Make IC Programming PERFECT

DediProg
Technology

A Leading Manufacturer in
IC Programming Field

Why DediProg?

- ▶ Leading IC Programming Solution Provider
- ▶ Highest Throughput with Accurate Production Yield
- ▶ Fast Technical Support
- ▶ New IC Algorithms/Software/Firmware Are Free to Download
- ▶ The Top Quality & New Technology with the Reasonable Price

Local Technical Support Team & DP's Certified Engineers

Shenzhen, China

Seoul, Korea

Chennai, India

Surrey, UK

Arizona, USA

Shanghai, China

Cologne, Germany

Taipei, Taiwan

Salzburg, Austria

Juarez, Mexico

Timisoara, Romania

Manila, Philippines

Istanbul, Turkey

Haipong, Vietnam

Johor, Malaysia

Ho Chi Minh, Vietnam

Automated IC Programming System

- High Throughput
- Support ALL IC Device Families
- Fast and Accurate Positioning
- Foolproof Mechanism
- Modular Design to Meet Different Requirement
- DediProg Auto Teach Feature

  Able to adjust the parameters automatically and increase the system speed, accuracy, and stabilities

- MES (Manufacturing Execution System)

  DediProg handlers are able to apply to different MES; production line via API protocol is easy to be integrating with their internal server. Work report can be converted to excel file as a record

Tape Out
(with Ink Marker/InkJet Marker)

DP600-A (DP600A-MD/MJ)
- Support up to 22" (550 mm) input
- Support up to 13" (330 mm) Output Tape Reel
- Support 8~88 mm width cover tape
- Support 32 mm depth carrier tape
- PSA (Press Sensitive Adhesive) and Heat Sealing

Auto Tray Loader
(with Ink Marker/InkJet Marker)

Auto Tray-350 (MD/MJ)
Auto Tray-250
- Support 20 to 25 JEDEC Standard Trays
- Tray Change Cycle Time: 20 seconds
- Able to Work Independently

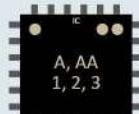## Tube Modules

MTI-220/MTI-230/ATI-220

Tape In

ETF-8/12/16/24/32mm

Markers
- Support QR code/Barcode/Serial Numbers
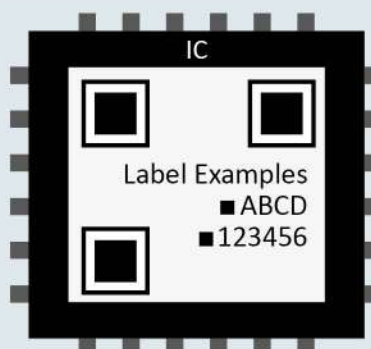- Infrared-Fiber Type

1. Ink Marking
AIM-610

A, AA
1, 2, 3

2. Inkjet Marking

DediProg
SN012A45

3. Laser Marking
ALM-610

Label Printer

LF-100P
- Support QR code/Barcode/Serial Numbers
- Label Pick and Placement

IC

Label Examples
- ABCD
- 123456

2D/3D AOI

ANS-640/650/680
- Marking Inspection
- Orientation Check
- Chip Crack Detection
- Pins Condition Definition

2D, 2.5D

Inspect

Inspect

3D

IC

2.5D, 3D

Inspect
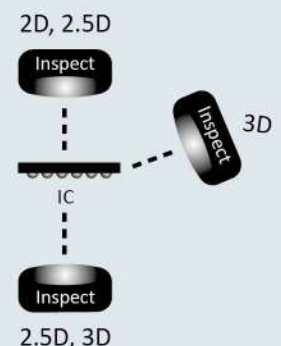
DP2T
Automated Programming System

DP2T is the most compact & cost saving automated programming system. It is able to embed with either one unit of universal programmer (ProgMaster-S8) to support SPI Flash, EEPROM, MCU, and CPLD...etc. Or All-in-one Programmer (NuProgPlus) to support all devices such as SPI Flash, EEPROM, MCU, CPLD, eMMC & UFS...etc.

DP2T also supports both input & output in Tray or Tape & reel. With stable quality & high efficiency, the UPH can easily go up to 1000. Save your budget & lower your labor cost starts from DP2T now.

Features

High Throughput
The system will be able to perform up to 1,000UPH.

