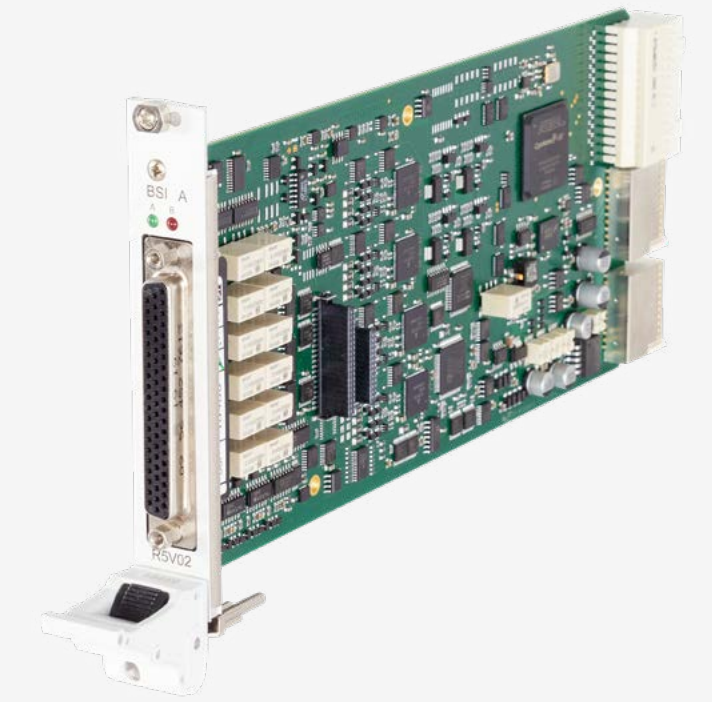
UTB (BSI) - Universal Tester Board

Efficient test system for digital sensors



Applications

- ✓ Efficient System Level Test (SLT) of digital sensors
- ✓ Sensor characterization testing
- ✓ Sensor production final test

Selected Data

- ✓ Supply voltage range: −2 V…+20(25)[1] V
- ✓ Supply current: up to ±50(20)[1] mA/source
- ✓ 12.5 ns timing resolution
- ✓ Slew Rate Control (1 V/µs…8.3 V/ms)

Features

- ✓ Fast FPGA for FW and host interface IP cores
- ✓ Support for SPI, I²C, mipi™ I3C, TDM, UART, JTAG, SENT, PSI5, CAN FD[2], LIN, ZACwire™
- ✓ 16 freely programmable IO pins
- ✓ 4 independent power sources
- ✓ External trigger functionality
- ✓ Fast LVDS backplane interface
- ✓ Special Function interface for custom hardware extension

Technical Data

HW interface	• DSUB (HD62)
Supported digital interfaces	• SPI / I²C / CAN-FD[1] (ISO 11898) / SENT / PSI5 / JTAG / LIN / ZACwire™ / mipi™ I3C / TDM / UART

Electrical Parameters

Digital MIO (Measurement and I/O)	
Voltage range digital	-2 V… 6 V
Voltage range analog input	-2 V … 25 V
Current per pin, max.	20 mA
Pull up / down resistor switchable	2 kΩ
Input resistor	1 MΩ
High Z mode for all MIO	
Input current High Z mode	max. < 5 nA, typical < 400 pA

Supply voltage range	−2 V…+20 V (25 V)[2] (±0.05 %)
Supply current ranges	50 mA (±0.2 %) 2 mA (±0.2 %) 200 µA (±0.2 %) 20 µA (±0.2 %)[1] 5 µA (±0.2 %)[1]
Max. sensor supply current	50 mA/source
Voltage measurement ranges	25 V (±0.01 % of FSR) 8 V (8 V…1 V: ±0.01 % of FSR, <1 V ± 100 µV)
Current measurement ranges	50 mA (±0.05 % of FSR) 2 mA (±0.05 % of FSR) 200 µA (±0.05 % of FSR) 20 µA (±0.05 % of FSR)[1] 5 µA (±0.1 % of FSR)[1]

1) Only UTB HW Variant R5V02

2) Only UTB Power Source #4

Accessories (optional)

- BSI Evaluation Board
- BSI Engineering Board
- BSI Cable