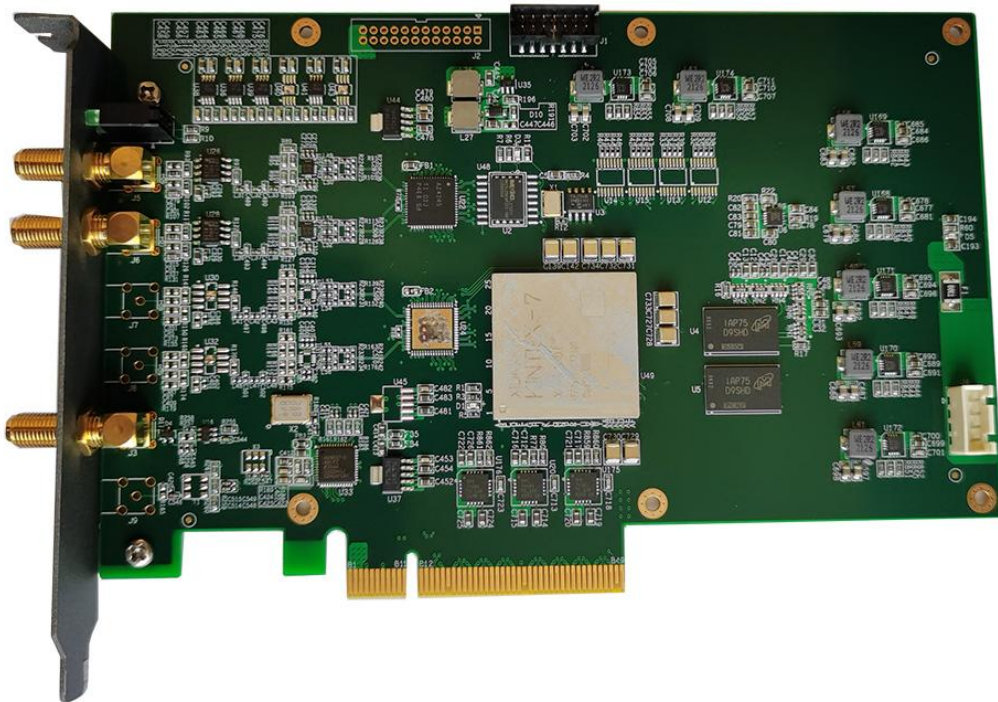


# 100MSps dual-channel high-speed acquisition fiber optic sensing and demodulation card

**P/N:YB-PCIe-6820**



## ❖ Specification

- 14bits dual-channel simultaneous real-time sampling
- 100MSps sampling rate
- DC coupling, 50  $\Omega$  input impedance
- 2Vpp input voltage range, 0-60MHz analog bandwidth
- Up to 88dBc SFDR
- Trigger output pulse, 16-channel digital IO
- PCI Express x8 Lane high-speed transfer interface
- 2GB DDR3 cache
- Built-in fiber optic sensing and demodulation algorithm

## ❖ Overview

This is a PCIe x8 Lane, dual channel, 14bits respectively rate fiber optic sensing demodulation card with 100MSps sampling rate. on board XC7K160T/325T high performance FPGA chip with rich multiplier and RAM resources, with exponential amplification, averaging, filtering, power statistics and other fiber optic sensing demodulation algorithms. By using high-capacity data cache and high-speed data transmission engine technology, it supports real-time upload of raw data with data transmission rate up to 1.2GB/s. The driver has good compatibility and supports multiple versions of WIN7, WIN8 and WIN10 with 32/64bits.

## ❖ Specifications

<b>Input Channel</b>		
Number of input channels	2	
Input Impedance	50±1%	Ω
Input Signal Range	2V <sub>p-p</sub> /10dBm	
Input coupling method	DC ( Customizable AC coupling )	
Resolution	14	bits
Bandwidth(-3dB)	0-60	MHz
Spurious-free dynamic range (SFDR)	-1dBFS Input/100MSps	
f <sub>N</sub> =26MHz	88.5	dBc
f <sub>N</sub> =42MHz	88.9	dBc
Signal-to-noise ratio (SNR)	-1dBFS Input/100MSps	
f <sub>N</sub> =26MHz	70	dBFS
f <sub>N</sub> =42MHz	72	dBFS
Average noise density	-140	dBm/Hz
<b>Internal reference clock</b>		
Frequency	10	MHz
Stability	±0.5 (-20-60°C)	ppm
<b>Trigger output</b>		
High level minimum voltage	3.3	V
Pulse width resolution	10	nS
Minimum pulse width	10	nS
<b>Digital input/output</b>		
Number of channels	16	
Leveling standards	3.3V LVTTTL	
Output drive capability	8 (MAX)	mA
Signal Rate	50 (MAX)	Mbps
<b>On-Board Cache</b>		
	2	GB (DDR3L)

## ❖ Power supply and consumption

- Power supply voltage: 12V (gold finger power supply)
- Power consumption: 18W (Max)

## ❖ Temperature range

- Working temperature: -20~60°C
- Storage temperature: -40~85°C

## ❖ Mechanical dimensions

181mm(L) x 111mm(W)x20mm(D)

## ❖ Ordering Guide

PN	Description
YB-PCIe-6820-2CH	2-channel input, 100MSps
YB-PCIe-6820-4CH	4-channel input, 100MSps