

DediProg

Automated IC Programming



We keep your production running

HIGHLY EFFICIENT IC PROGRAMMING

Automated IC programming with modular systems from DediProg

DEDIPROG IS ONE OF THE WORLD'S LEADING MANUFACTURERS IN THE FIELD OF HIGH-EFFICIENCY IC PROGRAMMING SOLUTIONS AND FOCUSES ON SOLUTIONS FOR PROGRAMMING EEPROM, SPI FLASH, NOR FLASH, NAND FLASH, MICROCONTROLLERS, EMMC, CPLD, UFS AND OTHER PROGRAMMABLE DEVICES.

OUR TEAM HAS THE BEST KNOW-HOW IN THE FIELD OF AUTOMATED IC PROGRAMMING, AS WELL AS MANY YEARS OF EXPERIENCE IN THE SMT INDUSTRY, WHICH IS WHY WE CAN OFFER YOU INDIVIDUAL SOLUTIONS FOR YOUR REQUIREMENTS.



- Automated IC programming
- Manual IC programming
- Automated Taping and Repacking
- I/O Peripherals
- Handheld and Supplies

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AUTOMATED IC PROGRAMMING

DP3000-G3 Plus

DP3000-G3 Plus automated programming system is the latest generation of DP3000 series. It is able to support CSP packages as well as small size packages. DP3000-G3 Plus supports different input/output peripherals, like tube, tape, and tray, to provide an overall solution for IC programming with more advance features.

The system can embed with up to 6 sets of gang Programmers to provide up to 96 programming sites with stable quality & high throughput. Especially fits all high density device, such as eMMC and UFS programming demand.

Adjustable Socket Actuating Kit

It makes it easier and quicker to switch to different types of socket adaptors based on each socket size.

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.

Various Additional Functions

Laser, Label Printer, Inkjet Marker and 3D inspection.

One Click Project Execution (OPRJ)

New software integration included both machine project & programming project to avoid any human setting error.



IC Marking Functions

Provide a variety of labeling methods

1. Ink Marker supports dot, character, or number.
2. Laser Marker supports precise character marking.
3. Label Printer supports QR Code and barcode.
4. Label Feeder automatically supplies labels to IC for identification.

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 can apply various MES protocols via the API, enabling remote monitoring and ensuring fool-proof programming.

Throughput	up to 3,600 UPH
Supported ICs	all: EEPROM, NAND/ NOR FLASH, MCU, eMMC, and UFS, etc.
Supported IC packages	all: SOP, SSOP, TSSOP, PLCC, QFN, LQFP, BGA, and WLCSP, etc.
Input / Output	Tube in, Tube out, Tape in, Tape out, Tray in, Tray out
Programmers	Up to 6 pcs. NuProgPlus-S8-E or NuProgPlus-S16-E
Programming Site	Expandable up to 96 sockets
Dimension WxDxH, Weight	2200 x 1300 (Tape Loader 2150, Tray Loader Front or Back 1900, Tray Loader Front and Back 2450) x 1700 mm, 840 kg

See pages 10-11 for all specs.



