



SuperBOT 5X and SuperBOT 5Xe

Fully Automated IC Programmer - up to 48-sockets

SuperBOT 5X and SuperBOT 5Xe were designed to take on the toughest jobs and are ready for whatever you throw at them. Up to 48 sockets for chip programming. (Yes. You did read that right.) Recommended for high density chips such as eMMC and NAND flash devices. SuperBOT 5X and SuperBOT 5Xe provide higher operation speeds than any other automated programmer on the market.

Standard Features

Model	SuperBOT 5X	SuperBOT 5Xe
Units Per Hour	2,500	2,000
Nozzles	Quad	Dual
Tray	Single Manual Tray	Single Manual Tray

Programmer	SuperPro® X108	SuperPro® X108
Sockets	48	32
Adapters	24	16
Vision Check	Dual Camera	Dual Camera
Tape Input	Dual	Dual
Operating System	Windows™	Windows™
Computer	Built-In Industrial PC	Built-In Industrial PC

Devices and Packages

Supports: NAND, eMMC, NOR Flash and other device memories on the market

Package: WLCSP, SOT, BGA, TSSOP, PLCC & ETC

Size: 2mm - 25mm

Features

High Throughput SuperBOT 5X/5Xe is based on a high performance servo system that can program up to 2,500 UPH (units per hour) (for devices with programming time less than 36 sec) and is suitable for both small and large capacity devices. Throughput is up to 30 times higher than SuperBot 1, especially higher for large capacity devices like eMMC, NAND/NOR FLASH, SPI FLASH. It can be operated 24x7 and can provide throughput of up to 1,800,000 UPM (units per month). One person can supervise many SuperBOT machines and once they are programmed they can usually be left to operate by themselves.

High Performance Programmers SuperBOT 5X/5Xe are equipped with 4-6 SuperPro® X108 high-speed universal programmers. Depending on the device programmed, each SuperPro® X108 can have up to 8 sockets with a total of up to 48 sockets in the system. SuperPro® X108 programming speeds surpass the SuperPro® 7500Ns making it an optimal choice for high-density programming for devices such as eMMC, NAND, NOR, and SPI Flash. With its 10th generation pin-driver technology that provides a better signal, wider voltage range, and higher bandwidth and its IC manufacturer approved algorithms that deliver high reliability, the SuperPro® X108 is a remarkably fast, high-performance and affordable programmer for large capacity devices.

LAN Operation Most volume programming applications need programmers to be operated remotely and this can be achieved by on SuperBOT programmers. Programmers can be connected to a local network and be remotely controlled by any computer on the network via LAN (100M) port. LAN port enables remote project loading, quality monitoring, volume control, file security. Technical department can remote control programming operations and processes, including downloading project file, command execution, project settings, and obtain real time information to achieve production goals. Remote network management provides the most protection for intellectual property. Project data and files are never shared with operators because files are remotely loaded by authorized engineers.

The Most Durable and Reliable Systems in the Industry China is the hub of the world Electronics manufacturing and Xeltek automated programmers are widely installed at most major Electronic manufacturing plants with multiple installations at many locations. Most companies run production 24 hours/day and 7 days/week programming millions of devices per year. Xeltek automated programmers have been refined to run non-stop, withstand harsh and battle-ground like environment.

Largest Device Support Located in Silicon Valley, we keep good relationships with many major IC companies that are important for us to continuously support new devices. Xeltek currently supports more than 100,000 devices, which is the largest device library in the programming industry. can be added within a week - average lead time from other manufacturers is over two months.

Better Yield Our semiconductor manufacturer approved algorithms, precision and clean signals guarantee high programming yield. Algorithms are performed with state machine architecture constructed with FPGA to achieve an ultrahigh programming speed. Along with the low voltage components selection, they program devices down to 1.2 volts.

Lowest Cost Automated Programming System in Market SuperBot automated programmers are the most affordable and high value systems in the industry. High volume and extensive production experience enables the programmers to be the most competitive in terms of quality, price, and value in the programming industry.

Powerful and Intelligent Software User-friendly software with graphical interface cuts learning curve. Setup data saved for next operation. Software also includes resourceful log table, convenient production and quality tracking, authorization, flexible stopping strategy for bad socket or module.

