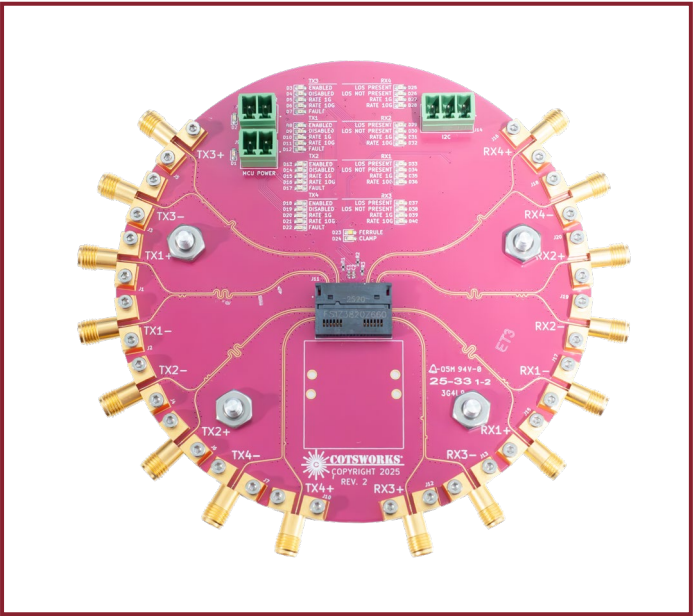


Features:

- Features SFF-8436-compliant QSFP electrical connector
- Designed to work with SPOT-MB and SPOT-CE transceivers
- 16x SMA electrical interfaces
- Provides I²C access to digital diagnostics compliant with SFF-8636
- Easy to read LED indicators for visual function verification
- Designed for performance validation and troubleshooting



This high performance evaluation board allows for fast and reliable testing without the need for a final board design.



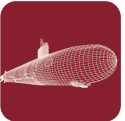
COMMERCIAL AEROSPACE



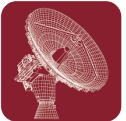
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MILITARY TACTICAL



SUBSEA NETWORKING



RADAR & SENSING



OIL & EXPLORATION

General Description

The Moog | COTSWORKS SPOT evaluation board enables users to test and evaluate SPOT-MB and SPOT-CE transceivers. It supports sending and receiving digital data via 16x SMA connection points and provides I²C access to the transceiver’s digital diagnostics. An on-board microcontroller drives diagnostic LEDs for real-time troubleshooting. The QSFP connector is SFF-8436 compliant, transceiver’s diagnostics are compliant with SFF-8636 memory architecture.

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	NOTES
Maximum Supply Voltage	V _{CC}	-	3.47	V	
Storage Temperature	T _{sto}	-55	105	°C	
Operating Temperature	T _{OP}	-55	105	°C	

Pinout Reference diagram

The Pinout Reference diagram (Figure 1) illustrates the various I/O ports, pins, and diagnostic LEDs available on the SPOT Evaluation Board. Refer to the Pinout Reference Table for names and descriptions of each I/O port, pin and LED indicator.