DP3000-G3 Plus System Configuration

Main Unit	Article number	Description
	DP3000-G3 Plus	Automated IC Programming System
Programmeters	NuProgPlus-S8-E	8 Sites NuProgPlus Programmer
	NuProgPlus-S16-E	16 Sites NuProgPlus Programmer
Calibration Tools	NuProgPlus-CALIBRATION-KIT	NuProgPlus Calibration Kit (8pcs./set)
Socket Adapters	find online at www.dediprog.com/search/socket	
Tray In/Out	Auto Tray-250	Auto Tray Loader, lengthwise, without marker, JEDEC tray
	AutoTray-350B-MD	Auto Tray Loader with ink marker (front side)
	Manual-TRAY-SET	Manual Tray Set (required if no auto tray I/O)
Tape In Feeders	ETF-Fixture	ETF Fixture for 8-32mm Feeder (mandatory for Tape In)
	DP3000-ETF44-FIXTURE	DP3000 Series ETF Fixture 44mm
	DP3000-ETF-Fixture-Dual	DP3000 Series Dual ETF Fixture for 8-32mm Feeder
	ETF-8mm	Electrical Tape Feeder 8mm
	ETF-12mm	Electrical Tape Feeder 12mm
	ETF-16mm	Electrical Tape Feeder 16mm
	ETF-24mm	Electrical Tape Feeder 24mm
	ETF-32mm	Electrical Tape Feeder 32mm
	ETF-44mm	Electrical Tape Feeder 44mm
Tape In Options	AFS-120	Multiple Feeders Loading Preparation Station
Tape Out	DP600-A	Automated Taping Machine
	DP600A-AIM	Auto Ink Marker Upgrade for DP600-A
	DP600-P	Auto Taping Machine for CSP
	DP600-Ionizer	Ionizer for DP600 series
Tape Recycle	ATR-120	Automatic Tape Recycler
	ATR-120R	Tape Recycler for Dual ETF
Static Eliminator	DP3000G3Plus-Ionizer-CSP	DP3000-G3 Plus Anti Static Eliminator for CSP (2bars/set)
	DP3000G3Plus-Ionizer-E	DP3000-G3 Plus Efficient Anti Static Eliminator (2bars/set)
Tube In	MTI-220	Manual Tube In (4 tubes)
	MTI-Module	Tube In Module for reliable pick up position
Tube Out	MTO-230	Manual Tube Out (6 tubes)
	MTO-Module	Tube Out Module for reliable place position
NG Tray Reel	NG-TRAY-R-8mm	NG TRAY-R 8mm
	NG-TRAY-R-12mm	NG TRAY-R 12mm
	NG-TRAY-R-16mm	NG TRAY-R 16mm
	NG-TRAY-R-8-12mm	NG-TRAY-R 8-12mm
Inspection Systems	AOI-632	Optical Inspection Check System
	ANS-640-B	Bottom AOI Inspection System
	ANS-640C-B	CSP Bottom AOI Inspection System
	ANS-681	3D AOI Inspection System
Inspection Systems Options	ANS-681-Calibration-Kit	Calibration Kit for 3D Inspection System
	DP-Training-ANS-681-Calibration	2-Day onsite training for 3D inspection system calibration (accommodation & transportation excluded)
Markers	ALM-610	IR Laser Marker
	ALF-100	Label Feeder
	HD Axium	Hover Davis Label Feeder
Software Options	Report-Engine	Handler utilization report system (annual fee)
	M01207-00012	Auto Teach
	HSM-01	DP Secure programming system

AUTOMATED IC PROGRAMMING

DP1000-G5

DP1000-G5 automated programming system is the latest 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 NuProgPlus series programmer to provide up to 32 programming sites with stable quality and high throughput. Additionally, the Auto Teach Feature will automatically adjust the parameter to increase the productivity.

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.



IC Marking Functions

Provides a variety of labeling methods

1. Ink Marker supports dot, character, or number.
2. Laser Marker supports precise character marking.
3. Label Printer supports QR Code and barcode.
4. Label Feeder automatically supplies labels to IC for identification

MES (Manufacturing Execution System)

DediProg handlers can apply 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.

One Click Project Execution (OPRJ)

New software integration included both machine project & programming project to avoid any human setting error.

IC Inspection

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

Throughput	up to 3,200 UPH
Supported ICs	EEPROM, NAND/ NOR FLASH, MCU, eMMC, and UFS, etc.
Supported IC packages	SOP, SSOP, TSSOP, PLCC, QFN, LQFP and BGA etc.
Input / Output	Tube in, Tube out, Tape in, Tape out, Tray in, Tray out
Programmers	2 pcs. NuProgPlus-S8-E or NuProgPlus-S16-E
Programming Site	16 or 32 sockets
Dimension WxDxH, Weight	1517 x 1050 (Tape Loader 2170, Tray Loader Front 1704, Tray Loader Back 1798, Tray Loader Front and Back 2362) x 1618 mm, 600 kg

See pages 10-11 for all specs.

