Introduction

The Redwave Labs Time Tagger Q420 is a single width PXIe module. It provides four count inputs and a fifth input for offset time tagging. The clock is locked to the 100MHz differential PXIe clock. The counts can be gated via the PXI trigger lines. Counts are returned over the PCIe bus to the main system memory and are accessible via an API.

Specification

Features	**Time Tagger Q420 provides timing resolution down to 31.25ps**	
Applications	**Photon Timing, QKD, Quantum computing, single-photon spectroscopy**	
Specifications	Parameter	Value
Power	Triple	+3.3V, +5V +12 V from PXIe
Time-tagger Inputs	Voltage Type	0.5-5V pulse
	Resolution	31.25ps
	Number	4 Continuous timing inputs and 1 synchronisation or offset input
Clock Sources	Differential	100MHz PXIe bus clock
Trigger Input	PXIe trigger	Trigger 0-7 or can be star configuration
	External synch	SMA positive pin. Max 5V 10GHz
Connectors	PCIe (XJ3 and XJ4)	8 lane gen 3 PCIe
	Clock	100MHz PXIe back plane clock
	Pulses	4x SMA 50Ω terminated
Dimensions (WxHxD)		160 x 100 x 33 mm
Weight		300 g
Storage Temp		-55 to 100 C
Operating Temp		-40 to 85 C

RedWave Labs Ltd keeps improving its products and therefore some specifications can vary.