

# Inertia-Link<sup>®</sup>

# 3DM-GX2<sup>®</sup>

## Orientation Sensors



### Timer Reset

#### Overview

MicroStrain's Inertia-Link<sup>®</sup> and 3DM-GX2<sup>®</sup> can be customized with an external switching mechanism to allow the user to reset the on-board timer to zero. This customization can be useful when integrating these orientation sensors with third party equipment. The timer reset provides a pointer in the data stream to an event generated outside the orientation sensor. For example, this can be used as a means of synchronizing the on-board timer with a 1 pulse per second digital output from a GPS receiver.

The customization entails a factory installed jumper in the orientation module and a breakout of a 2 wire pigtail from either MicroStrain's standard RS-232 (part# 6212-1000) or USB (part# 6212-1040) communication and power cables. The pigtail is presented as a 2 wire lead pair, 12" in length, with yellow lead as power and black lead as ground.

#### Operation

The reset can be applied in either of two ways:

- a physical switching of the 2 leads will cause the switch; or
- a 0-3.3 volt digital signal can be applied.

Whenever a rising edge is detected on the circuit, the on-board timer will be reset to zero. Subsequent data records will have a time-stamp which reflects the elapsed time since the most recent rising edge event.

The reset circuit has a weak (25,000 ohm) pull-up to the 3.3 volt power rail. The circuit also contains a 1000 ohm series resistor as a protection measure.