DP1000-G5 System Configuration

	Article number	Description
Main Unit	DP1000-G5	Automated IC Programming System
Programmer	NuProgPlus-S8-E	8 Sites NuProgPlus Programmer
	NuProgPlus-S16-E	16 Sites NuProgPlus Programmer
Calibration Tools	NuProgPlus-CALIBRATION-KIT	NuProgPlus Calibration Kit (8pcs./set)
Socket Adapters	find online at www.dediprog.com/search/socket	
Tray In/Out	Auto Tray-250	Auto Tray Loader, lengthwise, without marker, JEDEC tray
	Auto Tray-350B-MD	Auto Tray Loader with ink marker (front side)
	Manual-TRAY-SET	Manual Tray Set (required if no auto tray I/O)
Tape In Feeders	ETF-Fixture	ETF Fixture for 8-32mm Feeder (mandatory for Tape In)
	DP1000-ETF44-FIXTURE	DP3000 Series ETF Fixture 44mm
	ETF-8mm	Electrical Tape Feeder 8mm
	ETF-12mm	Electrical Tape Feeder 12mm
	ETF-16mm	Electrical Tape Feeder 16mm
	ETF-24mm	Electrical Tape Feeder 24mm
	ETF-32mm	Electrical Tape Feeder 32mm
	ETF-44mm	Electrical Tape Feeder 44mm
Tape in Options	AFS-120	Multiple Feeders Loading Preparation Station
Tape Out	DP600-A	Automated Taping Machine
	DP600A-AIM	Auto Ink Marker Upgrade for DP600-A
	DP600-P	Auto Taping Machine for CSP
	DP600-Ionizer	Ionizer for DP600 series
Tape Recycle	ATR-120	Automatic Tape Recycler
Static Eliminator	DP1000G5-Ionizer-CSP	DP1000-G5 Plus Anti Static Eliminator for CSP (2bars/set)
	DP1000G5-Ionizer-E	DP1000-G5 Plus Efficient Anti Static Eliminator (2bars/set)
Tube In	MTI-220	Manual Tube In (4 tubes)
	MTI-Module	Tube In Module for reliable pick up position
Tube Out	MTO-230	Manual Tube Out (6 tubes)
	MTO-Module	Tube Out Module for reliable place position
NG Tray Reel	NG-TRAY-R-8mm	NG TRAY-R 8mm
	NG-TRAY-R-12mm	NG TRAY-R 12mm
	NG-TRAY-R-16mm	NG TRAY-R 16mm
	NG-TRAY-R-8-12mm	NG-TRAY-R 8-12mm
Inspection Systems	AOI-632	Optical Inspection Check System
	ANS-640-B	Bottom AOI Inspection System
Markers	ALM-610	IR Laser Marker
	ALF-100	Label Feeder
	HD Axium	Hover Davis Label Feeder
Software Options	Report-Engine	Handler utilization report system (annual fee)
	M01207-00012	Auto Teach
	HSM-01	DP Secure programming system

AUTOMATED IC PROGRAMMING

DP3T Plus

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 Expansibility**
Able to embed one set of NuProgPlus-S8-E or NuProgPlus-S16E, up to 16 programming sites.
- **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 adaptor according to the socket size. No need for extra socket actuating kits!
- **MES API**
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**
InkMarker supports dots, characters or numbers
Laser Marker supports precise character marking.
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.

Throughput	up to 1,300 UPH
Supported ICs	EEPROM, NAND/NOR Flash, MCU, eMMC and UFS, etc.
Input / Output	Tube, Tape and Tray
Programmers	1 x NuProgPlus-S8-E or 1 x NuProgPlus-S16-E
Programming Site	8 or 16 sockets
Dimensions WxDxH, Weight	1460x790x1620mm 1460x1940x1620mm (Tape-Out) 1520x790x1620mm (Tray-In Side) 1460x1240x1620mm (Tray-In Front) 300 kg

If you need installation, training, maintenance or (online) support: our experienced AdoptSMT technicians can assist you. Find out more on our service pages on

www.adoptsmt.com

DP3T Plus System Configuration

	Article number	Description
Programmer	ProgMaster-S8-E	8 Sites ProgMaster Programmer (Single Socket Only)
	NuProgPlus-16-E	16 Sites NuProgPlus Programmer
Socket Adapters	find online at www.dediprog.com/search/socket	
Calibration Tools	NuProgPlus-CALIBRATION-KIT	NuProgPlus Calibration Kit (8pcs/set)
Tray In/Out	Auto Tray-250	Auto Tray Loader for up to 25 JEDEC trays
	AutoTray-350B-MD	AutoTray Loader for up to 25 JEDEC trays with Ink Marker
	Manual-TRAY-SET	Manual Tray Set (required if no auto tray I/O)
Tape In (ETF-Fixture is a must)	ETF-Fixture	ETF Fixture for 8 - 32mm Feeder
	ETF44-Fixture	ETF Fixture for 44mm Feeder
	ETF-8mm	Electrical Tape Feeder 8mm
	ETF-12mm	Electrical Tape Feeder 12mm
	ETF-16mm	Electrical Tape Feeder 16mm
	ETF-24mm	Electrical Tape Feeder 24mm
	ETF-32mm	Electrical Tape Feeder 32mm
	ETF-44mm	Electrical Tape Feeder 44mm
Tape In Option	AFS-120	Multiple Feeders Loading Preparation Station
Tape Recycle	ATR-120	Automatic Tape Recycler
Tape Out	DP600-A	Automated Taping Machine (8-88mm tape, 32mm depth)
	DP600-P	Auto Taping Machine w/ Ionizer for CSP (8-44mm tape, 14mm depth)
	DP600- AIM	Auto Ink Marker Upgrade for DP600-Series
Inspection Systems	AOI-632	Optical Inspection Check System for DP600-Series & AutoTray-350B
	ANS-640-B	2D Bottom AOI (upward looking) for BGA, CSP,QFN,SOP,QFP
	ANS-640C-B	2D Bottom AOI (upward looking) for BGA, (smaller than 5x5mm, CSP)
Tube In	MTI-220	Manual Tube In (4 tubes simultaneously)
	Tube In Modules for reliable pick up on request	
Tube Out	MTO-230	Manual Tube Out (6 tubes simultaneously)
	Tube Out Modules for reliable discard on request.	
Marker	ALM-610	IR Laser Marker
	HD Axiom	Hover Davis Label Feeder
	LF-100P	LF-100P Print-on-Demand Label Feeder
Software Options	Report-Engine	Handler utilization report system (annual fee)
	M01207-00012	Auto Teach
	HSM-01	DP Secure programming system

