# **CHIPMASTER 6000XP**

### PC Based 48 Pin Universal Programmer

- Windows 7 64 bit support, Vista, Windows XP, Windows 98, 2000, NT
- Supports over 30,000 PLDs, PROMs, EPROMs, PALs, CLPDs, Flash Memory, MPUs, EEPROMs, and more.
- 48 Pin drivers with adaptors expanding over to 500 pins
- High speed USB port and Parallel port included
- Reads file in various hex or binary, and saves to various file formats. Reads from one format, copies to another format!

#### **General Features**

- Auto Devices
- Approved by Semiconductor Companies
- Ideal for field, Production and Engineering
- Industrisl grade, suitable for round the clock operations in abusive environment
- Automatically detects bad chips, broken pins and insertion errors.
- Large selection of adaptors support surface mount technologies like PLCC, SOIC, TSOP, BGA, TQFP, QFN, and a host of other package types.
- Supports 5V, 3.3 and 1.8V low voltage devices.
- Software Updates via Internet
- Over 10,000 sold in USA alone with less than 25 field harware failures!
- Full Money Back Guarantee, 7 Day Free Trial.

#### **DEVICE UPDATES:**

Logical Devices updates software and algorithm regularly. You can get the latest software online.

#### The Most Reliable Universal Programmer



The APEX Device Programming Station for any Programmable Device Programs Devices from the 70's, 80's, to the most recent!

#### **Technical Features:**

<u>Powerful Pin Drivers</u> The Chipmaster 6000XP features universal pin driver, each pin can supply four different voltage, ground, it also can be configurable as TTL high/low levels with pull-high/pull-low, high-speed clock and high impedan ce. This advanced pin design lets you program any DIL device of up to 48 pins without needing an adapter

#### Device insertion and contact checks—No mistakes!

The Chipmaster 6000XP performs device insertion and contact checks before it programs each device. It can detect poor pin contact and devices inserted upside down or in the wrong position. This function protects your pocketbook by preventing expensive chip damage due to operator error.

#### Serialization function

If your memory devices need individual serial numbers with different increment sequence and initial value, the Chipmaster 6000XP has an Auto Increment function. This simply increments the serial numbers in the buffer each time a new device is inserted. This saves time and money.

#### Auto-sensing and self-programming

the Chipmaster 6000XP's auto-sensing feature ensures the device has been inserted correctly and then automatically programs the device. Furthermore, in the mass-production mode the system keyboard is automatically disabled preventing the operator from making any inadvertent mistakes.



#### **CHIPMASTER 6000XPTechnical Features:**

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## GANGPRO 8XP

#### Stand Alone or PC Based Multi-Sockey Programmer

- Window 7 64 bit Support, Vista, Window XP, 98, Windows 2000, NT
- Supports Most New or Old EPROM, EEPROM, Flash
- One master, 8 slave sockets, also copies from PC file.
- SET and SPLIT programming features
- Serial and USB connection to computer.
- Read Existing Chips, Edit, Clone, Copy
- Read file in vairous hex or binary, and save to various file formats. Read from one format, copy to another format!
- Approved by Semiconductor Companies
- Ideal for Field, Production and Engineering
- Industrial grade, suitable for round the clock operation in abusive production enviornment
- Additional Programming Heads available for 40 and 42 PIN EPROMS, Flash, Micro-Controllers, SerialPROMs.
- Support 5V, 3.3, and 1.8V low voltage devices,
- Software Updates via Internet
- Over 10,000 sold in USA alone with less than 25 field hardware failures!
- Full Money Back Guarantee, 7 Day Free Trial.

A Programmer Easier to Use than a Copy Machine! Just Press Copy!



Classic Gang Programmer/Set Programmer Automatically Splits files in blocks or words!



Truly Stands Alone In Production Programming!

