

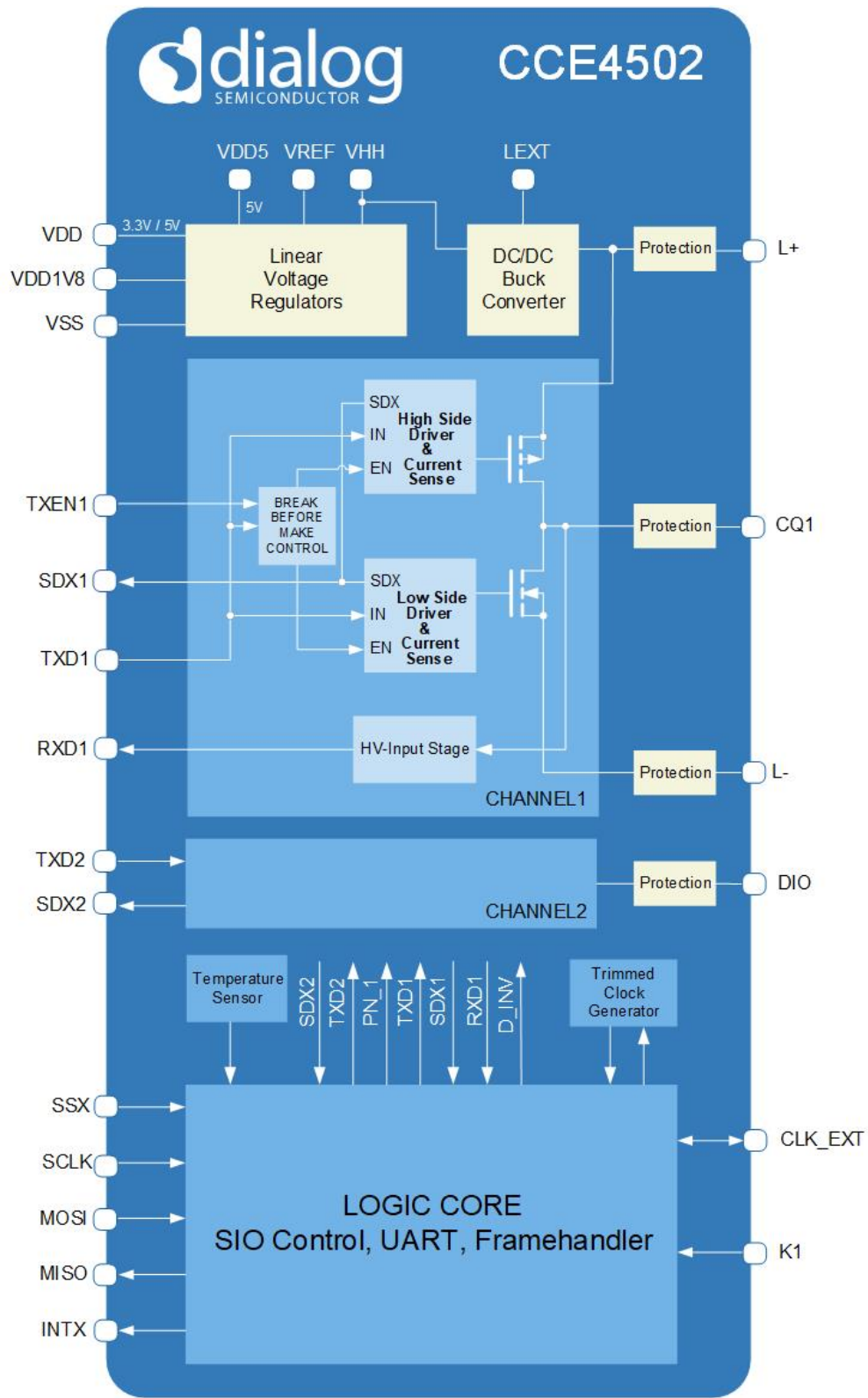
CCE4502

IO-Link Device Phy with Integrated Frame Handler

The CCE4502 is a highly integrated device-side IO-Link compliant transceiver IC. The built-in hardware based IO-Link frame handler provides full IO-Link protocol handling facilities making it simple to connect a host micro controller via the UART interface. The comprehensive function set includes LDOs and step down DC-DC converter, on chip oscillators and a user SPI interface for configuration and read back of fault indicators. The output stage provides overcurrent, reverse polarity and thermal protection and is tolerant to +/- 40V input. It is configurable as push-pull, open drain (PMOS or NMOS) or input only. Package options include a 4mm x 4mm, 0.5mm pitch QFN with an addition option of a 2mm x 2.6mm, 0.5mm pitch WLCSP. These options make the CC4502 suitable for demanding industrial applications where power dissipation or space are highly important.

Features	Benefits	Applications
<ul style="list-style-type: none">• IO-Link compliant transceiver• Integrated UART (COM1-3)• One IO-Link slave up to 200 mA driving current• Programmable PNP-, NPN- and Push-Pull mode• On-chip oscillator with $\pm 2\%$ frequency accuracy• Reverse polarity and short circuit protection• Two LDO voltage regulators (programmable 3.3V / 5V and 5V)• DC / DC buck converter 7v• Temperature stable reference voltage output• Slew rate control• High temperature detection• QFN24, 4x4mm package or CSP 2.6x2mm	<ul style="list-style-type: none">• Integrated Frame Handler automates most of the lower layer communication tasks• All IO-Link frame types supported• Hardware IO-Link stack support• Evaluation board available• IO-Link Physical Layer Test for Evaluation Board available• Rich configuration options	<ul style="list-style-type: none">• Industrial Profibus /IO-Link Network• Industrial Automation<ul style="list-style-type: none">○ Sensors○ Actuators• High voltage level shifter

Block Diagram



IO-Link Evaluation Boards



Evaluating CCE4502 is made easy with the availability of two different designs of evaluation boards

- The Controller-EvaBoard (pictured opposite) combines the CCE4502 with an on-board micro controller, two touch button sensors, a temperature sensor, a 64 kbit EEPROM and LED indicator.
- The Basic-EvaBoard features CCE4502 IO-Link compliant transceiver without periphery functions.

Both boards are equipped with a variety of connectors forming an easy-to-use platform for evaluation of the CCE4502 device.

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