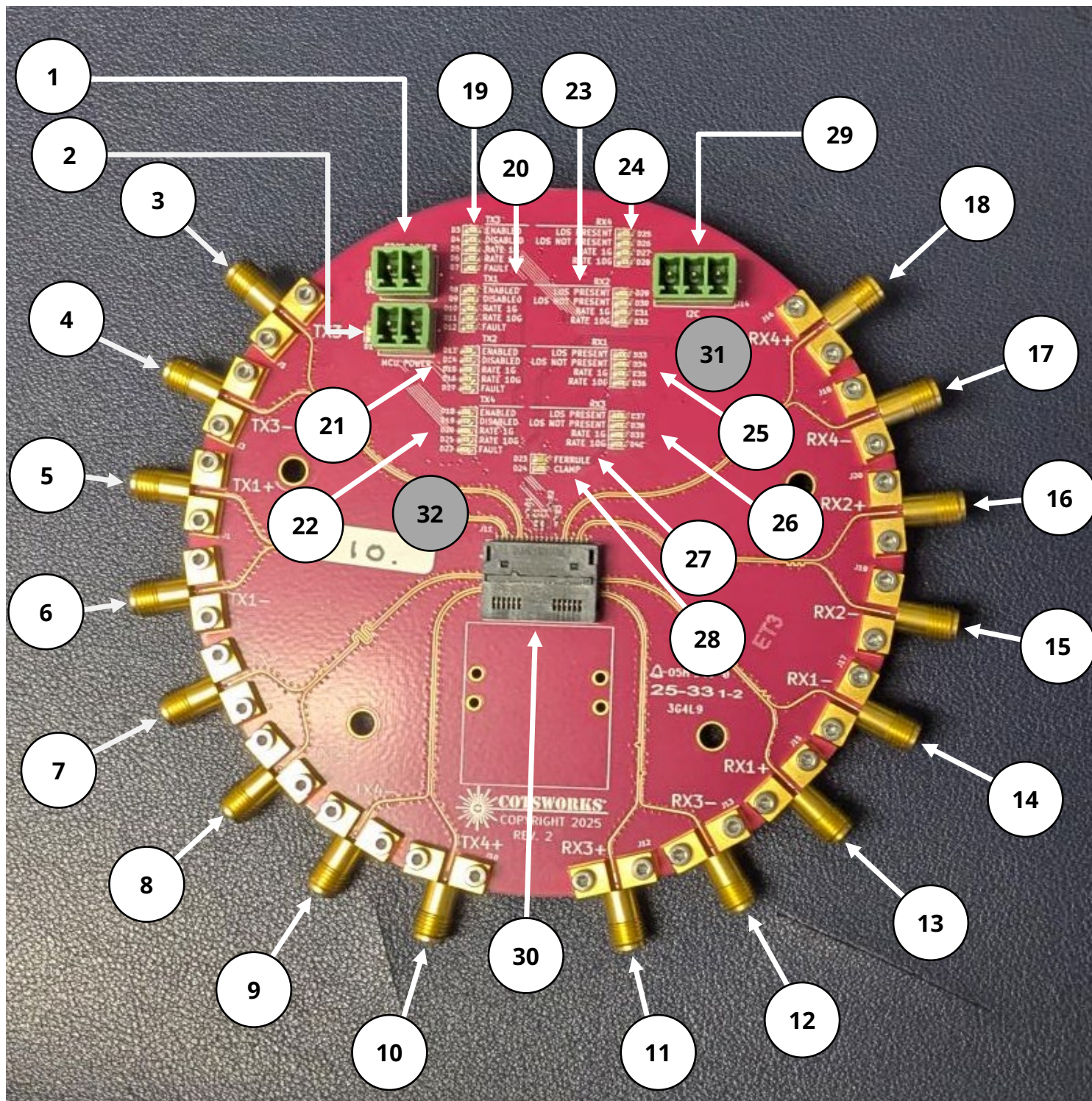
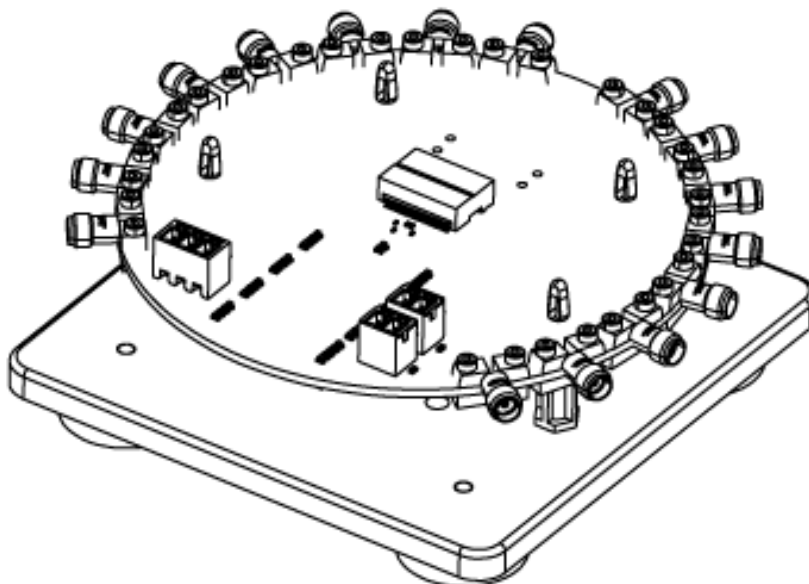


Figure 1: SPOT Evaluation Board Pinout Diagram. Ports 31 and 32 are located on the underside of the board and are marked in grey

