

# ASI4U

## Universal Actuator-Sensor Interface IC

### Feature Sheet

#### Features

- Compliant to AS-i Complete Specification V3.0, including all optional features
- Universal application: in slaves, masters, repeaters and bus-monitors
- Drop-in compatible to A<sup>2</sup>SI
- Floating AS-i transmitter and receiver for high symmetrical high power applications
- On-chip electronic inductor with current drive capability of 55 mA
- Two configurable LED outputs to support all Spec.V3.0 status indication modes
- Several data preprocessing functions, including configurable data input filters and bit selective data inverting
- Additional addressing channel for easy wireless module setup
- Support of 8 / 16 MHz crystals by automatic frequency detection
- Special AS-i Safety Mode
- Clock watchdog for high system security
- SSOP28 package

#### Brief Description

ASI4U is a new generation CMOS integrated circuit for AS-i (Actuator Sensor Interface) networks.

The low-level field bus AS-i (Actuator Sensor Interface) was designed for easy, safe and cost-effective interconnection of sensors, actuators and switches. It transports both power and data over the same two-wire unshielded cable.

ASI4U is used as a part of a master or slave node and works as an interface to the physical bus. The device realizes power supply, physical data transfer and communication protocol handling and is fully compliant to the AS-i Complete Specification 3.0.

ASI4U is a direct successor of the A<sup>2</sup>SI IC and can replace A<sup>2</sup>SI in existing board layouts.

All configuration data are stored in an internal EEPROM that can be easily programmed by a stationary or handheld programming device. The special AS-i Safety Mode assures short response times regarding security related events.

- **Application support available:**

Email [asi@zmd.de](mailto:asi@zmd.de)

