

**HiCore**<sup>®</sup>

## Your Fast Path to Functional Safety

HIMA HiCore 1 evaluation kits are designed to evaluate the ease of use and flexibility of this safety-SoC and the included software package. They support all features of HiCore 1. These evaluation kits are also an ideal platform for the development of application software while the target hardware is being designed.

Following the idea of HIMA Smart Safety, the evaluation kits include all required components as well as pre-installed reference applications. The HiCore 1 Communications Board includes an additional communications co-processor for evaluation and design of applications requiring safe communications.

### HiCore Features:

- Energy-efficient, high-performance DP80390 (8-bit) processor cores
- Optimized MCS-51 (8051) instruction set
- Max. clock: 100 MHz
- Memory "SAFE System":
  - 2 x 256 KB Flash
  - 2 x 64 KB SRAM
- Memory "COM System":
  - 512 KB Flash
  - 128 KB SRAM
- Operating temperature: -40 °C to +85 °C

### Scope of Delivery:

- Evaluation Board or Communications Board
  - Software (compliant with IEC 61508 SIL 3, ISO 13849 PLe, and EN 62061)
  - Safe operation system
  - Safe middle ware
  - Compiler
- Documentation
- 24V switching power supply
- Anti-static protection mat

### Development Environment:


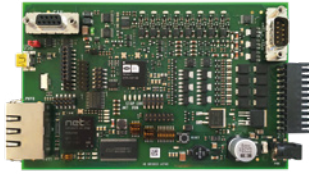
- IAR Embedded Workbench for 8051 IDE V8.20.1
- Validated for use in safety-relevant projects
- Integrated debugging using DCD HAD2 via JTAG

### Accessories:

- License for IAR Embedded Workbench
- DCD HAD2-Kit
- RS232/422/485 USB adapter

## Evaluation Board vs. Communications Board

Start HICore-based product development smartly and efficiently by using the Evaluation Board or Communications Board by HIMA. Both boards are available with a complete development suite which can be upgraded with optional accessories. Targeting different applications, both boards feature different connectivity.

	<b>Evaluation Board</b>	<b>Communications Board</b>
	Part no. 98 0100101	Part no. 98 0100102
		
Application area	Safe applications using all features of HICore 1	Safe applications using safe industrial communications
General	All HICore 1 interfaces and I/Os made available	HICore 1 as platform for safe communications plus a Hilscher Co-processor for lower non-safe communications layers
Certification	HICore 1 safety-SoC and Software Package certified in acc. with IEC 61505 up to SIL 3, suitable for use in line with EN ISO 13849 up to PLe	HICore 1 safety-SoC and Software Package certified in acc. with IEC 61505 up to SIL 3, suitable for use in line with EN ISO 13849 up to PLe
Safe OS	Yes, part of Software Package	Yes, part of Software Package
Safe Middleware	Yes, part of Software Package	Yes, part of Software Package
Safe I/Os	8/8	8/8
I/Os	24/24 (Configurable as 24 additional safe In- or Outputs)	–
Clock out	2 (Short-circuit proof)	2 (Short-circuit proof)
Safe counters	8	4 (Multiplexed with inputs)
Interfaces	3 UART 2 CAN 2 Ethernet 3 SPI	1 UART 1 CAN 2 Ethernet
Non-safe communications	CANopen	CANopen PROFINet* Ethernet/IP* Sercos* EtherCAT* Powerlink*
Safe communications	CANopen Safety	CANopen Safety PROFIsafe (V2.4 / V2.6.1)* Fail Safe over EtherCAT*  *Communications via Hilscher netX51

### Contact

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