Features/Specifications Comparison

Programming System		DP 3000-G3 Plus
Pick and Place System	Placemant Accuracy	± 0.01 mm
	Pick & Place Device	Vacuum Nozzle x 4
	Throughput Programming	Up to 3,600 UPH
	Throughput Repacking	
Trans-mission system	X-Y-Z Drive	High Performance Servo Drive System
	Transmission	Ball Screw & Linear Guide
	Resolution	X axis: 0.001 mm, Y axis: 0.001 mm, Z axis: 0.001 mm
	Maximum Stroke	X axis: 1155 mm, Y axis: 480 mm, Z axis: 30 mm
	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 - 44 mm tape width Dual Electrical Tape Feeders; support 8 - 24 mm width
	Tape Out	Automated Taping Machine; PSA and Heat Sealing Support 8 - 44 mm tape width; up to 32 mm carrier tape depth
	Tray In/Out	1. Manual Input JEDEC Tray; 2. Manual Output JEDEC Tray; 3. Automatic Tray In/Out Loader - capacity 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	± 0.01 mm
	Vision Process Time	~ 0.03 sec/unit
Programming System	Programmer	up to 6 pcs. NuProgPlus-S8-E or NuProgPlus-S16-E
	Programming Sites	Expandable up to 96 sockets
	Supported IC	EEPROM, NAND/NOR FLASH, MCU, eMMC, UFS, etc.
	IC Package	SOP, SSOP, TSSOP, PLCC, QFN, LQFP, BGA, WLCSP, etc.
Marking / Labeling	Laser Marker	Characters with a height greater than 0.3mm
	Ink Marker	Different color available; support dot (1.5-2.0mm), character and number (2x3mm)
	Label Feeder	3x3 - 35x35mm label
Operation Environment	Input Voltage	220-240 Vac, 50/60 Hz
	Power Consumption	3.3 kVA
	Air Flow	94 liters/min
	Air Pressure	0.6 MPa (~ 6.0 kg/cm2)
Dimensions (WxDxH) incl. Monitor & Light Tower	Main Unit	2200 x 1300 x 1700 mm
	+ Tube Loader	2200 x 1300 x 1700 mm
	+ Tape Out	2200 x 2150 x 1700 mm
	+ Tray Loader Side	N/A
	+ Tray Loader Front	2200 x 1900 x 1700 mm
	+ Tray Loader Back	2200 x 1900 x 1700 mm
	+ Tray Loader Front & Back	2200 x 2450 x 1700 mm
	Weight	840 kg



