NuProgPlus-U16
Universal Gang Programmer and Duplicator (8 Sites Dual Sockets)

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-U16 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. Capable to support PCI-E SSD and CAN bus device
4. Support various IC package: CSP, BGA, QFN, QFP, SOP, TSOP, SSOP, PLCC, DIP...
5. Support various file format: Binary [bin/rom], Intel Hex(h16/h20/hex), Motorola S19 [mhex/mot/s19/srec] and specific file format of MCU IC.

Software supports NAND Flash Bad Block Skip and partition programming

Support up to 8 programming sockets
(Only 4 sockets for PCI-E but can expand to 16 sockets for SPI Flash/UFS/eMMC)

Duplicating for UFS/eMMC/PCI-E
(Master IC/device is required as the data source)
1. Duplicate UFS data, LUN configuration and Descriptors/Attributes/Flags. (Not support RPMB duplicating)
2. Duplicate eMMC boot area, GPP, user area and ExtCSD. (Not support RPMB duplicating)
3. Capable to duplicate PCI-E SSD (Whole disk copy mode, selected partition copy mode and specific percentage copy mode)

Stand-alone function allows you to program without a computer and only need to select and start the 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

NuProgPlus-U16 with Hand Press Fixture
Support stand-alone function
Support all IC socket kinds
PC can connect to multiple NuProgPlus-U16
## Hardware

<table>
<thead>
<tr>
<th><strong>Architecture</strong></th>
<th>ARM based MCU and FPGA architecture design with high performance and high flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Programming Interface</strong></td>
<td>Socket adaptor</td>
</tr>
<tr>
<td><strong>IC Package Type</strong></td>
<td>CSP, BGA, QFN, QFP, SOP, TSOP, SSOP, PLCC, DIP, etc.</td>
</tr>
<tr>
<td><strong>Support IC Category</strong></td>
<td>UFS, eMMC, SPI NOR, SPI NAND, Parallel NOR, Parallel NAND, EEPROM, MCU, CPLD and FPGA</td>
</tr>
<tr>
<td><strong>Communication Interface</strong></td>
<td>Super Speed USB 3.1 Gen 1</td>
</tr>
</tbody>
</table>

### Others
- Integrated high speed DDR3 DRAM
- VCC range: 1.2–5V. Supports multi-voltage in batch process
- VPP range: 3.3V–12V
- M-PHY 3.1 for UFS v2.0/v2.1
- Overcurrent protection and ESD protection
- Automatic self-test when power on and keep self-test log
- Dedicated contact testing feature for each site
- LED indicates the status of each site and power LED indicates power status
- Start button to execute IC programming
- LCD and keypad for Stand-alone function operation
- Integrated high speed storage to store project files for programming

## Software

<table>
<thead>
<tr>
<th><strong>Operating Software</strong></th>
<th>DediWare</th>
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</thead>
<tbody>
<tr>
<td><strong>Operating System</strong></td>
<td>Windows XP/Vista/7/8/8.1/10, both 32-bit and 64-bit</td>
</tr>
<tr>
<td><strong>Support File Format</strong></td>
<td>Binary (.bin/rom), Intel Hex (16/32/64hex), Motorola S19 (.hex/.mst/.s19/srec) and specific file format of MCU IC</td>
</tr>
<tr>
<td><strong>Programming Function</strong></td>
<td>Blank Check, Erase, Program, Verify and register setting</td>
</tr>
</tbody>
</table>

### Others
- Server-Client architecture design
- Engineering mode for manual operation
  - IC selection and image file loading
  - IC Erase, Blank check, Program and Verify
  - IC configuration and batch setting
  - Serial number or unique key programming setting
  - Project file operation
- 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

## Power

- Power Adapter Input: AC 100–240V, 50/60Hz
- Power Adapter Output: DC 15V
- Maximum Power Consumption: 45W

DediProg Technology Co., Ltd.

### Taiwan Headquarter
**T**: 886–2–2790-7932
**E**: sales@dediprogress.com

### U.S.
**T**: 1-909-274-8860
**E**: america@dediprogress.com

### China
**T**: 86-21-5160-0157
**E**: sales@dediprogress.com.cn

### Europe
**E**: europe@dediprogress.com

### Korea
**T**: 031-275-3838
**E**: korea@dediprogress.com

### Japan
**E**: japan@dediprogress.com

### Malaysia
**T**: 607-268-1998
**E**: sales@dediprogress.com