

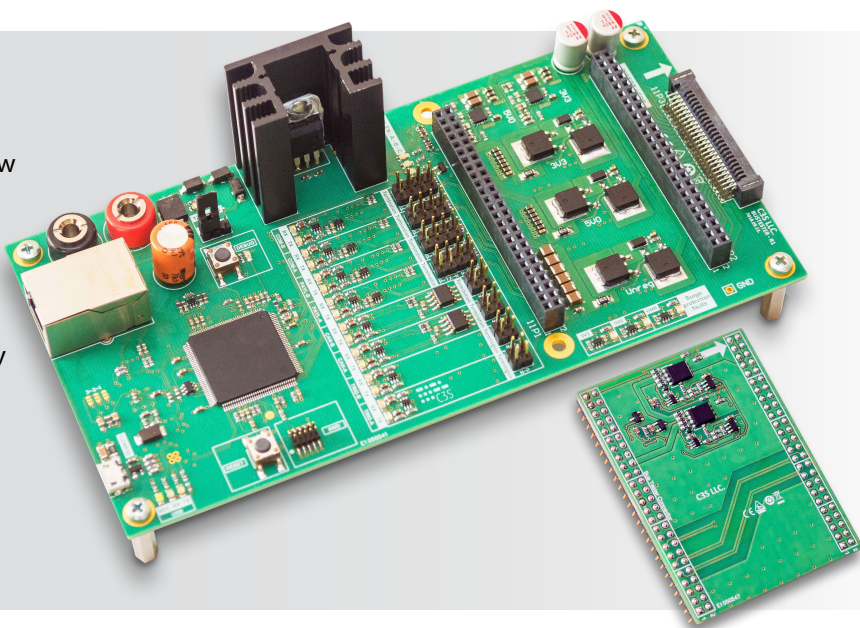
BUS TESTER

SUMMARY

C3S offers payload providers a development kit as a support during the whole integration process. Our hardware-in-the-loop bus tester is capable of testing the internal communication protocols of the satellite, making it possible to simulate real space usage by sending commands and verifying the correctness of the received data before flight. Thus, eliminating risks and making payload integration process smoother along with the verification of the electrical and software compliance of the ICD.

MAIN FEATURES

- Tests can be executed during the development flow
- Test processes are performed in the cloud providing traceable test results
- Guaranteed real-time connection
- The protection of the unit under test is provided by a three configurable limiter switch, monitoring the supply power
- Customization and configuration of the device can be performed according to customer needs



SPECIFICATION

Property	Value/Options	Notes
MCU	32-bit ARM Cortex-M7	
MCU frequency	Up to 300 MHz	
Program memory	2 Mbyte	Internal flash
Data memory	384 kByte	Internal RAM
Flash memory	256 Byte	For network configuration parameters
External network interface	Ethernet (1Mbps, RJ-45)	
External network configuration interface	Virtual COM port (micro USB)	
External power interface	9.9 ... 12.3 VDC via two 4 mm banana jack	
Internal power source: UNREG	9.9 ... 12.3 VDC (OVP, UVP, OCP)	

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TITLE
COMPANY
ADDRESS
CONTACT

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Bus Tester/ Specification

Property	Value/Options	Notes
Internal power source: 5V	5 VDC (OVP, UVP, OCP)	
Internal power source: 3V3	3.3 VDC (OVP, UVP, OCP)	
Latch-up current limiters	3x, with configurable voltage source, and protection level	Configuration is done by the matrix cards
CAN communication interface	2x	Configuration is done by the matrix cards
UART communication interface	4x, full-duplex, with M-LVDS transceiver	Configuration is done by the matrix cards
SPI interface	1 x SPI with two chip select	Configuration is done by the matrix cards
Visual feedback	For power supplies and CAN and M-LVDS communication interfaces	
Debug interface	SWD interface, user and reset button, user LED	
External Connector for test equipment	Samtec TFM-125-01-L-D-RE1-WT	
Dimensions	86mm x 171mm	Without cables

MATRIX CARD - OBC

Property	Value/Options	Notes
CAN communication interface	2x	
UART communication interface	4x	M-LVDS, full-duplex
Latch-up current limiters	2x, 3.3V	With current measurement

MATRIX CARD - COM

Property	Value/Options	Notes
CAN communication interface	2x	
UART communication interface	2x	M-LVDS, full-duplex
Latch-up current limiters	2x, 5V	With current measurement

MATRIX CARD - AUX

Property	Value/Options	Notes
CAN communication interface	2x	
Latch-up current limiters	2x, 3.3V	With current measurement

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Bus Tester/ Specification

Latch-up current limiters

1x, UNREG

With current measurement

MATRIX CARD - EPS

Property

Value/Options

Notes

CAN communication interface

2x

SPI communication interface

1x

For the optional dummy load modul

Latch-up current limiters

2x, UNREG

With current measurement

MATRIX CARD - ADCS

Property

Value/Options

Notes

CAN communication interface

2x

Sun sensors

6x

Latch-up current limiters

2x, 5V

With current measurement

MATRIX CARD - PAYLOAD 001

Property

Value/Options

Notes

CAN communication interface

2x

UART communication interface

2x

M-LVDS, full-duplex

Latch-up current limiters

2x, UNREG

With current measurement

Custom matrix cards are available on request