High Expansibility
Able to embed with one set of ProgMaster-S8 (Univesral Devices) or one set of NuProgPlus (Universal & UFS) with 8 programming sites.

Support Different Input/Output Peripherals
Input/Output: Tape In/Out, Tray In/Out & Manual Tube In.

Support All IC Families
1. Supported IC: EEPROM, NAND/NOR FLASH, MCU, eMMC, and UFS...etc.
2. Supported IC Package: SOP, SSOP, TSSOP, PLCC, QFN, LQFP, and BGA...etc.

Optional Ink/Inkjet Marker on Tape Out
Different colors are available; support dot, character & number.

DediProg Auto Teach Feature
1. Proceduralize- Automatically adjust handler's parameters step by step.
2. Digitalized- Automatically adjust the heights of nozzles.
3. Increase the speed of system adjustment.
4. Self-detection Function- Increase the accuracy & stabilities for nozzles' pick and place.

Software Supports Work Project
Able to create a programming file directly through Dediware according to your programming demands. It allows you to start programming right after loading the project, which will greatly reduce human errors.

MES (Manufacturing Execution System)
DediProg handlers are able to apply to different MES; production line via API protocol is easily to be integrating with their internal server. Work report can be converted to excel file as a record.

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Specification

Pick & Place System	Placement Accuracy	±0.03mm
	Pick & Place Device	Vacuum Nozzle x 1
	Throughput	Up to 1,000 UPH
Transmission System	X-Y-Z Drive	Stepper Motor
	Transmission	Belt & Linear Guide Mechanism
	Resolution	X axis: ±0.03mm, Y axis: ±0.03mm, Z axis: ±0.03mm
	Maximum Stroke	X axis: 498mm, Y axis: 402mm, Z axis: 40mm
	θ Axis Resolution	0.1125°
Input/Output System	Tube In	Manual Tube In Loader; capacity: 4 Tubes
	Tube Out	Manual Tube Out Loader; capacity: 6 Tubes
	Tape In	Electrical Tape Feeder; support 8~32mm tape width
	Tape Out	Automated Taping Machine; PSA and Heat Sealing; Support 8~50mm tape width; up to 32mm carrier tape depth
	Tray In/Out	1. Manual Input JEDEC Tray 2. Manual Output JEDEC Tray 3. Automatic Tray In/Out Loader; capacity of 25 JEDEC Trays 4. NG IC Trays
Vision System	Camera	1. Fixed CCD: 659 x 494 pixels 2. Carried CCD: 659 x 494 pixels
	Vision Alignment	IC corner leads
	Vision Accuracy	±0.02mm
	Vision Process Time	~0.03sec/unit
Programming System	Programmer	ProgMaster-S8 or NuProgPlus
	Programming Site	8 sockets
	Support IC	EEPROM, NAND/ NOR FLASH, MCU, eMMC, and UFS...etc.
	IC Package	SOP, SSOP, TSSOP, PLCC, QFN, LQFP, and BGA...etc.
Markers	Ink/Inkjet Marker	Different color available; support dot (1.5mm~2.0mm), character and number (2mm x 3mm)
Operation Environment	Input Voltage	220-240Vac, 50/60Hz
	Power Consumption	1KVA
	Air Flow	25liters/min
	Air Pressure	0.6MPa (~6.0kg/cm2)
Dimension (W x D x H) (Monitor Wide Opened and Alarm LED light)	Main Unit	1200 x 610 x 1590mm
	Main Unit+Tube Loader	1200 x 990 x 1590mm
	Main Unit+Tape Loader	1200 x 1830 x 1590mm
	Main Unit+Tray Loader	1200 x 1700 x 1590mm
	Weight	190kg
Control System	PC O/S	Windows 10 IOT
	Display	19"LCD
	Input Devices	Keypad & Mouse

DediProg

DP3T Plus
Automated Programming System

DP3T Plus responds to the industry's ever-evolving demands by handling down to 1x1mm packages. Able to support laser/labeling/ink/inkjet marking, and a maximum of 16 programming sockets to boost productivity for extreme high-capacity devices. The highest UPH goes up to 1300.

With the NuProgPlus series programmer, the system supports dual sockets & highest read/write speed goes up to 180/mb. Auto Teach feature improves productivity by reducing the project setup time. This system is the epitome of versatility, making it an ideal solution for low-volume, high-mix production teams seeking efficiency without compromise.