#### **Technical Features:**

Gangpro-8xp is the ideal unit for duplication and programming of programmable memory devices. The unit can be operated without a PC from a master chip for duplications, or can be connected to the PC via Winlink -3 software included in the unit for creation of devices from a file or edit buffer. Data can also be read from a device and uploaded to the PC to be saved for later use. It can program 8 simultaneous devices from the PC or the Master socket. The unit can come with any socket configuration desired and configured later for different types of socket through various programming socket platters. This will avoid the use of individual adaptors and be more cost effective. Finally one unit that can replace all previous models of Logical Programmers at affordable cost. Place your orders now as quantities are limited for our first run production. This unit can replace the following previous programmers without the loss of functionality. See list below

The Gangpro-8xp is loaded with features not found in comparably priced other gang programmers. The unique control interface allows inexperienced personnel to quickly produce programmed parts. Up to 30 part selections and command sequences can be stored in the internal memory and activated by a single button. Operation status such as PASS/FAIL is displayed by tri-color LEDs for reach ZIF socket. Part selection, device option settings and desired commands are arranged in a convenient job format in the internal memory. Jobs can be added from the front panel or from a PC using the WinLink Job Setup Wizard. The wizard steps you through the process of setting all parameters necessary to complete the job. Once the job is created, the operator can execute it by pressing a single button on the front panel or pressing and optional remote switch that plugs into the back of the unit. The proprietary SMART-PART feature assures programming compatibility when mixing different manufacturer parts and notifies the user when parts are inserted incorrectly or the parts are not program compatible.



New Gangpro-8XP-W3 models incorporates real key switches, and 96 PIN DIN connector for easier module swapping . If you have the W2 (Winlink2) model shown on the right picture, you can upgrade to the new modular unit shown in the left photos for a very reasonable price. Call us to get a quote. The new W3 model has moved all of the electronics on the socket platters to the main driver board, therefore lower the cost of 9 socket platters to less than half of the previous model. The picture above shows 5 socket PLCC version of the platters( One Master, 4 Slaves), however the standard platters provide One Master , 8 Slave sockets.

|        | IG       |  |
|--------|----------|--|
| EPROM2 | HEX FILE |  |
| EPROM8 |          |  |

NOTE: Set Programming is accomplished serially

#### **Technical Specifications**

- Device support: FLASH/ EEPROM, EPROM, MICRO'S (optional head)
- Capacity: 2-9 sockets (one master and 1-8 slave)
- Socket platters: DIP,PLCC2832,PLCC3232,PLCC44(8751), TSOP-48
- Software: Winlink-3 for Win 9x/ME/2K/XP/NT, Includes Command Line interface
- Interface: RS232 @115K/DB9 ,Now Includes USB cable.
- **Power:** 115/230VAC/100W external 12VDC 1.5 Amp (Car Battery Attachment Optional)
- Front panel: 3x4 KEYPAD 2x16 LCD
- Case: Steel 18 guage / Gray finish
- Warranty: One year Parts and Lab

#### PC system requirements

- Operating system: Windows 95/98, Win 2000, Windows XP or Windows
- NT, Window 7, Vista
- Processor: 386 and above
- 8 MB RAM minimum, 32 MB recommende
- Hard disk with 16 MB free space
- Parallel port with EPP mode, USB2.0
- CD ROM drive

Replaces the following programmers: Needham's EMP-30, Logical's Allpro-44, Allpro-LC, Allpro-88, Xeltek's Superpro 3000, Superpro 280, Superpro 580. Logical's XPRO-3000, Chipmaster 6100, Chipmaster 7200, Chipmaster 7100, Chipmaster 5100, Chipmaster 5200,

#### **DEVICE UPDATES:**

Logical Devices updates software and algorithm regularly. You can get the latest software online.



