6.1 Counters and Triggers

Application Manual

www.pinetek-networks.com

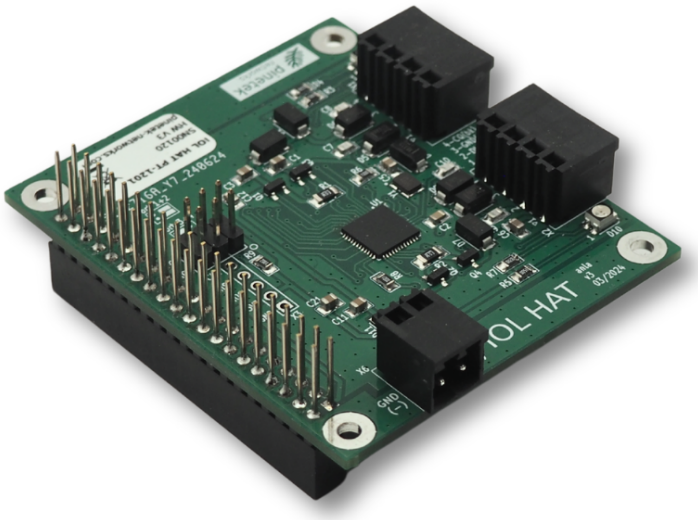
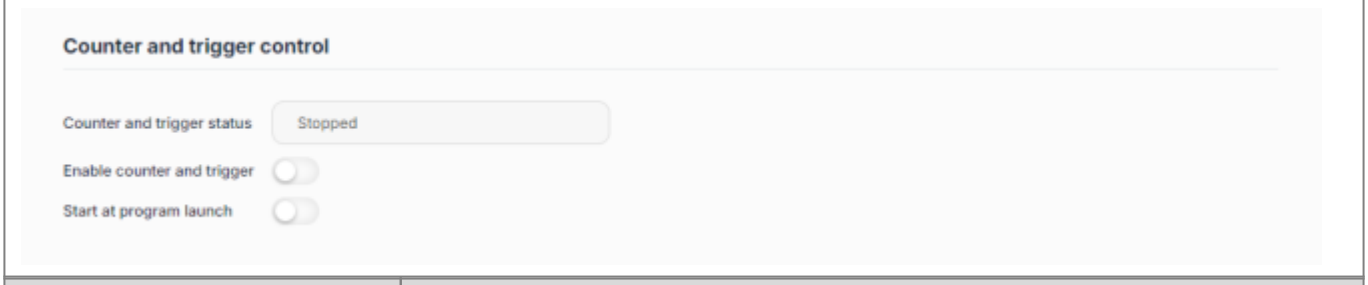


Table of Contents

6.1 Counters and Triggers

The Counters and Triggers function allows IO-Link process data signals to be monitored and used to increment or decrement software counters. Up to 8 triggers and 8 counters are available. The page is accessible via the **Counter/Trigger** entry in the side menu.

Engine Control



Control	Description
Counter and trigger status	Displays the current state: Running or Stopped
Enable counter and trigger	Toggle to start or stop the counter/trigger engine
Start at program launch	Toggle to start the engine automatically each time the application starts

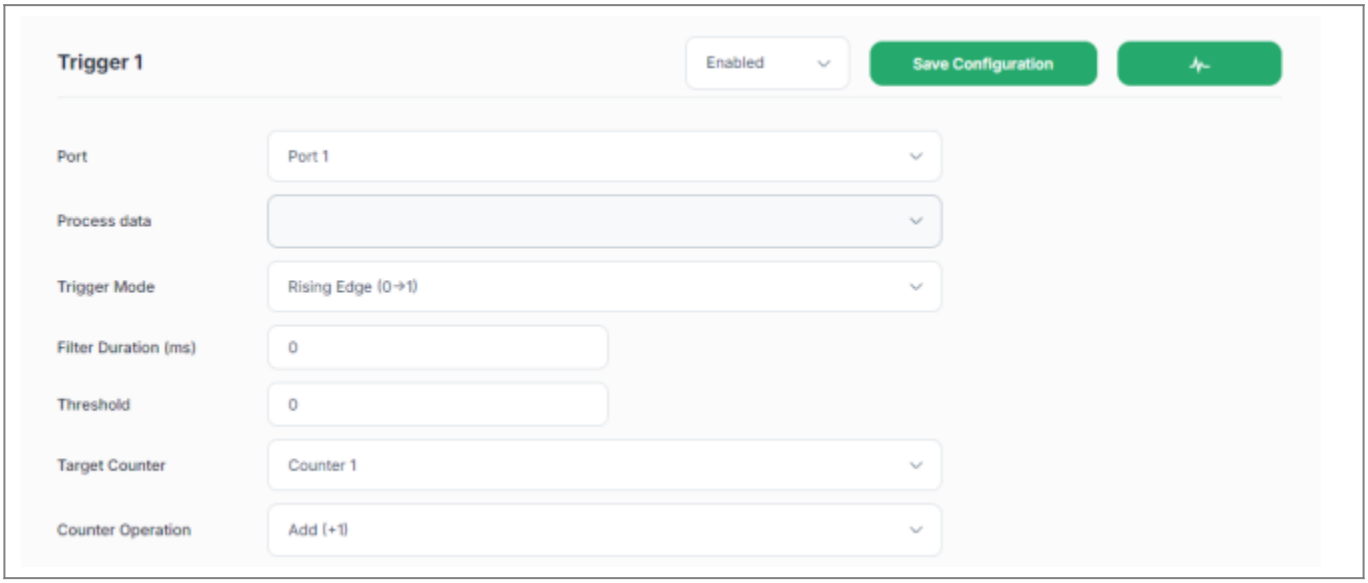
The engine must be running for triggers to evaluate and counters to accumulate. Autostart is saved persistently.

Counter Values

Eight counters (Counter 1..8) are displayed. For each counter:

Control	Description
Value	Current counter value (read-only, updates every second while engine is running)
Label	User-defined name for the counter for identification, enter label and click “Save”
Reset	Resets the counter value to 0

Trigger Configuration



Eight trigger slots (Trigger 1..8) are available. Each trigger section has:

Control	Action
Enabled / Disabled	Activates or deactivates this trigger without deleting its configuration. The state is saved persistently.
Save Configuration button	Saves all settings for this trigger to persistent storage
Scope button (waveform icon)	Opens the signal oscilloscope for this trigger's signal

Trigger parameters

Parameter	Description
Port	IO-Link port (Port 1..4) whose process data (PD) is monitored
Process Data	The specific process data variable to monitor (populated from the loaded IODD). The port needs to be correctly configured with a valid IODD. Process data is only captured when the port is powered.
Trigger Mode	The edge or threshold condition that fires the trigger (see table below)
Filter Duration (ms)	Minimum time the signal must satisfy the condition before triggering. Prevents counting noise or bounce. Range: 0..5000 ms
Threshold	Numeric threshold value for Threshold Above and Threshold Below modes
Target Counter	Which of the 8 counters this trigger increments or decrements. Multiple triggers can contribute to the same counter
Counter Operation	Add (+1) or Subtract (−1)

Trigger modes

Mode	Fires when
Rising Edge	Signal transitions from low to high over the threshold
Falling Edge	Signal transitions from high to low over the threshold
Both Edges	Signal transitions in either direction over the threshold

A trigger only increments/decrements its target counter when the engine is running, the trigger is enabled and the port is powered. Disabled triggers are ignored by the engine.