#	Pinout Reference Key	Description
1	Transceiver Power	3.3V power cable input to energize the DUT; it does not power the on-board MCU or supporting circuitry.
2	Microcontroller Power	3.3V power cable input to energize the on-board MCU; it does not power the DUT or supporting circuitry.
3	Channel TX3+ Input	Non-inverted input signal for Channel 3 Transmit. Requires 50Ω termination or SMA connection.
4	Channel TX3- Input	Inverted input signal for Channel 3 Transmit. Requires 50Ω termination or SMA connection.
5	Channel TX1+ Input	Non-inverted input signal for Channel 1 Transmit. Requires 50Ω termination or SMA connection.
6	Channel TX1- Input	Inverted input signal for Channel 1 Transmit. Requires 50Ω termination or SMA connection.
7	Channel TX2+ Input	Non-inverted input signal for Channel 2 Transmit. Requires 50Ω termination or SMA connection.
8	Channel TX2- Input	Inverted input signal for Channel 2 Transmit. Requires 50Ω termination or SMA connection.
9	Channel TX4+ Input	Non-inverted input signal for Channel 4 Transmit. Requires 50Ω termination or SMA connection.
10	Channel TX4- Input	Inverted input signal for Channel 4 Transmit. Requires 50Ω termination or SMA connection.
11	Channel RX3+ Input	Non-inverted output signal from Channel 3 Receive. Requires 50Ω termination or SMA connection.
12	Channel RX3- Input	Inverted output signal from Channel 3 Receive. Requires 50Ω termination or SMA connection.
13	Channel RX1+ Input	Non-inverted output signal from Channel 1 Receive. Requires 50Ω termination or SMA connection.
14	Channel RX1- Input	Inverted output signal from Channel 1 Receive. Requires 50Ω termination or SMA connection.
15	Channel RX2+ Input	Non-inverted output signal from Channel 2 Receive. Requires 50Ω termination or SMA connection.
16	Channel RX2- Input	Inverted output signal from Channel 2 Receive. Requires 50Ω termination or SMA connection.
17	Channel RX4+ Input	Non-inverted output signal from Channel 4 Receive. Requires 50Ω termination or SMA connection.
18	Channel RX4- Input	Inverted output signal from Channel 4 Receive. Requires 50Ω termination or SMA connection.

19	Channel TX3 LED Array	Live diagnostic LED array for Channel 3 Transmit displaying TX Enable, TX Disable, Rate 1G, Rate 10G, and TX Fault indicators. Either TX Enable or TX Disable will illuminate based on the configured state, either 1G or 10G will illuminate based on the selected rate mode, and TX Fault will illuminate only if the transmitter is in a faulted condition.
20	Channel TX1 LED Array	Live diagnostic indicator LEDs for Channel 1 Transmit.
21	Channel TX2 LED Array	Live diagnostic indicator LEDs for Channel 2 Transmit.
22	Channel TX4 LED Array	Live diagnostic indicator LEDs for Channel 4 Transmit.
23	Channel RX3 LED Array	Live diagnostic LED array for Channel 3 Receive, displaying RX LOS Present, RX LOS Not Present, 1G Rate, and 10G Rate indicators. RX LOS Present illuminates when no signal is detected, RX LOS Not Present illuminates when an incoming signal is detected, and either 1G or 10G illuminates based on the internal rate select setting.
24	Channel RX1 LED Array	Live diagnostic indicator LEDs for Channel 1 Receive.
25	Channel RX2 LED Array	Live diagnostic indicator LEDs for Channel 2 Receive.
26	Channel RX4 LED Array	Live diagnostic indicator LEDs for Channel 4 Receive.
27	DUT Ferrule Indicator LED	Live diagnostic indicator LED for the DUT. Illuminates when the SPOT-MB/CE transceiver detects that the MT ferrule is properly engaged.
28	DUT Clamp Indicator LED	Live diagnostic indicator LED for the DUT. Illuminates when the SPOT-MB transceiver detects that the ferrule clamp is engaged.
29	I ² C Test Point #1	I ² C port for reading and writing DUT digital diagnostics.
30	DUT Connection Point	Standard off-the-shelf 38-pin QSFP electrical connector.
31	I ² C Test Point #2	I ² C port for reading and writing DUT digital diagnostics. Located on the underside of the evaluation board.
32	Microcontroller Debug Point	Port for programming and debugging the on-board MCU. Located on the underside of the evaluation board.



Ordering Information

TESTBD-SPOT-EB
Evaluation Board for SPOT-MB/-CE

Contact cotsworkssales@moog.com for mechanical dimensional information and other configuration options.

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