Algocraft

SOLUTIONS FOR THE PROGRAMMING INDUSTRY

µISP

µISP
IN-SYSTEM PROGRAMMERS

Algocraft®

PRODUCT INFORMATION

OVERVIEW

Based on the WriteNow! proprietary Technology, the µISP Series of In-System Programmers are professional programming instruments dedicated to the programming and testing of devices. µISP can either work connected to a host PC (RS-232, USB, LAN connections are built-in) or in standalone mode.
The programming cycle execution in standalone mode may occur by simply pressing the START button or through some TTL control lines.
Its compact size and versatility allows a simple integration into production environments, manual and automatic processes.

KEY FEATURES

- Ultra-fast, universal In-System Programmer
- Standalone operations or host controlled
- Easy to install and to use
- Compact size, fixture friendly
- Thousands of supported devices with different programming protocols

SOFTWARE FEATURES

- Project Generator GUI with built-in utilities: Image File Creation, File Manager, ISP Signal Connections, Memory Analysis
- SDK/ API—for custom application (Visual C, Visual Basic, C#, LabView, etc.)
- ASCII-based command line protocol
- Variable data handling for serial numbering, MAC addresses, production codes, etc.
- Protection Mode and Data Encryption

HARDWARE FEATURES

- Supports microcontrollers, serial memories and other programmable devices
- High-speed
- Compact size (fixture friendly)
- Standalone operations or host controlled
- Designed for easy ATE interfacing
- Supports multiple interfaces (JTAG, SWD, UART, SPI/QSPI, BDM, SWIM, I2C, DAP, cJTAG, C2, ICSP, PDI, UPDI, FINE, MUST/MICE, MON08, ISSP, ICC, MDI, OUT, PSI5, SBW, custom, etc)
- Memorizes data on a built-in memory card
- Programmable power supply output
- Programmable I/O voltage
- USB, LAN, RS-232 and low-level interface
- START Push button
- USB powered or AC/DC adapter

µISP

THE BENEFITS OF µISP PRODUCTS IN PRODUCTION

WriteNow! Technology

µISP was designed based on WriteNow! technology – successfully used by the main players in the automotive field.

Compact Size

The compact dimension allows its integration inside fixtures and its use in multiple configurations.

Programming Time: a key factor

The WriteNow! technology has been designed to achieve high-speed programming without sacrificing high quality and flexibility.

Worldwide Remote Connection

µISP allows production data to be sent over the Internet from a local R&D laboratory directly to any other WriteNow! instrument in the world.

Standalone Control

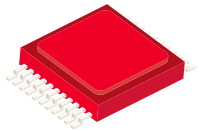
```
# exec -o prj -f myproject -s hFF
```

Binary codes, board parameters and programming flow reside inside µISP. A simple “exec” command string can be sent by an host to start the programming flow.

Protection Mode and Data Encryption

µISP provides a security feature to protect the intellectual property of the embedded firmware code.

Vpp programming mode



It integrates a programmable port for the generation of the Vpp signal required by the old generation devices or by the ones with a reduced number of pins in order to enter the programming mode.

Connectivity

Different connection ports to a host PC: ethernet for a maximum flexibility, USB for immediate use, RS232 UART for the oldest systems.

Variable Data Programming

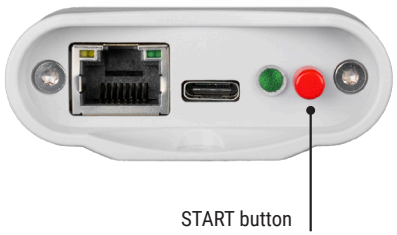
µISP allows to program each device with variable data, such as S/N, MAC address, vendor ID, etc.

Compatibility

The µISP series is compatible with the entire WriteNow! Series in order to allow an easy migration between the models. This is very interesting in order to migrate to multi-site solutions whenever needed into production.

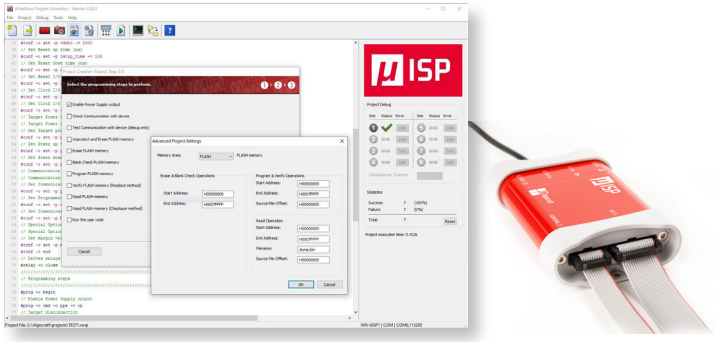
DIFFERENT PROGRAMMING INSTALLATIONS

Algocraft's µSP series finds different applications into the device programming field: into an on-board programming system for standalone stations or into automatic test equipment. It can be used for a single programming or for a multi-device parallel programming using different units.



