

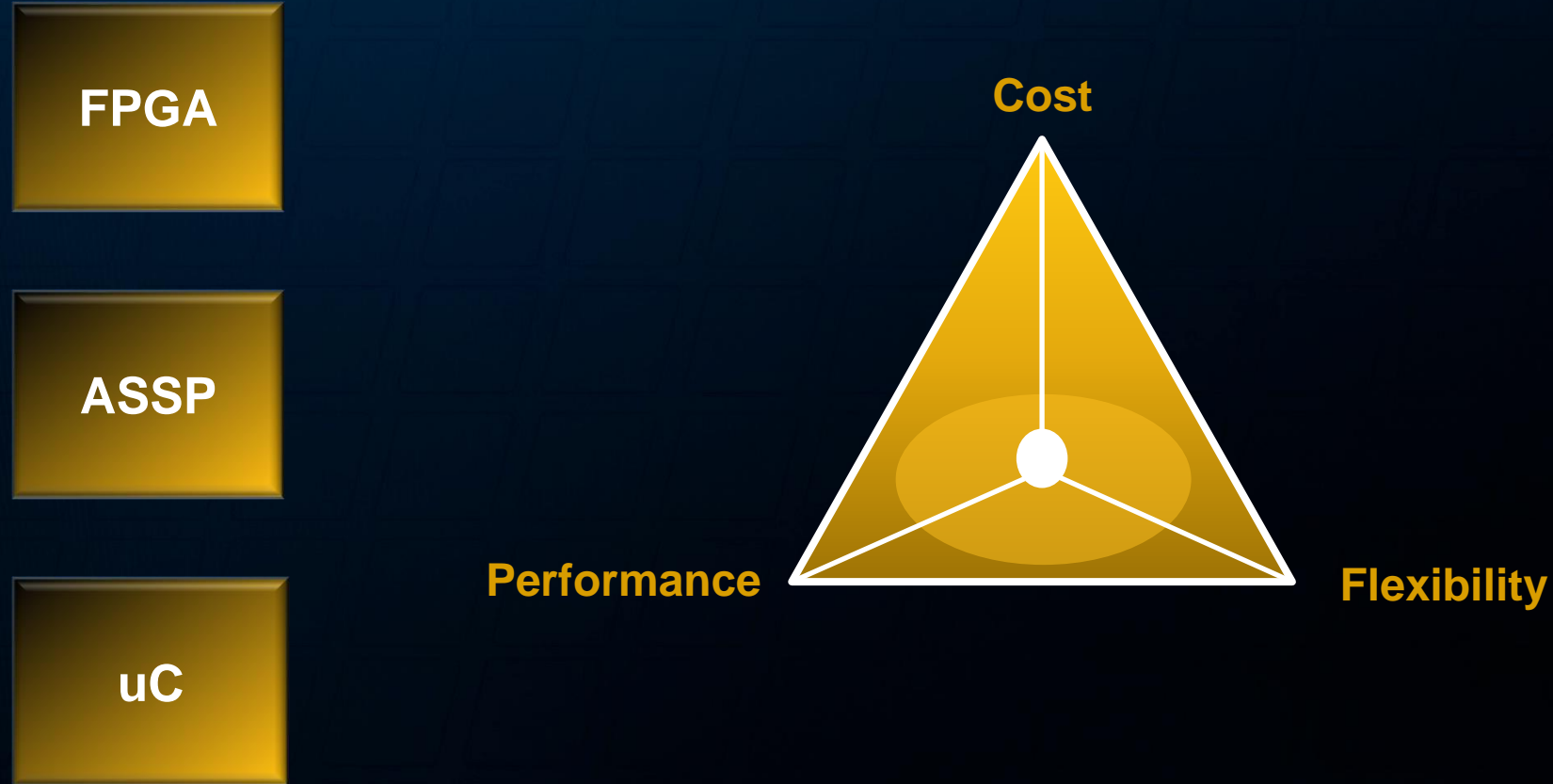


The Low Power Programmable Leader

FPGA vs ASSP vs Micro Controller

FPGA positioning vs Other Technologies

Flexibility vs Cost vs Performance

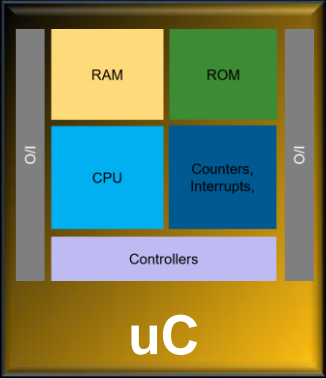
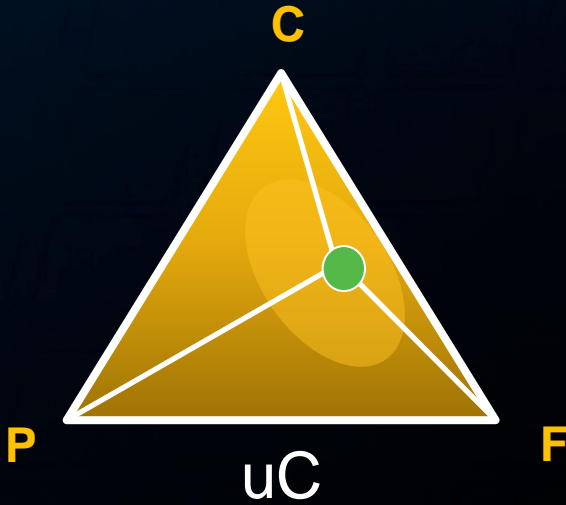
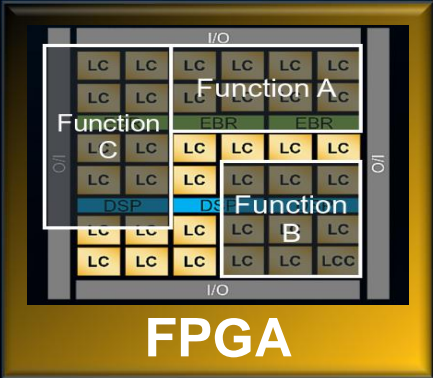
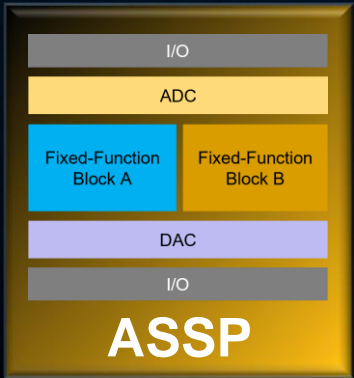


FPGA position vs Other Technologies

Flexibility vs Cost vs Performance



* Only for high volumes



Why Choose FPGA?

- Adapt to different applications without hardware changes.
- Reconfigure on-the-fly to future-proof systems.
- Integrate processing, control, and communication interface on one chip, reducing components.
- Deliver high-speed, low-latency, and high-throughput performance.