## **SD/MICRO SD** Secure Digital Card Duplicators

- Stand Alone Turnkey System (No computer required)
- New Asynchronous (Independent) Duplication
- Buffer Memory up to 256 MB
- Unlimited Max SD / Micro SD Size Support
- Supports All Files Systems
- Supports Flash Devices: All SD, SDHC, Micro SD MIcro SDHC Card
- Micro SD Drive Duplicator can make multiple copies of SD Drives performs without a computer.
- During the duplication process, no waiting and no interruption as each channel independently load, unload, and copy.
- New Asynchronous Duplication: Able to copy any size master data onto multiple sources asynchronously (independently) without sacrificing duplication speed or quality for faster and more reliable duplication.
- New Smart copy feature: This feature is used to quickly copy all accessible content contained on the SD/MicroSD device.
- New Supports all data Formats with bit by bit duplication
- New Supports all currently available SD/MicroSD drive:
- Supports all currently available SD/MicroSD drive in the market.
- New Secure Erase: Fully erase the SD/ Micro SD device without the data being recovered.
- Future functions upgradeable through firmware: Duplicator is able to be upgraded by future firmware updates.
- Multi-Language capability: The text on the LCD screen can be displayed in English, Spanish, French, Japanese & more.
- Maximum Write Speed is 31 MB/Sec.
- Maximum Read Speed is 33MB/Sec.



Target: 1 to 3 SD Requires 90 ~ 240V AC



Target: 1 to 7 SD Requires 90 ~ 240V AC



Requires 90 ~ 240V AC

DEVICE UPDATES: Logical Devices updates software and algorithm regularly. You can get the latest software free of charge through internet.

#### **Ordering Information**

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### **COMPACT FLASH** CF Card Duplicators

- Stand Alone Turnkey System (No computer required)
- Asynchronous and Synchronous copy modes
- No warm up and cool down
- Unlimited Max SD / Micro SD Size Support
- Supports All Files formats, file size and card/ drive capacity



Target: 1 to 7 SD

Target: 1 to 15 SD

Compact Flash Memory Card Duplicator performs without a computer. Easy to operate and completes copying in high speed safely. Has a real timedisplay of detailed information on LCD Screen.

#### Specifications

Device Type: Stand-alone

Color: Black

Display: LCD Backlit

Buffer Memory: Up to 256MB

Target: 15

Supported Media: Compact Flash (CF Model)

Supported Memory Cards: Compact Flash Type 1, 2, Microdrives

Transfer Speed : Up to 2GB / min

Copy Mode: Synchronous or Asynchronous

Regulations: FCC, CE

Operating Temperature: 41°F - 122°F

Operating Humidity: 15% to 90%

Power Requirements: 115/230VAC





Target: 1 to 23 SD

Target: 1 to 31 SD

#### **DEVICE UPDATES:**

Logical Devices updates software and algorithm regularly. You can get the latest software online.



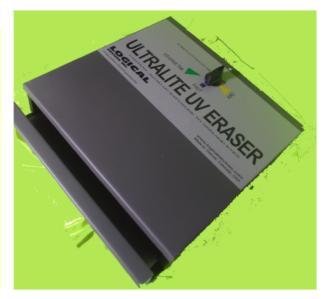
## **ULTRALITE UV ERASER**

#### Ultralite Standard High Capacity Industrial UV Eraser

#### **Specifications**

- Capacity: 30+DIP 40 parts50+ DIP 28 parts 90+ PLCC 32 parts
- Erasure Time: Typical 15-20 minutes
- Timer: 60 Minute Spring-woundAuto-Shut Off
- Power: 115 or 230 VAC
- Dimensions: 9"x10"x5"
- Weight: 15 lb
- Enclosure: 18 Gauge Steel, Gray Powder Coat
- UV Element: Double 6" UV element

Largest UV Eraser in the market!



The UltraLite is intended for mid to large volume production ultraviolet EPROM eraser use. Sliding drawer type tray is completely removable to facilitate chip insertion/removal. Extra trays are available for 'batch erasing'...one tray is erasing while another contains chips for programming. Tray is anti-static foam lined (5"x 6") to protect sensitive devices. Dual lamps produce 253nm UV light (for optimum erasure time). All models include Safety Interlock switch, ultra rugged steel enclosure and very reliable auto shut off timer.

