



- Universal 48 pin ZIF socket accepts both 300/600 mil DIP devices up to 48 pin
- Intelligent pin drivers allow varying voltages to be applied to any pin delivering signals without overshoot, increasing programming yield
- Pin drivers operate down to 1.8V so you'll be ready to program the full range of tomorrow's advanced low-voltage devices
- ISP capable using the JTAG interface
- Multiprogramming support allows one PC to control up to eight units programming independently or as a gang programmer

The Dataman 48Pro is a universal 48pin driver, PC based programmer with ISP capabilities with USB 2.0 and parallel connectivity. The 48Pro is built to meet the demands of development labs and field engineers for universal programming.

Supporting over 22,000 devices with new support being added monthly, the Dataman 48Pro can program without the need for a family-specific module, giving you the freedom to choose the optimal device for your design. Using the built-in, in-circuit serial programming (ISP) connector, the programmer is able to program ISP compatible chips in circuit.

Hardware

General

- FPGA based totally reconfigurable 48 powerful TTL pindrivers provide H/L/pull_up/pull_down and read capability for each pin of the socket. Advanced pindrivers incorporate high-quality high-speed circuitry to deliver signals without overshoot or ground bounce for all supported devices. Pin drivers operate down to 1.8V so you'll be ready to program the full range of today's advanced low-voltage devices
- The programmer performs device insertion tests and contact checks before device programming. These capabilities, supported by overcurrent protection and signature-byte check help prevent chip damage due to operator error
- Built-in protection circuits eliminates damage to programmer and/or device due to environment or operator failure. All the inputs of the 48Pro programmer, including the ZIF socket, connection to PC and power supply input, are protected against ESD up to 15kV
- Performs programming verification at the marginal level of supply voltage, improving programming yield and guarantees long data retention
- Various socket converters are available to handle device in PLCC, SOIC, PSOP, SSOP, TSOP, TSSOP, TQFP, QFN, SDIP, BGA and other packages

Base unit (DAC)

- USB 2.0 port
- FPGA based IEEE 1284 slave printer port, up to 1MB/s transfer rate
- On-board intelligence: powerful microprocessor and FPGA based state machine
- Three D/A converters for VCCP, VPP1, and VPP2, controllable rise and fall time
- VCCP range 0..8V/1A

- VPP1, VPP2 range 0..26V/1A
- Autocalibration and Self test capability
- Protection against surge and ESD on power supply input, parallel port connection

ZIF socket pindriver

- 48-pin DIL ZIF socket accepts both 300/600 mil devices up to 48-pin
- Pindrivers: 48 universal
- VCCP/VPP1/VPP2 can be connected to each pin
- Perfect ground for each pin
- FPGA based TTL driver provides H, L, CLK, pull-up, pull-down on all pindriver pins
- Analog pindriver output level selectable from 1.8 V up to 26V
- Current limitation, overcurrent shutdown, power failure shutdown
- ESD protection on each pin of socket (IEC1000-4-2: 15kV air, 8kV contact)
- Continuity test: each pin is tested before every programming operation

ISP connector

- 10-pin male type with missinsertion lock
- 5 TTL pindrivers, provides H, L, CLK, pull-up, pull-down; level H selectable from 1.8V up to
- 5V to handle all (low-voltage including) devices
- 1x VCCP voltage (range 2V..7V/100mA), can be applied to pins 1, 3
- Programmed chip voltage (VCCP) with both source/sink capability and voltage sense
- 1x VPP voltage (range 2V..25V/50mA), can be applied to pins 2,3,4,6,8,10
- Target system supply voltage (range 2V..6V/250mA)

Software

User Interface

- Programmer is driven by an easy-to-use control program with pull-down menu, hot keys and on-line help. Selecting of device is performed by its class, by manufacturer or simply by typing a fragment of vendor name and/or part number
- Standard device-related commands (read, blank check, program, verify, erase) are boosted by some test functions (insertion test, signature-byte check), and some special functions (auto-increment, production mode - start immediately after insertion of chip into socket)
- All known data formats are supported. Automatic file format detection and conversion during loading of file
- The rich-featured auto-increment function enables one to assign individual serial numbers to each programmed device - or simply increments a serial number, or the function enables one to read serial numbers or any programmed device identification signatures from a file
- The software also provides extensive information about programmable devices including detailed drawings of all available packages. The software also provides explanations of chip labelling (prefixes and suffixes) for each of the supported chips
- The software provides full information for ISP implementation: Description of ISP connector pins for currently selected chip, recommended target design around in-circuit programmed chip and other necessary information
- The remote control feature allows the PG4UW software to be controlled by other application - either using .BAT file commands or using DLL file

- Jam files of JEDEC standard JESD-71 are interpreted by Jam Player. Jam files are generated by design software which is provided by manufacturer of respective programmable device. Chips are programmable in-ZIF or through ISP connector (IEEE 1149.1 Joint Test Action Group (JTAG) interface)
- VME files are interpreted by VME Player. VME file is a compressed binary variation of SVF file and contains high-level IEEE 1149.1 bus operations. VME files are generated by design software which is provided by the manufacturers of respective programmable devices. Chips are programmable in-ZIF or through ISP connector (IEEE 1149.1 Joint Test Action Group (JTAG) interface)
- Multiple devices are possible to program and test via JTAG chain: JTAG chain (ISP-Jam) or JTAG chain (ISP-VME)
- Multiple 48Pro programmers can be connected to the same PC (through USB port) achieving an extremely powerful multiprogramming system, which support as many chips, as are supported by 48Pro programmer and without obvious decreasing of programming speed. Concurrent multiprogramming is also supported allowing each programmer to work independently. If necessary, each programmer can simultaneously program a different chip
- Keeping your programmer software up to date can be a costly business with some programmers. Dataman offers completely FREE software updates whenever you need them. The latest software is always available from our website

The Dataman 48Pro supports over 22,000 of the most popular devices in use today - with future devices being added monthly. Dataman 48Pro coverage includes the following device types:

Programmer (ZIF socket)

- | | | |
|-----------|---------|--------------------|
| • BI-PROM | • GAL | • NVRAM |
| • EPROM | • FLASH | • PAL |
| • EEPROM | • FPGA | • PEEL |
| • EPLD | • MACH | • PLD |
| • CPAL | • MROM | • MICROCONTROLLERS |

Programmer (ISP connector)

- | | |
|-------|--------------------|
| • PLD | • Serial E(E)PROM |
| • MAX | • MICROCONTROLLERS |

Package Includes

- Dataman 48Pro Universal ISP Production Programmer
Dimensions: 160x190x42 mm (16.3x7.5x1.7 inches)
Weight: 0.9kg (1.98 lb)
- Switching Power Supply Adaptor
Input: 100-240V @ 50-60Hz & 400mA
Output: 15V @ 1.0A, 15W
- Moulded USB and Parallel Cable
- ISP cable
- Diagnostic POD for self test of the programmer
- Anti-dust cover for ZIF socket
- User manual
- Software
- Optional range of adapters and socket converters also available

Warranty and Support

- 30 day money back guarantee* - If you don't like it, send it back
- Three year guarantee - Three years parts and labour warranty, on the 48Pro universal device programmer
- Life-Time Technical Support - 48Pro technical support is available free via our website and telephone helpdesk for life
- Life-Time Software Updates - 48Pro software updates are available free via our website for life

*Applies to orders from UK/US offices only

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