Dataman 48Pro+

www.dataman.com

The Dataman 48Pro+ is a PC based universal 48-pin programmer with ISP capabilities / 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 32,000 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 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 tomorrows advanced low-voltage devices.
- The programmer performs device insertion and contact tests before programming each device. These capabilities, supported by overcurrent protection and signature-byte check help prevent chip damage due to operator error.
- Built-in protection circuits eliminate damage to the programmer and/or programmed device due to environment or operator failure. All the inputs of the 48Pro+ programmer, including ZIF socket, connection to PC and power supply input are protected against ESD up to 15kV.
- 48Pro+ programmer 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 (MLF), SDIP, BGA and other packages.

- 48 pin universal 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 tomorrows advanced low-voltage devices
- ISP capable using the JTAG interface
- Multiprogramming support allows one PC to control up to four units programming independently or as a gang programmer

Base Unit (DAC)

- USB 2.0 high-speed compatible port, up to 480 Mbit/s transfer rate
- 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
- Selftest capability
- Protection against surge and ESD on power supply input and parallel port connection
- Banana jack for ESD wrist strap connection
- Banana jack for connection to ground

ZIF Socket Pindriver

- 48-pin DIL ZIF (Zero Insertion Force) 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 1.8V 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

- 20-pin male type with missinsertion lock
- 6 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 two pins
- Programmed chip voltage (VCCP) with both source/sink capability and voltage sense
- 1x VPP voltage (range 2V..25V/50mA), can be applied to six pins
- Target system supply voltage (range 2V..6V/250mA)
- ESD protection on each pin of ISP connector (IEC1000-4-2: 15kV air, 8kV contact)
- Two output signals, which indicate state of work result = LED OK and LED Error (active level: min 1.8V)
- Input signal, switch YES! equivalent (active level: max. 0.8V)

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 enhanced by test functions (insertion test, signature-byte check) and additional special functions (autoincrement, production mode - programming starts immediately once chip inserted 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 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, recommended target design and other necessary information.
- The remote control feature allows the PG4UW software to be flow controlled by another application - either using .BAT file commands or DLL file (C/PAS/VBASIC/.NET).
- Multiple devices can be programmed and tested via JTAG chain: JTAG chain (ISP-Jam) or JTAG chain (ISP-VME).
- Multiple 48Pro+ programmers can be connected to the same PC (via USB port) achieving an extremely powerful multiprogramming system, supporting as many devices as a single 48Pro+ programmer and without a noticeable decrease in programming speed. Concurrent multiprogramming is also supported allowing each programmer to work independently increasing throughput.

The Dataman 48Pro+ supports over 32,000 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)
1-Wire E(E)PROM, BI-PROM, Configuration (EE)PROM, CPAL, EEPROM, EPROM, EPLD, Flash, Flash EPROM, FPGA, GAL, MACH, Microcontrollers, MROM, NV RAM, PAL, PEEL, PLD, PROM, Serial E(E)PROM

Programmer (ISP Connector)
Microcontrollers, PLD, Serial E(E)PROM

Package Includes:

- **Dataman 48Pro+ Universal ISP Programmer**
  Dimensions: 195 x 140 x 55mm (7.7 x 5.5 x 2.2inches)
  Weight: 0.9Kg (1.98lbs)
  Operating voltage: 110-250V AC
  Power consumption: max. 20W active / approx. 2W sleep
- Moulded USB Cable
- ISP cable
- Diagnostic POD for selftest of the programmer
- Diagnostic POD for selftest of the ISP connector
- 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 office only

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