Phone +49 (0) 351-8822-916

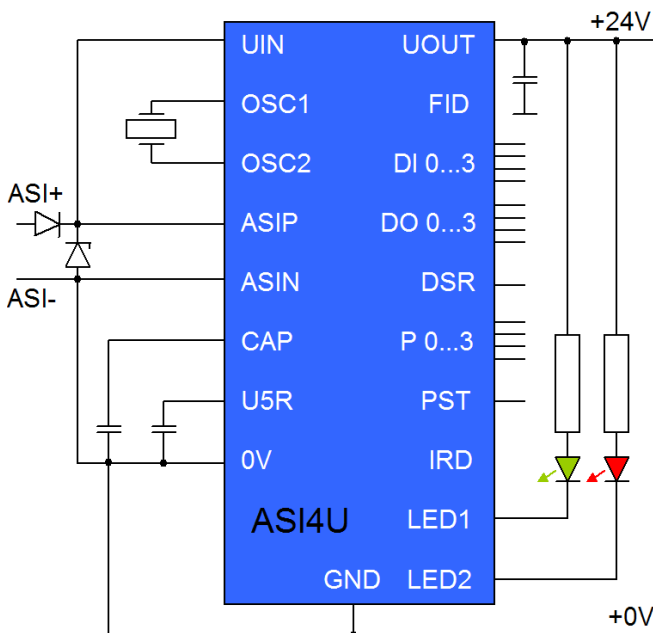
Fax +49 (0) 351-8822-606

- **Development tool available:**

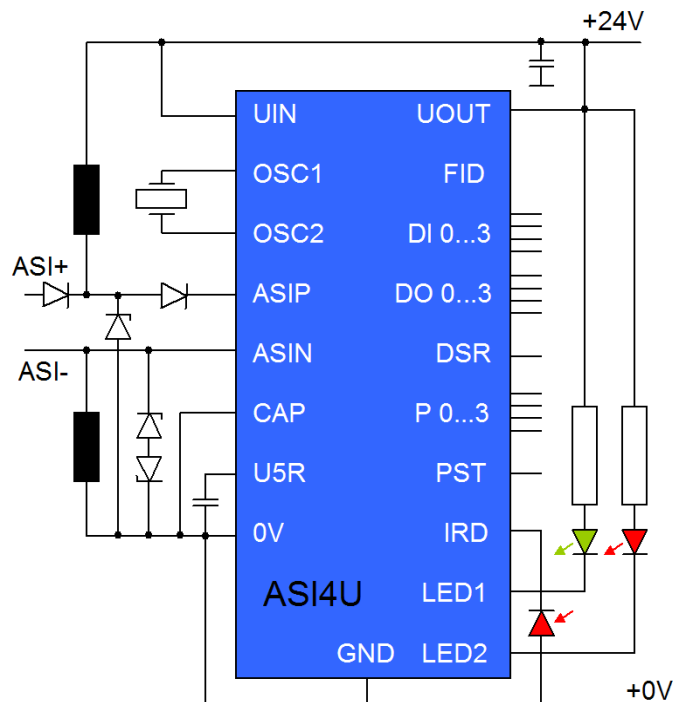
ZMD ASI Programmer

(PC-connectable, incl. hard- and software)

#### Application Circuit Examples



Example 1: Standard Application



Example 2: Extended Power Application with IR-Addressing Option

# ASI4U

## Universal Actuator-Sensor Interface IC

Feature Sheet

### Application Examples



Safety Module



Master OEM Module

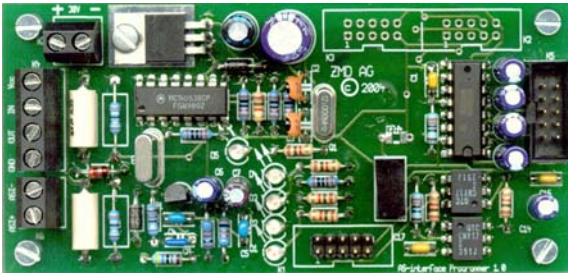


Safety Module

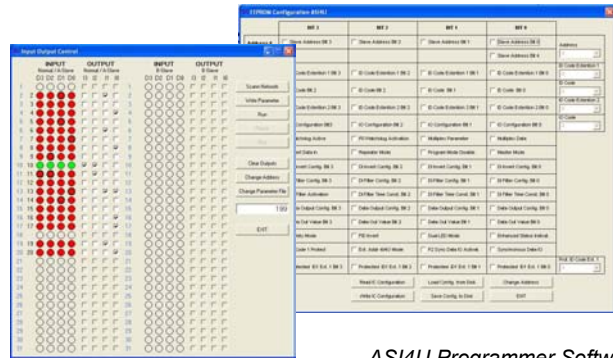


Master Module

### Development Tool: ZMD ASI Programmer



ASI Programmer PCB



ASI4U Programmer Software

### Ordering Information

Ordering Code	Description	Operating Temperature Range	Package Type <sup>2</sup>	Device Marking	Shipping Form
ASI4UC-ST	Standard version	-25°C to 85°C	28-pin SSOP (5.3 mm)	ASI4U	Tubes (47 parts/tube)
ASI4UC-SR	Standard version	-25°C to 85°C	28-pin SSOP (5.3 mm)	ASI4U	Tape-and-Reel (1500 parts/reel)
ASI4UC-MT <sup>1</sup>	Pre-programmed master function	-25°C to 85°C	28-pin SSOP (5.3 mm)	ASI4U + yellow dot	Tubes (47 parts/tube)
ASI4UC-MR <sup>1</sup>	Pre-programmed master function	-25°C to 85°C	28-pin SSOP (5.3 mm)	ASI4U + yellow dot	Tape-and-Reel (1500 parts/reel)

<sup>1</sup> available in Q1/2006, for earlier requests please contact ZMD

<sup>2</sup> RoHS compliant packages are available in Q4/2005, for earlier requests please contact ZMD

This information applies to a product under development. Its characteristics and specifications are subject to change without notice. ZMD assumes no obligation regarding future manufacture unless otherwise agreed in writing. The information furnished hereby is believed to be correct and accurate. However, ZMD shall not be liable to any customer, licensee or any other third party for any damages in connection with or arising out of the furnishing, performance or use of this technical data. No obligation or liability to any customer, licensee or any other third party shall result from ZMD's rendering of technical or other services.

**For further information:**  
 ZMD AG  
 Grenzstrasse 28  
 01109 Dresden, Germany  
 Phone +49 (0) 351-8822-366  
 Fax +49 (0) 351-8822-337  
 sales@zmd.de  
[www.zmd.biz](http://www.zmd.biz)