## **ENGINEERING UV ERASER**

#### **T-6 Low Cost UV Eraser**

#### **Specifications**

- Capacity: 15+ DIP parts
- Erasure Time: Typical 15-20 minutes
- Timer: 60 Minute Spring-woundAuto-Shut Off
- Power: 115 or 220 VAC or 240 VAC
- Dimensions: 8"x2.5"x1.8"
- Weight: 45 lb
- Enclosure: 18 Gauge Steel, Gray Powder Coat
- UV Element: 14" UV element



T-8 is a low cost high quality UV eraser. It can eraser up to 5 32 pin devices in less than 10 minutes. Auto-shutoff 60 minute timer is included .**Made in USA.** 

#### **DEVICE UPDATES:**

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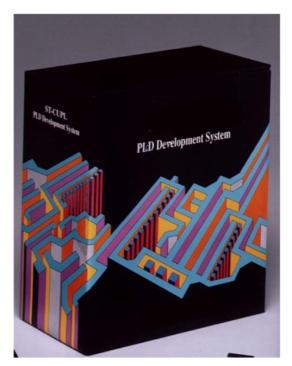


## **CUBEL CHIP DESIGNER 5.0**

Easy Language for PAL and PLD design

Based on CUPL and Abel programming languages

- Creates JEDEC files from Boolean Equation, State Machine Equations
- Runs Test Vectors and Simulate your Design
- Support for all Legacu PAL / PLD devices and select CLPD devices.



Includes many PLD Design examples: CLPDs, TTLPROMs!

#### Overview

<u>CUBEL 5.0 is a traditional PAL/PLD design software that allows users to create a JEDEC file for a programmer. The product can be used to perform all functions provided by similar products such as the Data I/O ABEL, AMD Palasm, ICT ICE, and original CUPL language. The syntax is made so it is based on the CUPL language and provides and exceeds all capabilities of such products.</u>

Software is included in CD form and comes with user manual and documentation . Limited telephone support

#### **Devices supported**

- MMI PAL 10HXX, 12Lxx, 14Lxx, 16Lxx, 16Rxx, 20Lxx, 20Rxx
- Philips Signetics PLS, PLA, PLUS, series
- Lattice GAL 16xx, 20xx, 22xx
- TI TIBPAL series
- ICT/Gould PEEL series
- AMD PALCE series, Mach series (requires fitters)
- ATMEL ATF series
- Altera EP300/600/900
- PROMs from various suppliers

DEVICE UPDATES: Logical Devices updates software and algorithm regularly. You can get the latest software online.



# PC/STAND ALONE-GP10

### Universal 48 pin One Touch Duplicator

- Supports any DIP device up to 40 Pins
- Windows XP/ Windows Vista, Windows 7 (32 Bit and 64 Bit, Windows 8 (32 Bit and 64 Bit)
- Supports 1.5v Low Voltage devices
- Dimension:160\*180\*32mm,weight:425g.
- Electrical spec. of the AC adapter: AC input 100V to 240V, 50/60Hz, DC output 9V/2.0A; power:18W
- 48 Pin ZIF socket with universal pin-drivers.
- Support PC hosted mode and stand-alone mode
- Interface with LAPTOP, PC or compatibles through USB port
- Accepts standard file formats: JEDEC, INTEL (Extended) HEX,HOLTEK,EMC(.CDS),INTEL HEX16, Motorola S record
- Manages 16 and 32-bit word split (Set Programming)
- Features Test Vector capability and multiarray fuse map editor.
- Test TTL/CMOS logic ICs and Dynamic/Static Random Access Memory devices

- Optimum programming for each individual device
- Automatically Identifies the manufacturer and type of E(E)PROMs, Auto identifies TTL/CMOS logic IC
- Device insertion and poor-pin-contact check Not need exterior adapter for mostly devices.
- Universal DIP, PLCC, QFP, TSOP, PSOP, SOIC, SSOP, SDIP adapters
- Auto-run mode starts programming automatically upon detection of chip insertion

#### PC Hosted Mode DEVICE SUPPORT:

PROM: N/CMOS E(E)PROM, SeriesE(E)PROM, and FLASH Memory

PLD: CPLD, EPLD, GAL, PEEL, PALCE and more Microcontroller: Atmel, Intel, Microchip, Signetics, Zilog, etc.