- Enable parallel execution for real-time data processing and AI tasks.
- Extend product lifecycles (10-20 years lifetime expectancy).
- Reduce costs with long-term reconfigurability, Integration and scalable design.



Why Choose FPGA?

Flexibility & Reconfigurability

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- Integrate processing, control, and communication interface on one chip, reducing components.

Performance & Parallel Processing

- Deliver high-speed, low-latency, and high-throughput performance.
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Cost Efficiency & Extended Lifecycle

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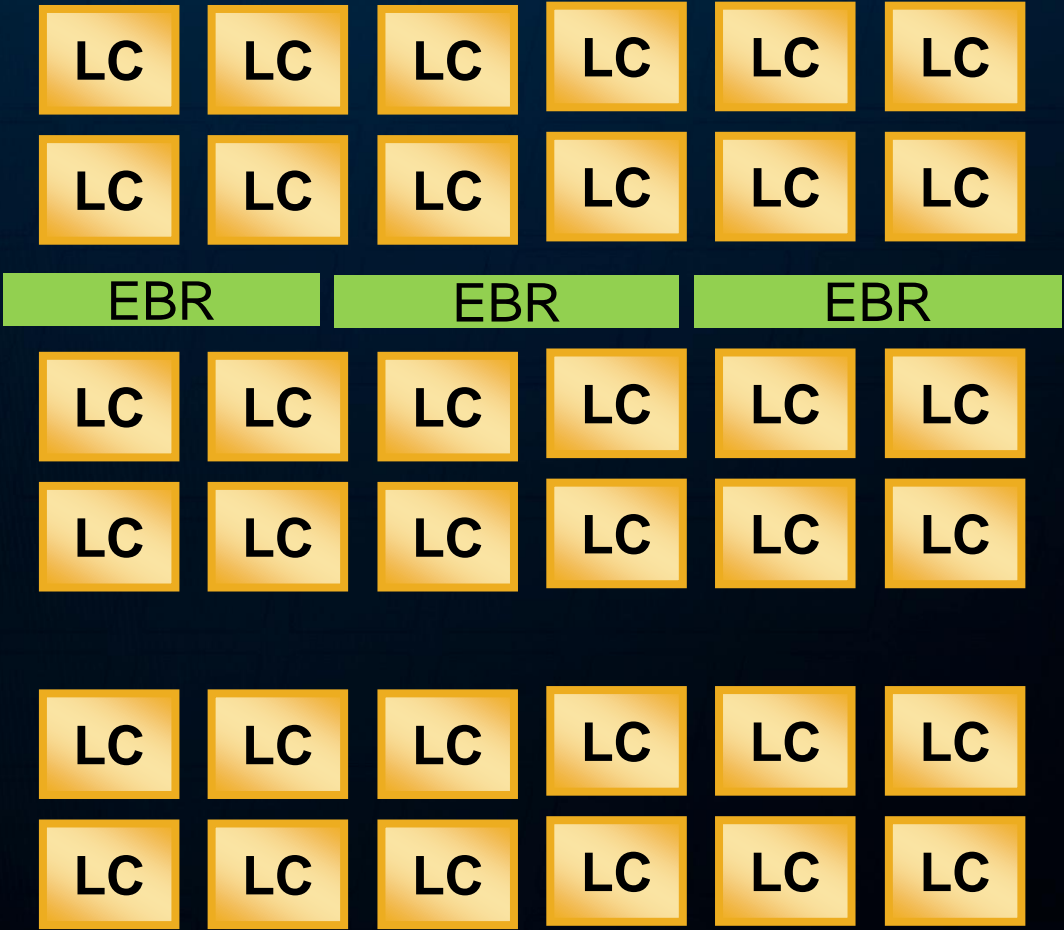
FPGA Architecture Blocks (Nexus)



