fb2CGhh@KU15P FPGA Card

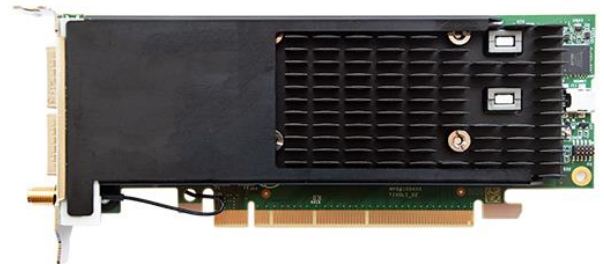**Dual QSFP28 port card supporting 2x100GE, PCIe Gen3 x16, Xilinx® Kintex UltraScale+**

Product Description

The Silicom fbC2CGhh@KU15P Dual FPGA Card offers network connectivity and capture to host memory with zero packet loss and with hardware packet processing. The 2xQSFP28 slots allow link speed support for 2x100GE/40GE/25GE, 8x10GE and 8x25GE. The fbC2CGghh@KU15P FPGA card is based on cutting edge Xilinx FPGA technology in the Kintex UltraScale+ series, providing packet filtering, advanced processing, traffic management, load balancing and host offloading mechanisms.

Key Features

- Xilinx® Kintex UltraScale+ XCKU15P FPGA

- 2 x QSFP28 ports

- 2 x 72-bit DDR4@2666MT/s (4 GB per bank with ECC)

- Configuration flash RAM for boot images

- PCIe form-factor: Half height, half length (68.9 x 167.65 mm with bracket)

- On-board power and temperature sensors

- FPGA controlled link and status LEDs

- Passive cooling solution

Technical Specifications

General Technical Specifications	
Host Interface	IEEE 802.3 10GE, 40GE, 25GE, 100GE
Interfaces	- Physical interface: 2 x QSFP28 slots - Supported QSFP+/QSFP28 modules: including fan-out modules for 4x10G/4x25GE, Multimode SR4 (850nm), singlemode LR4 (1310nm), multimode LRM4 (1310 nm), or Direct Attached Copper (Twinax) and others. - Data rate: 8×10, 2×40, 8×25, 2×100 Gbps - Support for SyncE

PCI bus	• 16 lanes PCIe Gen3 • PCIe compliant • Support for SMBUS
Configurations	• Quad SPI fast parallel programming interface from supporting preprogrammed controller • Configuration flash supports two boot images with automatic fallback to fail safe image if first image fails • Upload of FPGA configuration to flash via PCIe or directly from Xilinx Vivado via the onboard JTAG dongle • Direct FPGA configuration from Xilinx via the onboard JTAG dongle • Supports Tandem PROM boot
On Board Memory	• 2 x 72-bit DDR4@2666MT/s (4 GB per bank with ECC) • User configurable space in flash RAM for permanent storage • Configuration flash RAM for boot images
On Board Clock	• PCIe clock: 100 MHz • 2 x differential 161.13 MHz SerDes clock for Ethernet • 2 x differential 266.67 MHz clock for Memory • 50 MHz clock
FPGA Details	• FPGA Xilinx® Kintex Ultrascale+ XCKU15P
Environment	• ½ height, ½ length 68.90 x 167.65 mm with bracket • Storage temperature: -30 – 70°C , -22 – 158°F • Operating temperature: 0 – 55°C, 30 – 130°F • Operating humidity: 20 – 80% • Hardware compliance: RoHS, CE
Additional Board Support	• On-board power and temperature sensors • FPGA controlled Link and Activity LED for each port. 4 for each QSFP. • Board status LEDs • Failsafe button on bracket • PPS clock synchronization connector (optional, see ordering information)
Power	• Max 75W • Passive cooling solution • Power, temperature and FAN tacho sensor reading
On_Board Microcontroller	• Board management Microcontroller for various internal control tasks as well as external communication • SMbus/I2c • Possible to readout telemetry parameters

Silicom Ltd. Connectivity Solutions

Order Information

P/N	Description
fb2CGhh@KU15P-2	½ height mounted, full height spare, PPS
fb2CGhh@KU15P-2-0-H	½ height bracket mounted, full height spare, PPS
fb2CGhh@KU15P-2-0-F	Full height bracket mounted, ½ height spare, PPS
fb2CGhh@KU15P-2-N-H	½ height bracket mounted, full height spare, No PPS
fb2CGhh@KU15P-2-N-F	Full height bracket mounted, ½height spare, No PPS

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