Features

High Throughput
The system will be able to perform up to 1,300 UPH (Units per Hour).

High Expansibility
Able to embed with one set of NuProgPlus-S8-E or NuProgPlus-S16-E, up to 16 programming sites.

Support All IC Families
1. Supported IC: EEPROM, NAND/NOR FLASH, MCU, eMMC, and UFS, etc.
2. Supported IC Package: SOP, SSOP, TSSOP, PLCC, QFN, LQFP, and BGA, etc.
3. Minimum supported size: 1x1mm CSP.

Adjustable Socket Actuating Kit
Adjust socket actuating kits make it easier and quicker to switch to different types of socket adaptors according to the socket size. Therefore, you will not need extra socket actuating kits!

Software Supports Work Project
Able to create a programming file directly through DediWare according to your programming demands. It allows you to start programming right after loading the project, which will greatly reduce human errors.

Clamp Positioning Check
The system will automatically check if the clamps are installed properly before production to avoid machine/product damage caused by unmanned staff mistakes.

Support Different Input/Output Peripherals
Input/Output: Tube, Tape, and Tray.

Auto Teach Feature
1. Proceduralize- Automatically adjust handler's parameters step by step.
2. Digitalized- Automatically adjust the heights of nozzles.
3. Increase the speed of system adjustment.
4. Self-detection Function- Increase the accuracy & stabilities for nozzles' pick and place.

MES API
DediProg's handler can be easily integrated into different MES systems via the API protocol. It is capable of integrating remote control functions, fool-proof programming, and error management to enhance production yield and simplify management.

One Click Project Execution (OPRJ)
The OPRJ one-click activation feature enables fool-proof production (machine process and programming project), remote project editing, project preview, and machine qualification management. It can also integrate into MES systems through the API Protocol.

IC Marking Functions
Provides a variety of labeling methods
1. Ink Marker supports dot, character, or number.
2. Inkjet Printer supports string.
3. Laser Marker supports precise character marking.
4. Label Printer supports QR Code and barcode.
5. Label Feeder automatically supplies labels to IC for identification.

IC Inspection
Provide 2D inspection capabilities to detect pin failures in SOP, QFP, QFN, and BGA packages.

Specification

Pick & Place System	Placement Accuracy	±0.01mm		
	Pick & Place Device	Vacuum Nozzle x 1		
	Throughput	Up to 1,300 UPH		
Transmission System	X-Y-Z Drive	High Efficiency Step-Servo Drive System		
	Transmission	Ball Screw (X&Y axis) / Belt (Z axis) & Linear Guide Mechanism		
	Resolution	X axis: 0.0015mm, Y axis: 0.0015mm, Z axis: 0.01mm		
	Maximum Stroke	X axis: 655mm, Y axis: 365mm, Z axis: 55mm		
	θ Axis Resolution	0.1125°		
Input/Output System	Tube In	Manual Tube In Loader; capacity: 4 Tubes		
	Tube Out	Manual Tube Out Loader; capacity: 6 Tubes		
	Tape In	Electrical Tape Feeder; support 8~44mm tape width		
	Tape Out	Automated Taping Machine; PSA and Heat Sealing; Support 8~44mm tape width; up to 32mm carrier tape depth		
	Tray In/Out	1. Manual Input JEDEC Tray 2. Manual Output JEDEC Tray 3. Automatic Tray In/Out Loader; capacity of 25 JEDEC/Non JEDEC Trays 4. NG IC Trays		
Vision System	Camera	1440 x 1080 (1.6M Pixels)		
	Vision Alignment	IC corner leads		
	Vision Accuracy	±0.01mm		
	Vision Process Time	~0.03sec/unit		
Programming System	Programmer	NuProgPlus-S8-E x1 or NuProgPlus-S16-E x1		
	Programming Site	Up to 16 sockets		
	Support IC	EEPROM, NAND/NOR FLASH, MCU, eMMC, and UFS, etc.		
	IC Package	SOP, SSOP, TSSOP, PLCC, QFN, LQFP, and BGA, etc.		
Marking/Labeling System	Laser Marker	Characters with a height greater than 0.3mm.		
	Ink Marker	Different color available; support dot (1.5~2.0mm) for above 3mmx3mm IC, character and number (2mm x 3mm) for 4mm x 4mm IC		
	Inkjet Printer	Min Character height ≧ 2mm ; Support IC size ≧3mm ; Printable time ≦ 3hrs		
	Label Printer	4x4~10x10mm Label; prints QR Code, Data Matrix, Barcode, String		
	Label Feeder	3x3~10x10mm Label; Label Width≦28mm		
Operation Environment	Input Voltage	200±15% Vac, 40/60Hz		
	Power Consumption	5A/1.0kVA		
	Air Flow	46liters/min		
	Air Pressure	0.6MPa (~6.0kg/cm2)		
Dimension (W x D x H) (Monitor Wide Opened and Alarm LED light)	Main Unit (MU)	1460 x 790 x 1620mm	MU+Tape Loader	1460 x 1940 x 1620mm
	MU +Tray Loader	1520 x 790 x 1620mm(Side)	1460 x 1240 x 1620mm(Front)	
	Weight	300kg		
Control System	PC O/S	Windows 10 IOT		
	Display	19"LCD		
	Input Devices	Keypad & Mouse		