Stand-alone – Manual Programming

Once the programmer is configured, the programming cycle is executed by simply pressing the START button. The result of the programming is verified by the status of the multifunction LED (BUSY/PASS/FAIL).



Host PC Controlled via GUI

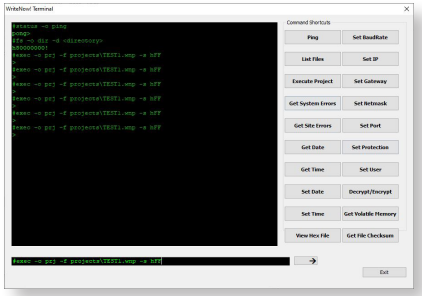
The Project Generator guides you through the creation and debugging of a programming Project in few guided steps: device selection, source file creation, board parameter settings, programming flow options, upload and run of the Project.

Multiple Programming system

By using a simple USB HUB or LAN switch, it is possible to create a parallel programming system

Stand-alone – Automated Programming

After the configuration of the parameters, the programmer can only be controlled by I/O lines in TTL logic (START, BUSY, PASS/FAIL)



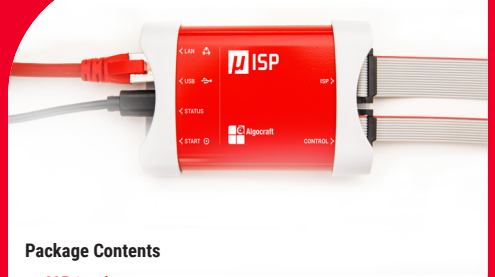
C# C C++
Labview
Python
Java Basic

Host PC controlled via DLL and command line utilities

Simplifies the design of your own PC software. µISP can be controlled through simple ASCII strings by way of a standard terminal interface.

USB powered

µISP can also be powered by USB Type C (5V) port. It can therefore be used as a handheld instrument in standalone mode for in-field programming.



Package Contents

- µISP1 unit
- AC Power Supply Adapter (5V output)
- USB/LAN cables
- Test board
- DIN61612 48-way Adapter
- 48-way, female wire-wrap connector

Silicon Support

- Infineon/Cypress
- Microchip
- Nordic Semiconductor
- NXP
- Renesas
- Silicon Labs
- ST Microelectronics
- Texas Instrument
- Windbond
- Micron
- Giga Device

Specifications	
Power Supply	USB powered or external 5V
Programmable Power Supply (PPS):	1.5V – 12.5V (200mA)
Low-Level Interface:	START, BUSY, OK/ERR (5V compatible)
Dimensions – with enclosure	90.0 x 60.9 x 23.4 mm
without enclosure	74 x 47.5 x 11 mm
ISP Lines:	1.2V–5.5V with 6 bi-directional lines
Programming Protocols	JTAG, SWD, UART, SPI/QSPI, BDM, SWIM, I2C, DAP, cJTAG, C2, ICSP, PDI, UPDI, FINE, MUST/MICE, MON08, ISSP, ICC, MDI, OUT, PSI5, SBW, custom, etc.
Connector Type:	Box Header 8x2 - p = 2mm
Built-in SD card:	16GB
Weight:	50g
EMC (EMI/EMS)	CE, FCC, ROHS

Models	
UISP1-UNIVERSAL	µISP1 Programmer for all devices (universal)
UISP1_ARM	µISP1 Programmer for ARM CPUs
UISP1-MEMORY	µISP1 Programmer for SPI, I2C and uWire Serial memory
UISP1-MICROCHIP	µISP1 Programmer for Microchip/ Atmel devices
UISP1-NXP	µISP1 Programmer for NXP devices
UISP1-STM	µISP1 Programmer for STMicroelectronics devices
UISP1-INFINEON	µISP1 Programmer for Infineon/ Cypress devices
UISP1-TI	µISP1 Programmer for Texas Instruments devices
UISP1-RENESAS	µISP1 Programmer for Renesas devices
UISP1-SILICONLABS	µISP1 Programmer for SiliconLabs

µISP series was designed to offer the support of specific silicon manufacturers, no matter the family or the programming protocol. This enables an easy migration from the tools used in the laboratory of R&D department s towards a programming solution for production.

All information is subject to change without notice

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