Features/Specifications Comparison

DP1000-G5 	DP3T Plus 
$\pm 0.01 \text{ mm}$	
Vacuum Nozzle x 2	Vacuum Nozzle x 1
Up to 3,200 UPH	1,300 UPH
Up to 4,000 UPH	Up to 1,600 UPH
High Performance Servo Drive System	High Efficiency Step-Servo Drive System
Ball Screw & Linear Guide	Ball Screw (X&Y axis), Belt (Z axis) & Linear Guide Mechanism
X axis: 0.003 mm, Y axis: 0.003 mm, Z axis: 0.008 mm	X axis: $\pm 0.0015 \text{ mm}$, Y axis: $\pm 0.0015 \text{ mm}$, Z axis: $\pm 0.01 \text{ mm}$
X axis: 690 mm, Y axis: 505 mm, Z axis: 85 mm	X axis: 655mm, Y axis: 365 mm, Z axis: 55 mm
0.1125°	
Manual Tube In Loader, capacity: 4 tubes	
Manual Tube Out Loader, capacity: 6 tubes	
Electrical Tape Feeder, support 8-44 mm tape width	
Automated Taping Machine; PSA and Heat Sealing	
Support 8 - 44 mm tape width; up to 32 mm carrier tape depth	
1. Manual Input JEDEC Tray; 2. Manual Output JEDEC Tray; 3. Automatic Tray In/Out Loader - capacity 25 JEDEC/Non JEDEC Trays; 4. NG IC Trays	
1440 x 1080 (1.6M Pixels)	
IC corner leads	
$\pm 0.01 \text{ mm}$	
$\sim 0.03 \text{ sec/unit}$	
2 pcs. NuProgPlus-S8-E or NuProgPlus-S16-E	1 pc. NuProgPlus-S8-E or NuProgPlus-S16-E
16 or 32 sockets	up to 16 sockets
EEPROM, NAND/NOR FLASH, MCU, eMMC, UFS, etc.	
SOP, SSOP, TSSOP, PLCC, QFN, LQFP, BGA, WLCSP, etc.	
Characters with a height greater than 0.3mm	
Different color available; support dot (1.5-2.0mm), character and number (2x3mm)	
3x3 – 35x35mm label	
220-240 Vac, 50/60 Hz	
1.3 KVA	1 kVA
46 liters/min	25 liters/min
0.6 MPa ($\sim 6.0 \text{ kg/cm}^2$)	
1517 x 1140 x 1618 mm	1460 x 790 x 1620 mm
1517 x 1190 x 1618 mm	N/A
1517 x 2170 x 1618 mm	1460 x 1940 x 1620 mm
N/A	1520 x 790 x 1620 mm
1517 x 1704 x 1618 mm	1460 x 1240 x 1620 mm
1517 x 1798 x 1618 mm	N/A
1517 x 2362 x 1618 mm	N/A
600 kg	300 kg

Gang Programmers & Duplicators

NuProgPlus

NuProgPlus Series is the most powerful universal programmer which is capable of supporting EEPROM, Flash, MCU, eMMC, UFS and many others. NuProgPlus-U8 and NuProgPlus-U16 supports up to 8 programming socket adaptors. NuProgPlus-U16 can program up to 16 ICs when programming SPI Flash/eMMC/UFS.

Duplicating for UFS/eMMC:

(Master IC/device is required as the data source)

1. Duplicate UFS data, LUN configuration and Descriptors/Attributes/Flags (Not supporting RPMB duplicating)
2. Duplicate eMMC boot area, GPP, user area and ExtCSD (Not support RPMB duplicating)
3. Stand-alone function allows you to program without a computer and only need to select and start project programming through LCD keypad.



Support project file for production programming demand:

1. Integrate high speed storage to store project file or project folder for more stable and faster transmission
2. Project download speed up to 100 MB/s
3. Press Start button to start programming after loading the project file, so operator will not load the wrong image file or select the incorrect IC part number

Three kinds of start modes for productivity improvement:

1. Manual mode
2. Auto Detection mode
3. Handler mode



Features

- All new designed FPGA kernel architecture supplies ultra-high speed programming performance. Support both Copy Mode and Program Mode
- PC can link to multiple NuProgPlus and program IC in parallel.
- Flexible to support various programmable IC/device in the market:
 1. Support various storage IC: UFS, eMMC, SPI NOR, SPI NAND, Parallel NOR, Parallel NAND and EEPROM
 2. Support MCU, CPLD and FPGA
 3. Support various IC packages: CSP, BGA, QFN, SOP, TSOP, SSOP, PLCC, DIP,...
 4. Support various file format: Binary (bin/rom), Intel Hex (h16/h20/hex), Motorola S19 (mhx/mot/s19/srec) and specific file format of MCU IC.
- Software supports NAND Flash Bad Block Skip and partition programming

