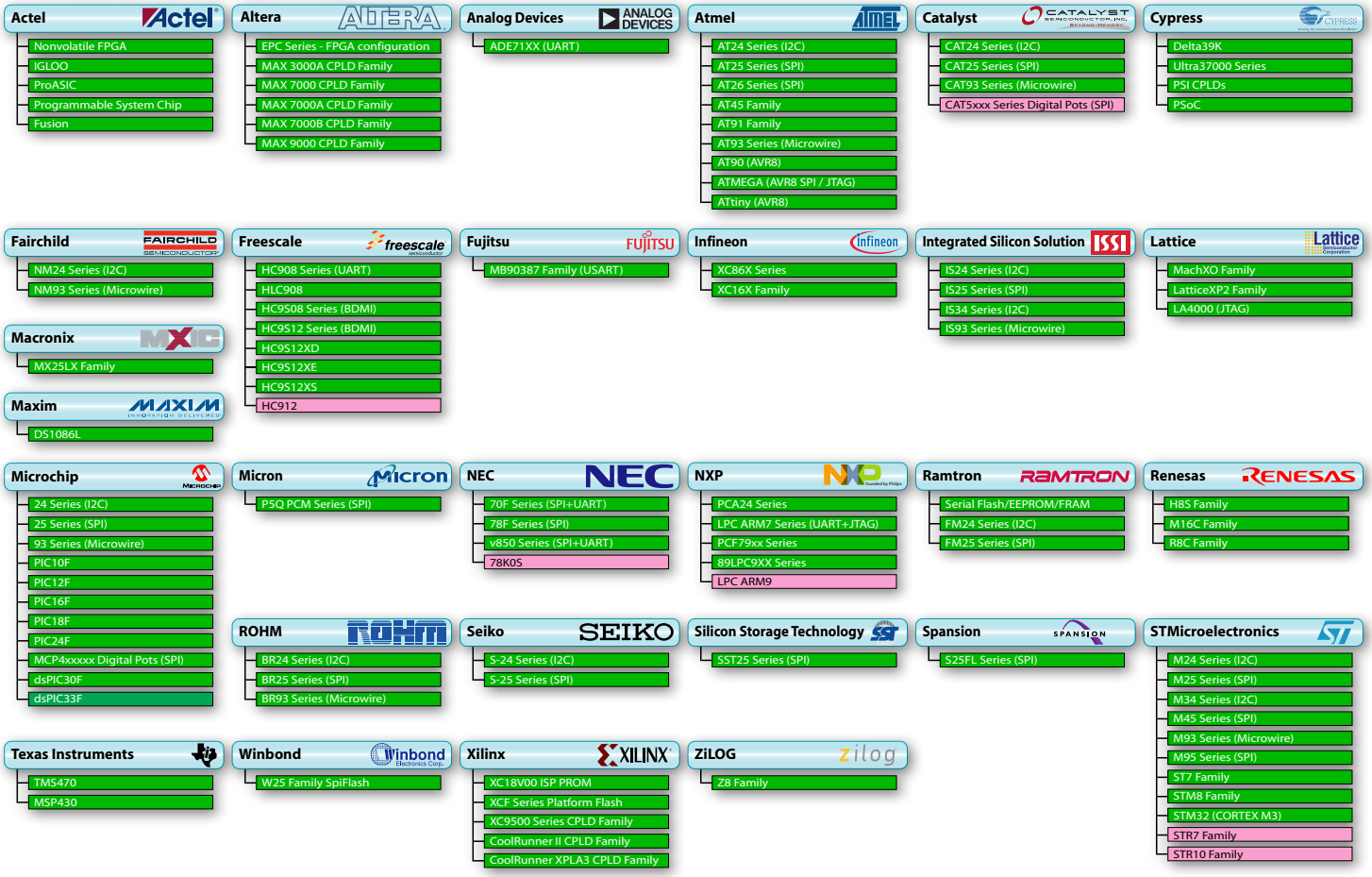
CheckSum MultiWriter™ Device Support

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



Note: Devices not listed can normally be supported upon request. Please contact CheckSum for more information:
Email: sales.support@checksum.com • Tel 1 877 CHECKSUM / +1.360.435.5510

Available
Planned

MultiWriter Control Module Specifications

- Controller board is connected to computer via USB 2.0, which also powers the board. Requires "high power" USB 2.0 rated hub. Board draws approximately 150 mA unloaded.
- 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 and buffer modules
- Designed for CheckSum buffer boards typically mounted in a bed-of-nails test fixture
- ESD Protection Exceeds JESD 22
- Control board dimensions: Approximately 3" x 5.5" / 8 cm x 14 cm, can be mounted in bed-of-nails test fixture

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Fully Tested