#### Stand-Alone Mode DEVICE SUPPORT:

PROM: N/CMOS E(E)PROM, SeriesE(E)PROM, and FLASH Memory PLD: CPLD, EPLD, GAL,PEEL,PALCE and more Microcontroller: Atmel, Intel, Microchip, Signetics, Zilog, etc.

#### **IC TEST**

TTL (74 Series), CMOS (40/45 Series) Logic IC DRAM (4164,41464...), SRAM (2114,6116...) Memory device.

<u>Supports ten languages, such as Chinese(Simplified), Chinese(Traditional), English, Korean, Poland, Italian,</u> <u>Portuguese, Dutch, Turkish and Hungary</u>

#### **DEVICE UPDATES:**

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#### **Ordering Information**

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### Low Cost Chip Copying



# **SHOOTER-VP 290**

### **Universal 40 pin Pocket USB Programmer**

- Supports any DIP device up to 40 Pins
- Windows XP/ Windows Vista, Windows 7 (32 Bit and 64 Bit, Windows 8 (32 Bit and 64 Bit)
- Supports 1.5v Low Voltage devices
- Dimension:115\*79\*18mm, weight:130g.
- Electrical spec. of the AC adapter: AC input 100V to 240V, 50/60Hz, DC output 9V/0.6A 40 Pin ZIF socket pin-drivers.
- Interface with LAPTOP, PC or compatibles through USB port
- Accepts standard file formats: JEDEC, INTEL (Extended) HEX, HOLTEK, EMC(.CDS), INTEL HEX16, Motorola S record
- Manages 16 and 32-bit word split (Set Programming)
- Features Test Vector capability and multiarray fuse map editor
- Test TTL/CMOS logic ICs Access Memory devices

Ultra Low Cost Personal Programming





- Optimum programming for each individual device
- Automaticly Identifies the manufacturer and type of E(E)PROMs, Auto identifies TTL/CMOS logic IC
- Device insertion and poor-pin-contact check
- Not need exterior adapter for mostly devices.
- Auto-run mode starts programming automatically upon detection of chip insertion



#### **DEVICE SUPPORT**

PROM: N/CMOS, E(E)PROM, SeriesE(E)PROM, and FLASH Memory PLD: GAL Microcontroller: Atmel, Intel, Microchip, etc.

#### IC TEST

TTL (74 Series), CMOS (40/45 series) Logic IC.

Supports ten languages, such as Chinese(Simplified), Chinese(Traditional), English, Korean, Poland, Italian, Portuguese, Dutch, Turkish and Hungary

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## **SHOOTER-VP 390**

Universal 48 pin USB Engineering Programmer

### Ultra Low Cost Universal Programming

- Supports any DIP device up to 48 Pins
- Supports Over 1500 Devices:
- Windows 7 (64 Bit), Windows 8 (32 Bit and 64 Bit), Windows XP, 98
- Supports USB High speed interface
- SMT adaptors options
- Dimension: 168x98x23mm, weight:265g. Electrical spec. of the AC adapter.
- AC input 100V to 240V, 50/60HZ, DC output 9V/0.6A 48 Pin ZIF socket with Popular Pin drivers.
- Interface with LAPTOP, PC or compatibles through USB Port.
- Accepts standard file formats: JEDEC, INTEL (extended) HEX, HOLTEC, EMC (CDS), INTEL HEX16, Motorola S record.
- Manages 16 and 32 bit word split (Set Programming) Features Test Vector capability and multiarray fuse map editor.
- Test TTL/CMOS logic ICs and Dynamic and Static Random access memory devices.
- Optimum programming for each individual device.
- Automatically identifies the manufacturer and type of E(E)PROMs, Auto identifies TTL?CMOS logic IC.

- PP-390 programmer
  - Device insertion and poor pin contact check support 1.5v Low voltage devices. Not need exterior adapter for most devices.
  - Universal DIP, PLCC, QFP, TSOP, PSOP, SOIC, SSOP, SDIP adapters.
  - Auto-run mode starts programming automatically upon detection of chip insertion.



