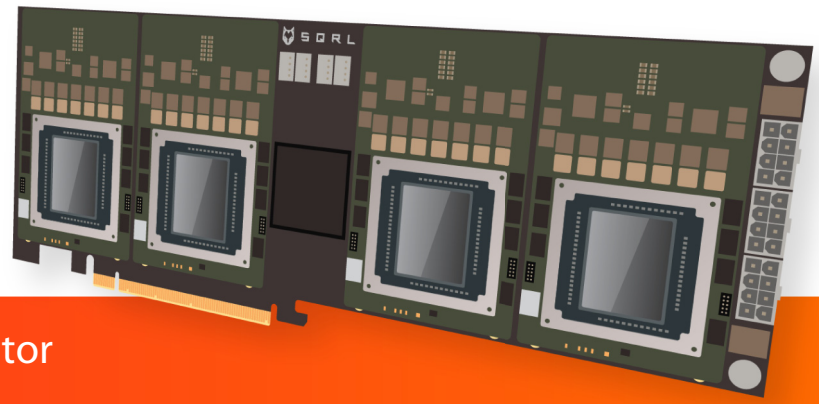




SQRL

JUNGLE CAT



- Modular HBM FPGA Mining Accelerator
- 2.4TB/s memory bandwidth

High-Density Quad-VU33/35P Modular PCI Board

Cutting-Edge Performance for Cryptocurrency Mining

The Squirrels Research Labs Jungle Cat line of modular FPGA accelerators provides top-tier performance in a high-density package. Up to four independent modules (JCMs) can be deployed per full-length PCIe carrier board, each hosting 250W of independent power delivery and a customized Xilinx VU33P or VU35P FPGA. With 8GB of HBM2 memory running up to 610 GB/s, as well as an optional 8GB DDR4 bank, Jungle Cat can handle the most demanding cryptocurrency mining algorithms.

In addition to the cutting edge JCM capabilities, the Jungle Cat carrier board supports several options for high-speed interconnect. The PCIe edge-interface can be configured for PCIe 4.0 x4x4x4x4 bifurcation directly to each module or full speed PCIe 3.0x16 to all four JCMs through a full-speed PCIe switch fabric. In addition to host communication, each Jungle Cat module is interconnected to its neighbors with a 16 Lane x 32 Gbps chip-to-chip interconnect. This high-speed ring provides over 512 Gbps of bandwidth between JCMs.




Xilinx VU35P with Dual-stack HBM2

Full Developer Support

- ✓ Xilinx Vivado Design Suite assistance program available
- ✓ Full board constraint packages and sample projects
- ✓ SQRL Certified Bitstreams and Miner SDK

Key Features

2480 GB/s

High Bandwidth Memory + DDR4

Up to 64 GB

32GB HBM2 and Optional 32GB DDR4

7.6M

Logic Cells

Leading-Edge Performance Per Watt

Jungle Cat represents the leading edge of performance in multi-purpose cryptocurrency mining hardware. Marrying the power efficiency and raw throughput of FPGA and HBM technologies with the development expertise of Squirrels Research Labs means a board with superior performance per watt.

Proven Technology

Xilinx FPGAs are industry proven. Certified for continuous, years-long operation in temperatures up to 100° C and tested for use in environments as harsh as space, Xilinx chips are up to the task of demanding cryptocurrency mining data center environments.