※ Specifications are subject to change without notice.

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DP1000-G3
Automated Programming System

DP1000-G3 automated programming system is the third generation of DP1000, which supports different input/output peripherals to provide an overall solution for IC programming. It supports most of the IC families, such as EEPROM, NAND/NOR FLASH, MCU, eMMC, and UFS...etc.

The system can embed with 2 sets of ProgMaster-S8 Programmer or NuProgPlus to provide up to 16 programming sites with stable quality & high throughput. Additionally, the Auto Teach Feature will automatically adjust the parameter to increase the productivity.

Features

High Throughput
The system will be able to perform up to 2,200UPH.

High Expansibility
Able to embed two sets of ProgMaster-S8 (Univesral Devices) or NuProgPlus (Universal & UFS) to expand up to 16 programming sites.

Support All IC Families
1. Supported IC: EEPROM, NAND/NOR FLASH, MCU, eMMC, and UFS...etc.
2. Supported IC Package: SOP, SSOP, TSSOP, PLCC, QFN, LQFP, and BGA...etc.

Adjustable Socket Actuating Kit
Adjust socket actuating kits make it easier and quicker to switch to different types of socket adaptors according to the socket size. Therefore, you will not need extra socket actuating kits!

Support Different Input/Output Peripherals
Input/Output: Tube, Tape, and Tray.

DediProg Auto Teach Feature
1. Proceduralize- Automatically adjust handler's parameters step by step.
2. Digitalized- Automatically adjust the heights of nozzles.
3. Increase the speed of system adjustment.
4. Self-detection Function- Increase the accuracy & stabilities for nozzles' pick and place.

Software Supports Work Project
Able to create a programming file directly through Dediware according to your programming demands. It allows you to start programming right after loading the project, which will greatly reduce human errors.

MES (Manufacturing Execution System)
DediProg handlers are able to apply to different MES; production line via API protocol is easily to be integrating with their internal server. Work report can be converted to excel file as a record.

Optional Ink/Inkjet Marker/Labeling
Different colors are available.
Ink Marker supports dot, character & number.
Inkjet Marker and Labeling support barcode & QR code.