Chip Size Devices between 2x2mm to 30x30mm can be programmed. SuperBOT systems support the SOT23 package which measures only 2x3mm. We do not know of any other manufacturer who supports such a small package type and this is a testimony that SuperBOT systems excel in its accuracy and precision.

Short change-over time I/O devices and socket adapters are easily interchangeable and socket positioning can be performed automatically. Auto Tray and Tape-out can be permanently attached to SuperBot eliminating changeover time when moving from tape-out to auto tray. Tape-in feeder changeover time is below 10 minutes and laser marker changeover time between tray to tape is under 15 minutes.

Socket Cost and Investment Cost recovery in short period with low investment in the beginning as socket adapters are universal for up to 144 pin chips. For most of competitor programmers, user has to invest on device specific socket adapters for chips greater than 48 pins thus increasing cost in long term.

Technical Support More than 30 engineers are devoted to developing new programmers, socket adapters and device algorithms. Engineers are fluent in English and provide excellent direct support through emails, telephone, live chat and an online ticketing system. With our locations in the United States and China, providing 17 hours of continuous support worldwide daily, we are confident to be able to provide support anywhere in the world.

I/O

Manual Tray (Standard equipped) Standard I/O device of the machine. Operator will replace the programmed tray from the SuperBot machine manually after the full tray is programmed. Customer does not need to buy any other accessory while using this option.

Auto Tray Device This device is an extension of the fixed tray. It includes tray-in and tray-out and users can put 20 trays into the device. When the machine is running, users can add trays or take out trays without stopping the machine. The auto tray device can also be installed outside of the whole machine and trays can be automatically changed without the need to open the upper cover, which saves tray changeover space and avoids human error during tray changeover. The auto tray device can stack up to 20 JEDEC trays.

Tape-In Device Electric Tape in feeder. Tape width between 8 and 32mm applicable. Tape-in device can be configured as per the chip to be programmed. For SOIC and TSOP packages customer will need 2-3 types of different tape in the devices depending on the width of chips to be programmed.

Tape-Out Device Connects to a SuperBOT for fully automatic operation. 8-32 mm tape widths can be used with the device. Output reel is sealed with heated tape.

Tube-In Moves chips in the machine. Chip guider for different chip width (optional). IO is multi feed and up to 8 tubes can be operated at once (optional). Tube IO pages should also be updated accordingly.

Tube-Out Moves chips out of the machine. Chip guider for different chip width (optional). IO is multi feed and upto 8 tubes can be operated at once (optional). Tube IO pages should also be updated accordingly.

Laser Marker System An optional attachment to the tape-out or the auto tray device for high speed marking. It marks up to 4 characters on the passed chips.

Tape Ink-Marker Add-on item for tape out machine. On completion of programming the chip can be automatically marked with a point using ink (optional). **Tray Ink Marker** Add-on item for auto tray machine. On completion of the programming the chip can be automatically marked with a point using ink (optional).

Specifications

SuperBOT 5X/5Xe

Chips and Package Types

Chip Size

Min: 2x2mm, Max: 25x25mm

Devices Supported

EPROM, Paged EPROM, Parallel and Serial EEPROM, FPGA Configuration PROM, FLASH memory (NOR & NAND), BROM, NVRAM, SPLD, CPLD, EPLD, Firmware HUB, Microcontroller, MCU, and more.

Available Adapters

PLCC, JLCC, SOIC, QFP, TQFP, PQFP, VQFP, TSOP, SOP, TSOPII, PSOP, TSSOP, SON, EBGA, FBGA, VFBGA, uBGA, WLCSP, SCSP, and more.

Air

Pressure 0.6MPa

Consumption 50 liters/min

Main Hardware and OS

Operation System - Windows™

Computer – Built-in Industrial PC

Hardware – SuperPro x108

Remote Access – LAN Supported

Electrical

Power Adapter Type - AC

Output – 220V

Power Consumption – 1.5Kw

Dimensions

SuperBOT 5X

Width(X): 840mm

Depth(Y): 1,280mm

Height(Z): 1,500mm

Weight: 450kg

SuperBOT 5Xe

Width(X): 850mm

Depth(Y): 1,250mm

Height(X): 1,400mm

Weight: 300kg