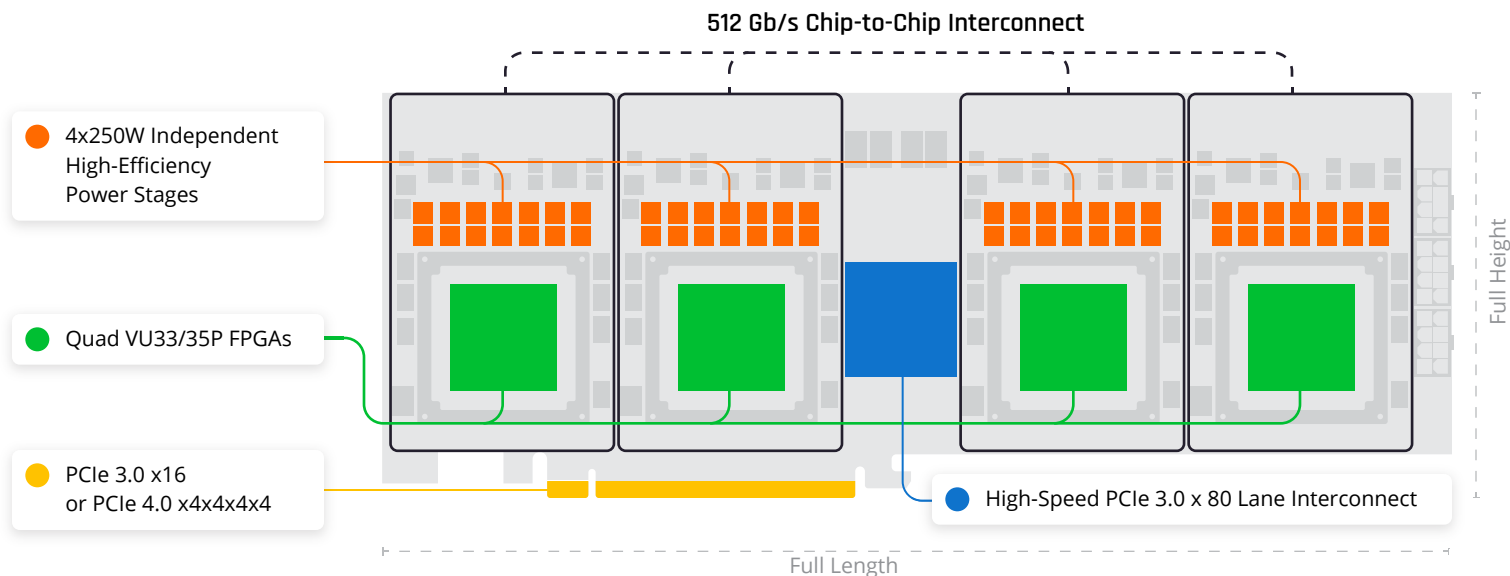
Long Operating Life

The incredible power to performance ratio of 16nm FPGA technology and HBM2, coupled with complete re-programmability means your SQRL FPGA boards will continue to run for years, outliving GPUs and ASICs. Xilinx FPGAs have a proven track record of profitability spanning many years.

SQRL Market Support

Squirrels Research Labs stands by all of its products. With a 12-month manufacturer's warranty, and the backing of SQRL development staff, you don't have to worry about the risk of hardware going down or missing out on the opportunity to mine new coins or algorithms.

JUNGLE CAT



Jungle Cat Module Specifications

FPGA	<ul style="list-style-type: none"> • Virtex Ultrascale+ VU33P or VU35P • 16x Module to Module GTY Transceivers at 32.75 Gb/s • 1.9M Logic Elements • 250 Mb of Embedded Memory • PCIe 3.0 x16 / 4.0 x8 • 5952 Dedicated DSPs
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HBM	<ul style="list-style-type: none"> • 8GB On-Die HBM2 (4GB x 2) • 2048 bit Memory Bus (32x64) @ 2400 MT/s • 610 GB/s Total Bandwidth
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DDR4 (Optional)	<ul style="list-style-type: none"> • 8GB On-Module DDR4 • 64 bit Memory Bus @ 2666 MT/s • 20.8 GB/s Available Bandwidth
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Configuration	<ul style="list-style-type: none"> • 1 Gbit On-Module Bitstream Flash • FPGA JTAG Interface to Carrier
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Power Delivery	<ul style="list-style-type: none"> • 12V+5V Dedicated Module Power Pins • 250W TDP • 240A (Configurable up to 490A) VCCINT • Fully Programmable Infineon PMBUS Power
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Controllers Management and Indicators	<ul style="list-style-type: none"> • Dedicated external 200 Mhz System Clock • Voltage, Current and Temperature Monitoring • PMBus and I2C Access • Power Stage Status LEDs • 4 GPIO LEDs • 1 User-Programmable RGB LED
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Physical	<ul style="list-style-type: none"> • 2.4" x 3.8" (61mm x 96.5mm) • 7mm Mating Depth • 400-Pin High-Speed Carrier Interface
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JCC4P Quad-Module Carrier Specifications

Module Support	<ul style="list-style-type: none"> • Up to 4 JCM33 or JCM35 Modules • Forward Compatible With Future SQRL JCMs • Fully Upgradable
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Interconnect	<ul style="list-style-type: none"> • 16 x 32Gb/s High-Speed Ring • PCIe 4.0 x4x4x4x4 Bifurcate Edge Connectivity • Optional PCIe 3.0 x80 (x16 edge + 4x16 JCMs) Switch Fabric
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Power Delivery	<ul style="list-style-type: none"> • x3 8-Pin 12v PCIe Power Connectors • Up to 900W with 16 AWG Cables and Approved Power Supplies • Up to 450W with 18 AWG Cables or Standard ATX Power Supplies
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Cooling	<ul style="list-style-type: none"> • Full-Cover Liquid Cooling or Immersion Recommended • Dual-Slot Passive (High-Pressure Server-Grade) Air Cooling Available • Quad-Slot (70mm) Open Air Cooling Available
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Physical	<ul style="list-style-type: none"> • PCIe Full-Height Full-Length Single-Slot (Without Cooling) Board • 311.83mm x 111.15mm • Up to 70mm (Quad-Slot) Depending on Cooling Configuration
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To learn more, visit squirrelsresearch.com

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