

SuperBot-III Automatic IC Programmer

SuperBot-III is an automatic IC programmer with high performance and reasonable price for large-scale electronic product manufacturing. This programmer can automatically pick up, place, program, take out and pack up chips. With fully automated operation setup capabilities, it can improve working efficiency and minimize human errors. Compared to the first generation model, SuperBot-1, its production capacity is increased by sixty times.

Main features:

- ✧ Eight built-in SuperPro 7000s for higher programming speed and throughput rate
- ✧ Suitable for high-density chips such as eMMC NAND /NOR FLASH and SPI FLASH with programming speed up to ten times faster than SuperBot-I
- ✧ Equipped with up to four sockets for one programmer and the whole machine can program thirty-two chips simultaneously
- ✧ Supports nearly 90,000 IC devices from more than 300 manufactures. Device support is quick and will not be a bottleneck to the programming process. (*Device support count as of August 2013. Check online for current device support.)
- ✧ Programs up to 1600 UPH for standard devices using four suction nozzles, independent socket button actuator, double feeder, top industrial class motion-control card and servo system, and high-speed visual position system.
- ✧ Compact design, peripheral units include:
 1. Standard and auto tray for material delivery
 2. Braid packaging machine tape out
 3. Tube for material delivery
 4. Oil ink and laser marker
 5. Tape and Tube
- ✧ Higher reliability, stability, and safety



Basic Features

- **High throughput:** 4 nozzles, 8 independent socket pressing actuators and 2 tape feeders. Up to 1600 UPH for devices with programming time less than 50 seconds.
- Equipped with eight SuperPro 7000s with a 4-gang socket option (each), the entire machine could support up to thirty-two independent sockets simultaneously. Production ratio increases by sixty times compared to SuperBot-I for large capacity chips (eMMC NAND /NOR FLASH and SPI FLASH)

Prog. Time (S)	50	60	120	180	240	300
SuperPro 7000						
UPH	2000	1680	840	560	420	336

Accurate Positioning: Equipped with high performance servo system, precise CCD cameras and vision algorithm for device alignment and sockets / pick & place spots positioning.

Devices to support: Supporting the device users required is the essential for automated programmers and Xeltek has been the first in this area for the past 20years. Xeltek currently supports more than 90,000 chips from over 300 manufactures as of August 2013. Contact Xeltek for current device support.

Varied I/O devices: Supports tray, tape and tube input and output. Supports laser and ink marking. Supports packing conversion and can work as a packing conversion machine alone.

Short changeover time: Switch I/O devices and adapters quickly. Socket positioning can be performed automatically, and projects can be loaded automatically with barcode scanning.

Powerful software: User-friendly software with graphical interface. Software automatically saves programmer settings. Software also includes resourceful log table, convenient production and quality tracking, authorization, flexible stopping strategy for bad socket or module, and anti-overlap mechanism.

Remote Control: Remote project loading, quality monitoring, volume control and file security.

Motion System

High precision servo drive system.

Resolution: X-axis: $\pm 0.02\text{mm}$; Y-axis: $\pm 0.02\text{mm}$; Z-axis: $\pm 0.02\text{mm}$;
 θ -axis: 0.1°

Stroke: X-axis:1000mm; Y-axis: 500mm; Z-axis: 40mm

Operational chip size: Min: 2x2mm; Max: 25x25mm,

Maximum Throughput: 1600 UPH

Vision System

Two CCD cameras. Upward CCD for IC positioning which the downward CCD for sockets / pick and place spots positioning.

512x512 pixels

Visual range: 30mm X 30mm

Visual adjustment precision: $\Delta x = \Delta y = 0.07 \text{ mm}$, $\Delta \theta = 0.1^\circ$

Programmer System

Eight built-in SuperPro 7000s (4-gang socket adapters for each unit optional). Support various electrical devices (1.2V to 5V) and automatically detect wrong chips inserted / bad pin contact. Connections via high-speed USB and LAN ports.

Control System

Built-in Industrial PC (OS Windows XP) -19" LCD display, keyboard and mouse.
 Communication interface: USB and LAN

I/O Device

Manual Tray (Standard equipped)

One tray each time. Change tray manually.

Tape-out

Heat sealing and pressure sealing modes. Tape width adjustable between 8 and 32mm.

Tape-In

YAMAHA pneumatic feeder. Tape width between 8-32mm.

Auto Tray Device

Moves blank tray in and passed tray out the machine automatically, marking the tray (optional). Stack up to 15 JEDEC trays.

Tube-In Device

Moves chips in the machine. Chip guider for different chip width (optional).

Tube-Out Device

Moves chips out of the machine. Chip guider for different chip width (optional).

Tape Ink-Marker

An attachment to the tape-out device. Put an ink dot on the chip.

Auto Tray Ink-Marker

An attachment to the auto tray device. Scan and put dots on the passed chips.

Laser-Marker

An optional attachment to the tape-out or the auto tray device. Marks up to 4 characters on passed chips.

Accessories (Optional)

Programming adapters, nozzles, socket pressing plates.

Electrical and Mechanical Specifications

Power Supply: AC 200 ~ 240V / 50~60Hz, single phase

Power Consumption: 1.5KVA

Air: Clean, pressure: 0.6MPa, consumption: 50 liter / min.

Size (mm): Main machine: 1280 (L) x 840 (W) x 1500 (H)

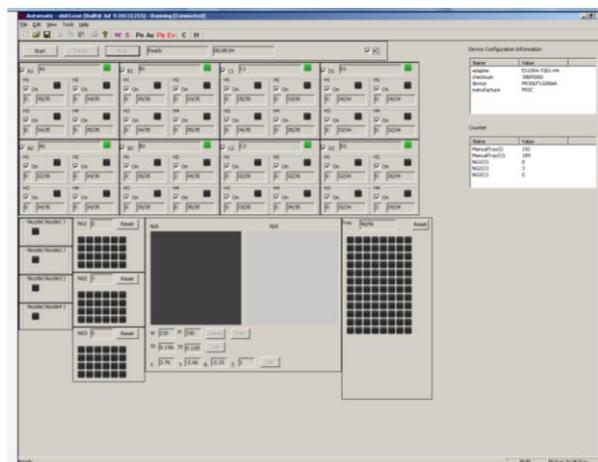
Auto tray: 1100 (L) x 380 (W) x 1300 (H)

Tape-out: 1100 (L) x 380 (W) x 1300 (H)

Weight (Kg): Main machine: 450

Auto tray: 80

Tape-out: 80



Why Xeltek Products and Solutions?

- Professional experience. During the past 20 years, Xeltek has only been concentrating on programmers and related products, and has served over thousands of customers. Beyond the user's requirement for vision and design, Xeltek provides true value in every product released.
- Extensive compatibility. Xeltek programmers can support any devices needed by users, which is essential to any application. Xeltek currently supports over 90,000 devices from more than 300 IC manufacturers with thousands of new devices added to the device library each year. Additionally, conventional device software upgrades are free of charge, so users would never have to worry about subsequent upgrades.
- Local service. Whether engineering consulting, plan formulation, software upgrades or after-sales service, Xeltek supplies unmatched speed and quality.
- Higher Performance-to-price ratio.