

User Guide for the Movesense Sensor Programming and Debugging Jig

1. Install the necessary Segger J-Link drivers and other associated support software to your computer (see www.movesense.com/docs for additional information)
2. Connect the USB type B cable to the left side of the jig. Connect the other end of the USB cable to your computer or a USB power source (+5V).

The USB interface powers both the jig and the connected Movesense sensor, and it also provides UART connection to the sensor.

The supply voltage of the sensor is 3V, and the I/O voltage is 1.8V. The sensor supply can be switched on/off with the slide switch on the right side of the jig.

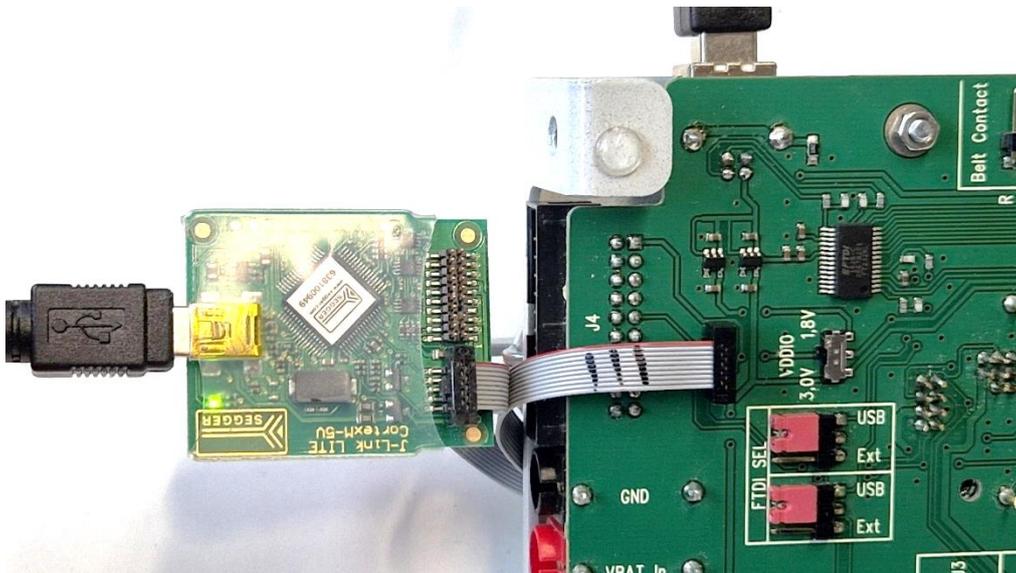
LED indicators on the front of the jig function as follows:

GREEN LED == 1.8V I/O voltage is connected

RED LED == 3V supply voltage is connected

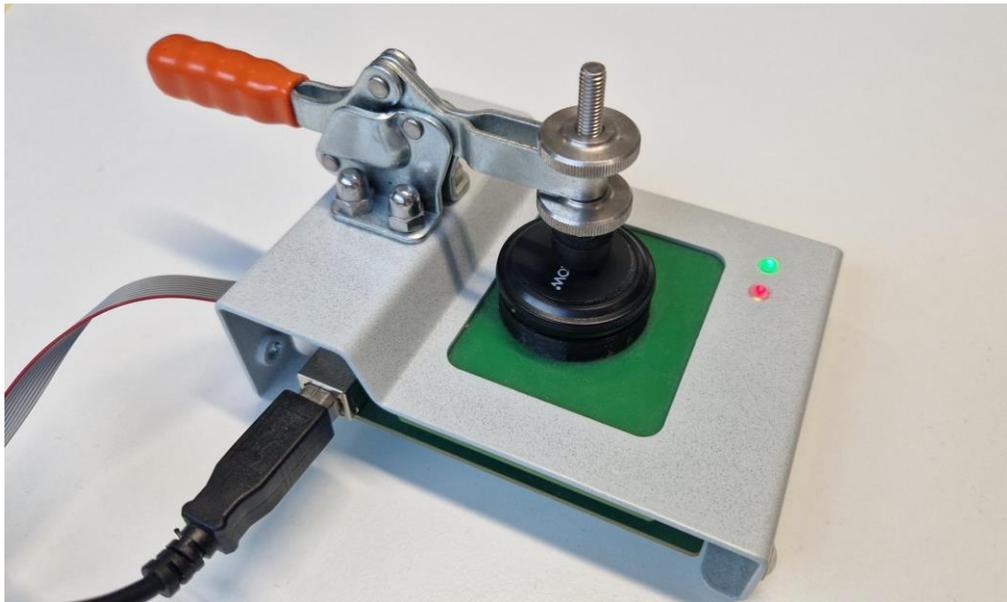
WARNING: BLUE LED == DO NOT CONNECT THE SENSOR! The selected I/O voltage is 3V and this will cause irreparable damage to the sensor if connected. Change the I/O voltage to 1.8V with the voltage selection switch on the underside of the jig.

3. Connect the Segger J-Link debugger to the pin header on the underside of the jig, with the flat ribbon cable provided. Make sure that the VDDIO switch is in the 1.8V position. See Picture 1 below for details.



Picture 1: Underside of the debugger jig showing the correct attachment of the ribbon cable and correct positioning of the jumpers. The VDDIO switch **MUST** be in 1.8V position.

4. Connect the Segger J-Link debugger to your computer with the USB cable.
5. Connect a test sensor to the jig by
 - 1) removing the battery cap and the battery
 - 2) removing the battery insulator sheet with tweezers
 - 3) placing the sensor on the test fixture
 - 4) closing the mechanical locking handle. Adjust the handle's rubber foot, so that is pressing the sensor in the middle of the front face.



Picture 2: Movesense sensor placed in the jig.

6. The sensor supply current can be measured by connecting a current measuring multimeter between the yellow and red banana sockets. Disconnect the jig's internal supply with the slide switch (=RED LED turns off), so that the sensor's power supply current will run through the multimeter interface.
7. The sensor debug output can be viewed using the Segger RTTViewer software.
8. Operate the jig only in an ESD protected area and connect an additional ESD grounding to the back side of the jig.
9. Test pins: if the jig's test pins need replacement, spare parts can be ordered from Farnell (order code for the 8-pin programming interface: 322-5891; for 2-pin HR stud connection: 996-0180).
Note: the test pins may fall off if no sensor is connected and the jig is turned upside down.
Always have a sensor attached to the jig when transporting it.

Notes: The Movesense sensor's I/O voltage is 1.8V. The sensor's supply voltage is 3.0V.