IC TEST: TTL (74 Series), CMOS (40/45 series) Logic IC DRAM (41464...), SRAM (2114, 6116...) Memory device

Supports ten languages.such as Chinese(Simplified).Chinese(Traditional). English. Korean. Poland. Italian. Portuguese.Dutch. Turkish and Hungary

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## **ISPPROG** Universal-in-System-Programmer

- Works under control of Windows XP and Windows 7 (32 and 64-bit versions)
- Easy to use and intuitive user interface
- Fast loading and programming
- Use for engineering and manufacturing



- Supports in-system programming for a variety of embedded microcontrollers, serial EEPROM & flash memory devices
- Palm size tool 4"x2½"x1" (100x70x25 mm)
- Communicate to a PC via a USB 2.0 compatible port
- Any number of concurrently working ChipProg-ISP chip burners can be driven from one computer or via a USB active hub
- Does not require an additional power adapter for the programming the power is taken from the computer USB port
- Has a standard 14-pin connector for plugging changeable ISP cables connecting to the target
- The output connector is protected against incorrect connection to the target
- Being based on four independently working 32-bit microcontrollers and FPGAs, provides very fast loading & programming
- Allows to work in a multi-programmer mode unlimited number of ChipProg-ISP units can be driven from one computer
- 'Start' button for fast manual operations programmable to execute a single operation or a batch of them
- Vpp and other parameters precise adjustment via the software settings
- Project management you can create, open and store an unlimited number of projects in the programmer software shell
- Supports loading files of all popular formats: Intel HEX, Binary, Motorola S-format, POF, JEDEC, PRG, ASCII Hex & Octal, etc.
- Built-in editor supports sophisticated operations with blocks
- Splits files to multiple images
- Embedded script language for automation of routine operations
- Serialization of the programmed devices by writing a serial number into a specified target memory location
- Calculation of the control sum with capability to write it into a specified target memory location
- A unique signature can be written into a specified target memory location
- Advanced self-diagnostic start-up routine that check the target device reliable contact through the ISP programming cable
- Incorrect device connection check and overcurrent protection
- Lifetime free software updates via Web

#### **DEVICE UPDATES:**

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You can directly fill out our order form at www.logicaldevices.com/orderform.htm



# **XPRO 500**

#### **Universal 48 pin Programmer**

- Stand Alone Mode (No PC Required)
- 30% Faster Programming Speed
- Support files up to 256 GigaBytes
- Supports Windows XP, Windows Vista, Windows 7 (32 and 64 Bit), Windows 8 (32 and 64 Bits)
- 31,000+ devices supported from 220 IC Manufacturers
- ARM 7 Bit RISC MCU
- Programs devices with Vcc as low as 1.2V.
- Built with 48 universal pin-drivers for support of today's most complex devices.
- Universal and device independent socket adapters are available for various packages. The programmer operates in either PC hosted mode.
- Under PC hosted mode, a PC controls the programmer via a high-speed USB2.0 connection to program.
- ISP/ICP programming capability through optional ISP/ICP adapter. Programming / testing features for TTL/CMOS logic ICs and memories. Only IC manufacturer approved programming algorithms provide high reliability Vcc verification at (+5%~-5%) and (10%~-10%) enhances programming reliability.
- Provides over-current and over-voltage protection for safety of the chip and programmer hardware.
- Compatible with Windows XP / Vista / 7 / 8 (32/64 bit)

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Low Cost, Commercial Quality

# Includes the following advanced and powerful software functions:

- Chip operation starts immediately upon proper chip insertion in Production Mode.
- The Project function simplifies processes such as device selection, file loading, device configuration setting, program option, and batch file setting into one step.
- Password protection provides security for project files and production volume control.
- The Batch command combines device operations like program, verify, security into a single command at any sequence.
- Serial number generators are available as standard or customer-specific functions.
- A Log file provides quality tracking.