Programmers Configuration & Specifications

Series	NuProgPlus-U8	NuProgPlus-U16
Type	Universal Gang Programmer	
Programming Sites	up to 8 ICs	up to 16 ICs (when programming SPI Flash/eMMC/UFS)
Expandable	PC to multiple programmers	
Socket Adaptor Type	Single Site Socket	Single Site Socket and Dual Site Socket
Article No.	NuProgPlus-U8	NuProgPlus-U16
	Specifications - Hardware:	
Architecture	ARM based MCU and FPGA architecture design with high performance and high flexibility	
Programming interface	Socket adaptor, find at www.dediprog.com/search/socket	
IC Package Types	CSP, BGA, QFN, QFP, SOP, TSOP, SSOP, PLCC, DIP, etc.	
IC category	UFS, eMMC, SPI NOR, SPI NAND, Parallel NOR, Parallel, NAND, EEPROM, MCU, CPLD and FPGA	
Comm. Int.	Super Speed USB 3.1 Gen 1	
Operation interface	LCD and keypad	
Project storage	SSD256GB (standard)/ up to 1T (optional) (To store project files for programming)	
Dimensions	366 x 288 x 60 mm, weight 6 kg	
Pwr input / output / max	AC 100-240V 50/60 Hz / - / DC 15V x 3A (45W)	
	Specifications - Software:	
Software	Dediware	
OS	Windows XP/Vista/7/8/8.1/10, both 32-bit and 64-bit	
File Formats	Binary (bin/rom), Intel Hex (h16/h20/hex), Motorola S19 (mhx/mot/s19/srec) and specific file format of MCU IC	
Programming Funtion	Blank Check, Erase, Program, Verify and register setting	
Engineering Mode	1. IC selection and image file loading 2. IC Erase, blank check, Program, Verify 3. IC configuration and batch setting 4. Serial number or unique key programming setting 5. Project file operation	
Other Functions	- Server-Client architecture design - Production mode to program all sites in parallel - IC information, checksum information - Programming/duplicating status of each site - Automated save log in PC - Extra scan bad block function for NAND Flash IC - Command line to load and execute project file - Display in English, Simplified Chinese or Traditional Chinese	

AUTOMATED TAPING

DP600 Series

DP600 series is able to support different taping needs, designed to be simple and easy to operate.

DP600-A, -P and -M2A are equipped with a RS232 & IO port for easy integration with automated systems. DP600-M2 is a desktop semi-auto taping machine that can work independently.



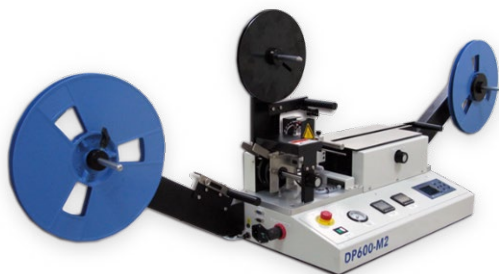
SPECIFICATIONS		DP600-A	DP600-P	DP600-M2A	DP600-M2
		Automated Taping Machine		Semi-Automated Desktop	
Input	Mechanical Accuracy	± 0.04 mm			
	Speed	Continuous tape, 80 mm/sec max			
Support IC	SOP/QFP/QFN/BGA	yes			
	CSP	n/a	yes	n/a	n/a
Output	PSA Sealing	yes			
	Heat Sealing	yes			
	Carrier Tape Width	8-88 mm	8-44 mm	8-88 mm	
	Tape Depth	32 mm	14 mm	32 mm	
	Heat Temperature	0-260°C (32-500°F)			
Max Diameter of Tape (Input/ Output)	Input*	22" (550 mm)			
	Output	13" (330 mm)			
3rd Party Interface	RS-232	yes			n/a
Sensors	Empty Pocket Sensor	yes			n/a
	Floating Chip Sensor	yes			n/a
	Home Sensor	yes			n/a
	Cover Tape Sensor	yes			yes
	Carrier Tape Sensor	yes			n/a
Sub System	CCD Camera	optional	optional	optional	n/a
	Ink Marker	optional	optional	n/a	
	Electrostatic elimination	optional	optional	n/a	
Main System	Dimension WxDxH	1150 x 450 x 1300 mm	1150 x 390 x 1260 mm	1250 x 450 x 600 mm**	1600 x 450 x 600 mm
	Weight	55 kg	58 kg	45 kg	
Operation Environment	Input Voltage	220-240Vac, 40/60 Hz			
	Power/Consumption	0.44KVA	0.66KVA	0.44KVA	
	Air Pressure	0.5 MPa (~ 5.0 kg/cm2)			
	Full-loaded Current	2A	3A	2A	
	Operation Temp. Range	15-40°C (59-104°F)			
	Relative Humidity	35-85%			
Control System	Control System	Microcomputer control system			
	User Interface	LCD Keypad			
*DP600-M2A come w/o reel holder. Order DP600-M2A-RH for desktop use					
**DP600-M2A with reel holder (DP600-M2A-RH) 1600 x 450 x 600 mm					