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Specification

Pick & Place System	Placement Accuracy	±0.02mm
	Pick & Place Device	Vacuum Nozzle x 2
	Throughput	Up to 2,200 UPH
Transmission System	X-Y-Z Drive	High Performance Servo Drive System
	Transmission	Ball Screw & Linear Guide Mechanism
	Resolution	X axis: 0.01mm, Y axis: 0.01mm, Z axis: 0.01mm
	Maximum Stroke	X axis: 690mm, Y axis: 505mm, Z axis: 75mm
	θ Axis Resolution	0.1125°
Input/Output System	Tube In	Manual Tube In Loader; capacity: 4 Tubes
	Tube Out	Manual Tube Out Loader; capacity: 6 Tubes
	Tape In	Electrical Tape Feeder; support 8~32mm tape width
	Tape Out	Automated Taping Machine; PSA and Heat Sealing; Support 8~50mm tape width; up to 32mm carrier tape depth
	Tray In/Out	1. Manual Input JEDEC Tray 2. Manual Output JEDEC Tray 3. Automatic Tray In/Out Loader; capacity of 25 JEDEC/Non JEDEC Trays 4. NG IC Trays
Vision System	Camera	1. Fixed CCD: 659 x 494pixels 2. Carried CCD: 659 x 494pixels
	Vision Alignment	IC corner leads
	Vision Accuracy	±0.01mm
	Vision Process Time	~0.03sec/unit
Programming System	Programmer	ProgMaster-S8 x 2 or NuProgPlus x 2
	Programming Site	16 sockets
	Support IC	EEPROM, NAND/ NOR FLASH, MCU, eMMC, and UFS...etc.
	IC Package	SOP, SSOP, TSSOP, PLCC, QFN, LQFP, and BGA...etc.
Markers	Ink/Inkjet Marker	Different color available; support dot (1.5mm~2.0mm), character and number (2mm x 3mm)
Operation Environment	Input Voltage	220-240Vac, 50/60Hz
	Power Consumption	1.3KVA
	Air Flow	48liters/min
	Air Pressure	0.6MPa (~6.0kg/cm2)
Dimension (W x D x H) (Monitor Wide Opened and Alarm LED light)	Main Unit	1500 x 1050 x 1600mm
	Main Unit+Tube Loader	1500 x 1100 x 1600mm
	Main Unit+Tape Loader	1500 x 2000 x 1600mm
	Main Unit+Tray Loader	1500 x 1700 x 1600mm
	Weight	440kg
Control System	PC O/S	Windows 10 IOT
	Display	19"LCD
	Input Devices	Keypad & Mouse

DP3000-G3

Automated Programming System

DP3000-G3 automated programming system is the third generation of DP3000. It is able to support CSP packages as well as small size packages, like 1.5 x 0.8mm size chips. DP3000-G3 supports different input/output peripherals, like tube, tape, and tray, to provides an overall solution for IC programming with more advance features.

DP3000-G3 supports all kinds of IC families, such as EEPROM, NAND/NOR FLASH, MCU, eMMC, and UFS...etc. It is able to expand up to 96 programming sites, which will keep the high throughput even when handling the high density memory, like NAND Flash, eMMC, and UFS.

Features

High Throughput
The system will be able to perform up to 3,500UPH.

Support Different Input/Output Peripherals
Input/Output: Tube, Tape, and Tray.

Support All IC Families
1. Supported IC: EEPROM, NAND/ NOR FLASH, MCU, eMMC, and UFS...etc.
2. Supported IC Package: SOP, SSOP, TSSOP, PLCC, QFN, LQFP, BGA, and WLCSP...etc.

High Expansibility
Able to embed up to six sets of eMMC-S8 or ProgMaster-S8 or NuProPlus to get up to 96 sites.

1. eMMC-S8 supports eMMC.
2. ProgMaster-S8 supports Universal Devices.
3. NuProgPlus support Universal, eMMC, and UFS.

Adjustable Socket Actuating Kit
Adjust socket actuating kits make it easier and quicker to switch to different types of socket adaptors according to the socket size. Therefore, you will not need extra socket actuating kits!

DediProg Auto Teach Feature
1. Proceduralize- Automatically adjust handler's parameters step by step.
2. Digitalized- Automatically adjust the heights of nozzles.
3. Increase the speed of system adjustment.
4. Self-detection Function- Increase the accuracy & stabilities for nozzles' pick and place.

Software Supports Work Project
Able to create a programming file directly through Dediware according to your programming demands. It allows you to start programming right after loading the project, which will greatly reduce human errors.

MES (Manufacturing Execution System)
DediProg handlers are able to apply to different MES; production line via API protocol is easily to be integrating with their internal server. Work report can be converted to excel file as a record.

Various Additional Functions
Laser, Label Printer, Inkjet Marker, and 3D Inspection.

