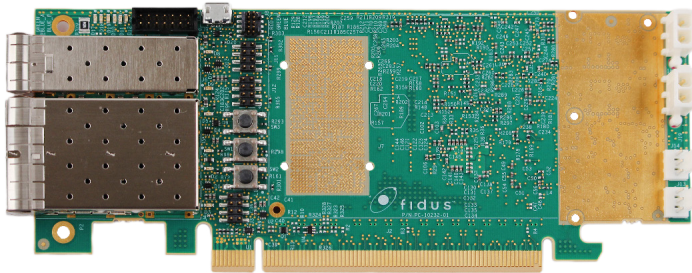# origami
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ORIGAMI CARRIER B21
application driven carrier board
combined with the B20 ORIGAMI module and with its 3 SFP cages, the B21 allows interfacing through PCIe, 12G-SDI, HDMI, 10GEth, in copper of fiber version

Application fields
- Advanced video
- 8K video streams
- 12G-SDI
- 10G-Ethernet

▶ Overview

The Origami B21 Carrier offers a flexible PCIe platform to experiment and deploy fast and efficiently high end video applications using the extreme power and connectivity of the Origami B20 Module.

With its **half-height half-length low profile** PCIe size, the B21 can easily be integrated into any PC based systems.

Featuring a PCIe GEN3 x8/x16 bus, the B21 can reach throughput supporting up to **8K-60p** uncompressed video streams simultaneously as input and output.

With its **3 SFP+ cages**, the B21 allows interfacing through **12G-SDI**, **HDMI**, **10 Gb Ethernet**, in copper or fiber version.

Coupled with the Origami B20 Module, the B21 is particularly convenient for **advanced video applications**. It is capable of handling multiple video codecs, interfacing and processing video streams up to 8K UHD-2 in uncompressed & TICO and up to 4K UHD-1 in uncompressed, TICO, JPEG 2000, HEVC IP, AVC and MPEG 2.

▶ Reference Designs & Development Kits

A set of development kits are available (under license) to help you develop your own carrier board:

Hardware Development Kit (HDK)
- Interposer schematics, PCB layout
- Interposer reference design and pinout
- Reference design, Bill of Materials

Software Development Kit (SDK)
- API

Firmware Development Kit (FDK)
- Pre-validated IP-cores and pre-build firmwares
- Tool to develop firmwares in HLS

▶ Features

Interfaces	3x SFP+ Cages - MSA and Embrionix compliant
	PCIe Gen3 up to x16
	Interposer connector Z2-50 for 1x2 units or 2x1 unit Origami Module(s)
	• 6x Gigabit Transceivers toward the 3 SFP Cages
	• 16x Gigabit Transceivers toward the PCIe bus
	• JTAG
	• HPIO / HRIO
	• I²C & ISP control bus
	• 12V & 3,3V Power lines
	USB and JTAG connectors for module programming
	Reset buttons and LEDs for debug
Clock	2x Clock Generators AD9578
	1x Clock Generator CDCM6208
Dimension	Low Profile - Half length - PCIe card
	68.90 x 167.65 mm

▶ Hardware Diagram
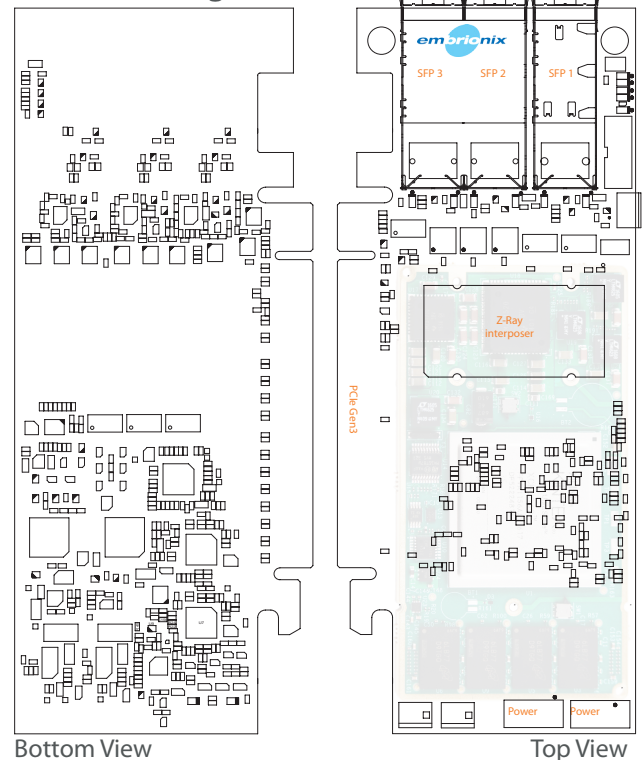

Bottom View | Top View

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Part Number:
OC-B21-Z2-PC16-SFP3