# **XPRO 6000**

#### PC-Stand Alone 144 pin Universal Programmer

- Stand Alone Mode (No PC Required)
- 30% Faster Programming Speed
- Support files up to 256 GigaBytes
- Supports Windows XP, Windows Vista, Windows 7 (32 and 64 Bit), Windows 8 (32 and 64 Bits)
- ARM 32 Bit MCU+ Linux for Algorithm processing
- Supports NAND / eMMC devices up to 256 GB
- Built-in 144 universal pin-driver

Spans 3 decades of algorithms

Over 80,000 devices supported



From 2K EPROMS to Gigabit Flash Programming

- Support devices with Vcc from 1.2V 5V.
- 30% faster programming speed compared to SuperPro5000 with ARM9 MCU Processor + Linux ultra-fast algorithm processing engine.
- Support files up to 256 GBytes.
- Built with **144 universal pin-drivers.** Universal adapters are available for various package types up to 144 pins. More efficient for new device support.
- Stand Alone mode (No PC required) and PC hosted mode.
- Under PC hosted mode the programmer is controlled by a PC via USB2.0 (high speed) to program a chip.
- Under stand-alone mode, the programmer is controlled via the 6-KEY keypad and the 20 character by 4 line LCD display.
- A CF (compact flash) card is used to store the project files.
- Cluster 1-15 units for flexible volume production. Operate multiple units to construct a concurrent multi-programming system.
- ISP/ICP programming capability available via ISP/ICP adapter.

- Over-current and over-voltage protection for safety of the chip and programmer hardware.
- Only IC manufacturer approved programming algorithms used for high reliability.
- Vcc verification at (+5%~-5%) and (10%~-10%) enhances programming reliability.
  - Advanced and powerful software functions:

Production mode start chip operation the moment the chip is inserted properly.

Project function simplifies processes such as Device Selection, File Loading, Device Configuration Setting, Program Option, and Batch File Setting into one step.

Password for project files can be set for volume production control

Batch command combines device operations like Program, Verify, and Security into a single command at any sequence. Serial numbers generators are available as standard or customer-specific functions.

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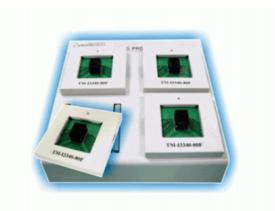


# **T 400**

### Hi-Density/Hi-Speed Flash Programmers



- Support 3.3V to 1.2V flash memory chip in VCC and I/O without low voltage converter.
- Flash chip support up to 128G bit.
- Extremely high speed: it blank check a 64M bit flash chip in 1.6 seconds, program the STM28W640CT (4 word programming algorithm) within 11.5 seconds, verify within 3.2 seconds.
- USB interface: support USB 1.1 or 2.0
- One PC can connect up to 16 unit Labtool-T400 to perform Asynchronous programming
- Device insertion /continuity check before programming.
- Target quantity and Max failure rate alarm.
- Supports Windows 98SE/Me, Windows 2000 and windows XP



DEVICE UPDATES: Logical Devices updates software and algorithm regularly. You can get the latest software online.



# **NEC Microcontroller**



The PRO-FP5-EA is a Flash Memory Programmer development tool for erasing, programming, and verifying programs on Renesas MCUs with on-chip flash memory, either installed in a system or mounted on a program adapter.

#### **Features:**

- Compact, space-saving design with optimized button layout for usability
- High-speed downloading of program files via USB2.0
- Support for MCU communication using UART (max. 1Mbps), CSI, or CSI-H/S (max. 5MHz)
- Use of parameter files for MCU information necessary for programming
- Ability to manage programming environment using settings files
- Ability to provide 1.2V to 5.5V power supply to MCU
- Ability to supply 1MHz, 2MHz, 4MHz, 5MHz, 6MHz, 8MHz, 9MHz, 10MHz, 12MHz, 16MHz, or 20MHz clock to MCU
- Ability to store up to eight program files and sets of MCU information in a single FP5 unit
- Support for self-diagnostics and firmware updates
- Support for on-board and off-board programming
- Support for standalone programming
- Beep notification when programming finishes
- GND connector (GND cable)
- Support for sending programming commands as terminal commands
- Remote interface functions enabling control and display of programming operations or PASS/ERROR indications on an external device
- Lineup of optional products (gang software1 and external controller1) designed for use on production lines

#### **DEVICE UPDATES:**

Logical Devices updates software and algorithm regularly. You can get the latest software online.