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Specification

Section	Parameter	Value
Pick & Place System	Placement Accuracy	±0.01mm
	Pick & Place Device	Vacuum Nozzle x 4
	Throughput	Up to 3,500 UPH
Transmission System	X-Y-Z Drive	High Performance Servo Drive System
	Transmission	Ball Screw & Linear Guide Mechanism
	Resolution	X axis: 0.01mm, Y axis: 0.01mm, Z axis: 0.01mm
	Maximum Stroke	X axis: 1155mm, Y axis: 480mm, Z axis: 30mm
	θ Axis Resolution	0.1125°
Input/Output System	Tube In	Manual Tube In Loader; capacity: 4 Tubes
	Tube Out	Manual Tube Out Loader; capacity: 6 Tubes
	Tape In	Electrical Tape Feeder; support 8~32mm tape width
		Dual Electrical Tape Feeders, support 8~24mm tape width
	Tape Out	Automated Taping Machine; PSA and Heat Sealing;
		Support 8~50mm tape width; up to 32mm carrier tape depth
	Tray In/Out	1. Manual Input JEDEC Tray
		2. Manual Output JEDEC Tray
		3. Automatic Tray In/Out Loader; capacity of 25 JEDEC/Non JEDEC Trays
		4. NG IC Trays
Vision System	Camera	1. Fixed CCD: 659 x 494pixels
		2. Carried CCD: 659 x 494pixels
	Vision Alignment	IC corner leads
	Vision Accuracy	±0.01mm
	Vision Process Time	~0.03sec/unit
Programming System	Programmer	eMMC-S8, ProgMaster-S8, NuProgPlus
	Programming Site	Expandable from 48 up to 96 sockets
	Support IC	EEPROM, NAND/ NOR FLASH, MCU, eMMC, and UFS...etc.
	IC Package	SOP, SSOP, TSSOP, PLCC, QFN, LQFP, BGA, and WLCSP...etc.
Markers	Ink/Inkjet Marker	Different color available; support dot (1.5mm~2.0mm), character and number (2mm x 3mm)
Operation Environment	Input Voltage	220-240Vac, 50/60Hz
	Power Consumption	2.2KVA
	Air Flow	94liters/min
	Air Pressure	0.6MPa (~6.0kg/cm2)
Dimension (W x D x H) (Monitor Wide Opened and Alarm LED light)	Main Unit	2200 x 1300 x 1700mm
	Main Unit+Tube Loader	2200 x 1300 x 1700mm
	Main Unit+Tape Loader	2200 x 2100 x 1700mm
	Main Unit+Tray Loader	2200 x 1850 x 1700mm
	Weight	790kg
Control System	PC O/S	Windows 10 IOT
	Display	19"LCD
	Input Devices	Keypad & Mouse

Gang Programmer and Duplicator

Able to Use Independently or Integrate with Automated Systems

Model Name	ProgMaster-U4/U8	NuProgPlus-U8
Product Type	**Universal Gang Programmer**	**Universal Gang Programmer**
Function	Progamming	Programming and duplicating
Socket Sites	4 or 8 sites	8 sites (Single Socket Adaptor) 16 sites (Dual Socket Adaptor)
Stand-Alone Feature	Yes	Yes
Support IC Kinds	All IC Types (Except for UFS)	All IC Types (Include UFS, PCI-E and CAN bus IC)
Expandable Capability	PC to multiple programmers	PC to multiple programmers

Handheld Size Engineering Programming Solutions

Model Name	SF100	SF600	SF600 *Plus*	SF700	K110	StarProg-A	StarProg-U	NuProg-E2
Support IC Types	SPI NOR Flash			SPI NOR, SPI NAND, and SPI Octal. NOR	SPI NOR, SPI NAND, and EEPROM	MCU, CPLD, SPI NOR Flash, SPI NAND Flash, and EEPROM	All IC Types (Except for UFS)	All IC Types
On Board Programming (ISP/ICP)	✓						✗	
Socket Site	Through bottom board	One site						One Site (NuProgPlus Compatible)
Stand-Alone	✗	✓					✗	
Software	SF Software			Dediware				
3rd Party Integration	Command Line			ATE Port, Command Line		ATE Port, Command Line, DLL API (Optional)	Command Line	✗

IC Programming Service

Auto Mass Production

Asymmetric Cryptographic Secure Programming

High & Stable Efficiency
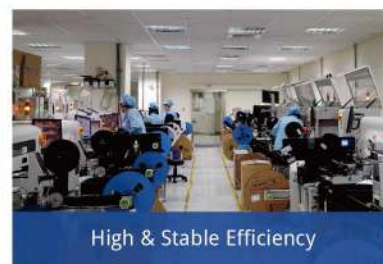
- Auto Programming
- Various Marking

- Printable Labeling
- 3D Inspection

- Device Repacking
- Vacuum Bulk Pack