*DP600-M2A come w/o reel holder. Order DP600-M2A-RH for desktop use

**DP600-M2A with reel holder (DP600-M2A-RH) 1600 x 450 x 600 mm

DP600 Series Configuration & Specifications

	Article number	Description
Main Unit	DP600-A	Automated Taping Machine for integration with DediProg Automated Programmers
	DP600-P	Automated Taping Machine especially for CSP
	DP600-M2A	Bench Top Semi-Auto Taping Machine - capable of integration or Semi-Auto use
	DP600-M2	Bench Top Semi-Auto Taping Machine
Inspection Systems	AOI-632	Optical Inspection Check System
Ionizer Modules	DP600-Ionizer	Ionizer for DP600 series
Modules	M03015-16901	DP600-A Tape Receiving Position Holder
	M03012-04402	Auto Ink Marker Air-blow Adjustment Module
	M03015-14901	Tape Stabilizer for tape in carrier tape
	M02204-00003	Foot Paddle for DP600-M2/M2A
Marking	DP600A-AIM	Auto Ink Marker Upgrade for DP600 series



Auto Tray Loaders

AUTO TRAY-250

Are you still changing the trays by yourself whenever the tray is fully loaded? Auto Tray-250 is an automatic loader specifically for tray input and output. It can accommodate up to 25 JEDEC standard trays at once and it can perfectly combine with DediProg's automatec IC programming systems, DP1000, DP3000, DP2T and DP3T, or other third party automation. Once the tray is filled up with ICs, the trays will exchange automatically, and it will only take about 25 seconds.



AUTO TRAY-350B

Auto Tray-350B supports ink marking. It differs from Auto Tray-250 in that Auto Tray-350B can work independently as tray marker, and is able to save eight setting files of tray condition for ink marking in the embedded memory.

Without marker: Auto Tray-350B



AUTO TRAY LOADER SPECIFICATIONS

AUTO TRAY-250		AUTO TRAY-350B	
Tray type	JEDEC tray		
Tray capacity	up to 25 trays		
Tray change cycle	25 seconds		
Operational Interface	LCD and Button		
Serial Interface	RS-232		
Independency	n/a	yes	
Inkdot Marker	n/a	optional	
Inspection System	n/a	optional	
Dimension DxWxH	930x162x1090 mm	920x480x1150 mm	
Weight	40 kg	65 kg	
Power Supply	220-240Vac 50/60 Hz		
Air Pressure	0.5-0.6 MPa (5.0-6.0 kg/cm2), Ø 6 mm Air Pipe		
Operating Env.	Temperature: 10-40°C, Humidity: 35-85%		

Auto Tray Loaders, Feeder, Tube In/Out Modules

	Article Number	Description
Auto Tray Loaders	AutoTray-250	Auto Tray Loader, lengthwise, without marker, JEDEC tray
	AutoTray-350B-MD	Auto Tray Loader with ink marker
Feeders and required Feeder Fixtures	ETF-Fixture	ETF Fixture for 8-32mm Feeder (mandatory for Tape In)
	DP3000-ETF44-Fixture	DP3000 Series ETF Fixture for 44mm Feeder
	ETF-Fixture for AMPFN_001	ETF Fixture for Hover-Davis Label Feeder
	ETF44-Fixture	ETF Fixture for 44mm Feeder
	ETF-8mm	8mm Electrical Tape Feeder
	ETF-12mm	12mm Electrical Tape Feeder
	ETF-16mm	16mm Electrical Tape Feeder
	ETF-24mm	24mm Electrical Tape Feeder
	ETF-32mm	32mm Electrical Tape Feeder
	ETF-44mm	44mm Electrical Tape Feeder
	AMPFN02-002	Hover-Davis AXIUM Media Presenter with reel holder (Label Feeder)
	GMP02-001	Hover-Davis Generic Media Platform (Module) for labels up to 35mm
Tube in	MTI-220	Manual Tube Feeder, up to 4 tubes
	For reliable pick up off tubes we offer modules used with MTI-220 which are especiall designed according to your Tubes / IC's	
Tube out	MTO-230	Manual Tube Output Vibratory Unit for up to 6 tubes
	For reliable discard of your IC's we offer modules used with MTO-230 which are especially designed according to your Tubes / IC's	



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Inspection Systems and Markers

PRODUCTS LIST			Field of View	Light Control	Image Capturing	Leadscan	Mark Inspection	Package Inspection	Ball Inspection	Supported Packages
	Article Number	Description								
Inspection Systems „AOIs“	AOI-632	2D Top Inspection (Marking and Orientation) - Installation: DP600 Tape Out or AutoTray-350 - Device Size: All (except glossy surface CSP's) - Camera Resolution: 3MP	30x30	-	top	-	✓	-	-	QFN SOP QFP etc.
	ANS-640-B	2D Bottom Inspection - Installation: DP3000 & DP1000 - Device Size: Above 5 x 5 mm - Camera Resolution: 5MP	28x22	-	bottom	✓	-	✓	✓	BGA CSP QFN SOP QFP etc.
	ANS-640C-B	2D Bottom Inspection - Installation: DP3000 & DP1000 - Device Size: Below 5 x 5 mm - Camera Resolution: 5MP	6x6	-	bottom	-	-	✓	✓	BGA CSP
	ANS-681	3D Multi-Cam Inspection - Installation: DP3000 - Detect: Ball missing, ball size roundness, defect, Lead condition, bend & different height, coplanarity - 3D high-definition, multi-camera, triangulation technology - Multi-spectral LED strobe lighting - Simultaneous multi-part & ROI capability increases throughput - Leaded, BGA & QFN package & supported (5S QFN option available) - No hardware change-over required between package types	50x50	✓	bottom	✓	-	✓	✓	QFN SOP QFP BGA CSP etc.
Markers	ALM-610	IR Laser Marker (Infrared-Fiber)								
	ALF-100	Dediprog Label Feeder								
	DP600-AIM	Auto Ink Marker Upgrade for DP600-A								
	AMPFN02-002	Hover-Davis AXIUM Media Presenter with reel holder (Label Feeder)								
	GMP02-001	Hover-Davis Generic Media Platform (Module) for labels up to 35mm								



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Handheld Programming

Unit	Description	Supported IC types	On Board Programming (ISP/ICP)	Socket Site	Stand-Alone	Soft-ware	3rd Party Integration
SF100 	The SF100 is a high speed „In System Programming“ programmer to update the SPI Flash soldered on board or Freescale MCU using Ezport. The programmer is easily controlled by the computer DediProg Software through the USB bus offering a friendly interface and powerful features to users. More details: www.dediprog.com/product/SF100	SPI NOR Flash		Through bottom board	no		
SF600Plus-G2 	SF600Plus-G2 is a high-speed Serial NOR/NAND Flash programmer with In-Circuit Programming (update the SPI Flash soldered on board) and Standalone programming (update the SPI Flash in the socket adaptor) Mode. With DediProg SF software and the USB, it offers friendly user interfaces and powerful features. The newly designed SF600Plus-G2 is the upgraded version of SF600 and SF600Plus, which greatly increases the programming efficiency with the SOC architecture of FPGA. Other than the original functions of the SF600/S600Plus, it can also support SPI NAND, which will be convenient for the developer when programming. More details: www.dediprog.com/product/SF600Plus-G2	SPI NOR / NAND Flash	yes	on site	yes	SF Soft-ware	Command Line
NuProg-E2 	NuProg-E2 is an universal engineering programmer. Widely supports most IC types on the market, UFS, eMMC, MCU, CPLD, FPGA, SPI NOR, SPI NAND, Parallel NOR, Parallel NAND and EEPROM, etc. And also support different types of IC packages: CSP, BGA, QFN, QFP, SOP, TSOP, SSOP, PLCC, DIP, etc. Designed FPGA kernel architecture supplies ultra high speed programming performance. The Programming project and sockets are compatible with NuProgPlus. Together with built-in SuperSpeed® USB 3.0 for high-speed communication, it is an efficient tool for you to focus on application analysis and product development. More details: www.dediprog.com/product/NuProg-E2	UFS (up to 180MB/s), eMMC (up to 100MB/s)	no		no	Dedi-ware	no
Other Handheld equipment:							
EM100Pro-G3	EM100Pro-G3 is DediProg SPI NOR Flash emulator integrated high-speed DRAM memory to offer the best code updating performances. This advanced tool has been designed in close cooperation with the SPI NOR Flash suppliers to emulator the behavior of all the SPI NOR Flash on the market and also the next generation SPI NOR Flash. It provides engineers with a flexible development and testing tool for any embedded project that uses an external SPI NOR Flash. It provides quick, in-circuit firmware test cycles during development. EM100Pro-G3 increases productivity by downloading firmware code or data into the emulator in a few seconds for density as large as 2GB. In addition, it provides "SPI BUS Analyzer" feature by collecting all the SPI command and data on the SPI bus in order to help the debugging process. It will speed up your firmware development and testing by eliminating the need to remove-erase-program and re-install SPI flash each time you test a code change. If you want to stop the "program/insert/boot/remove/erase" cycle, then this is the tool for you. More details: www.dediprog.com/product/EM100Pro-G3						

LOCATIONS

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