Logic Cell (LC)

Basic logic unit to implement logic function

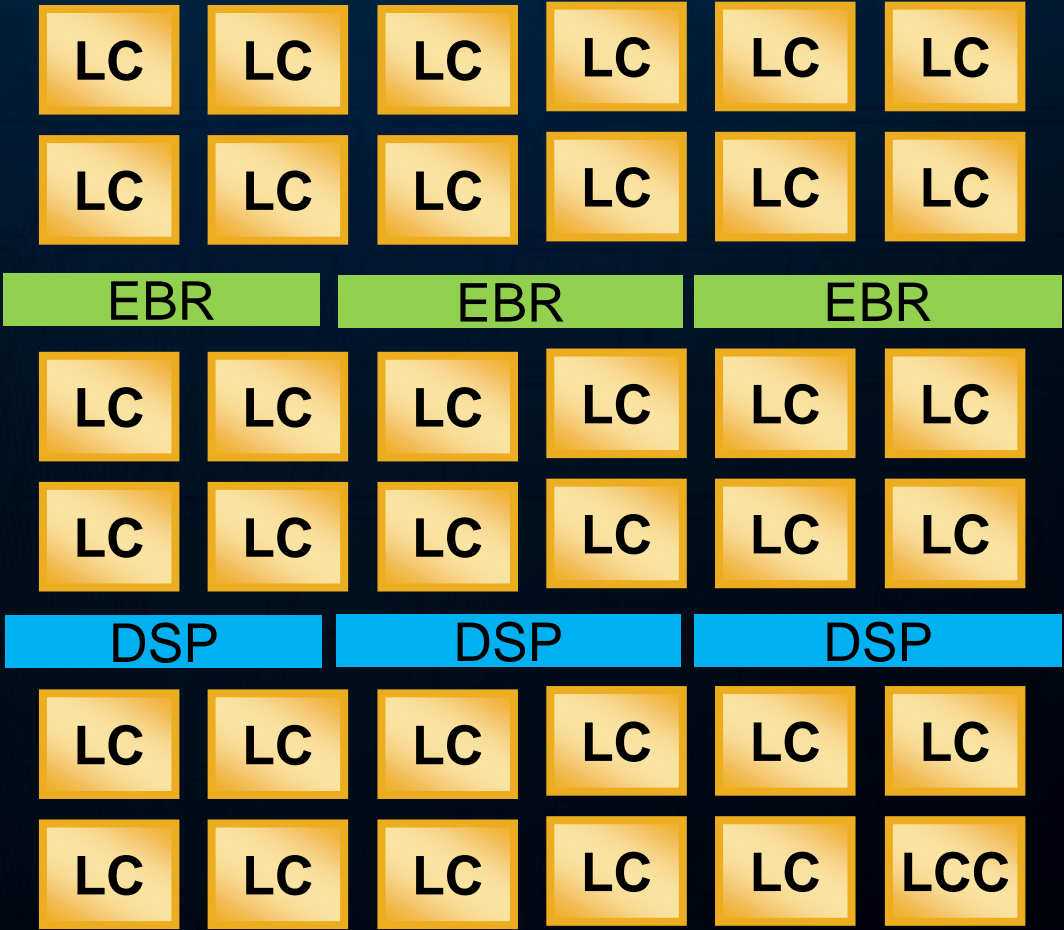
FPGA Architecture Blocks (Nexus)



Embedded Block of RAM

EBR Memory

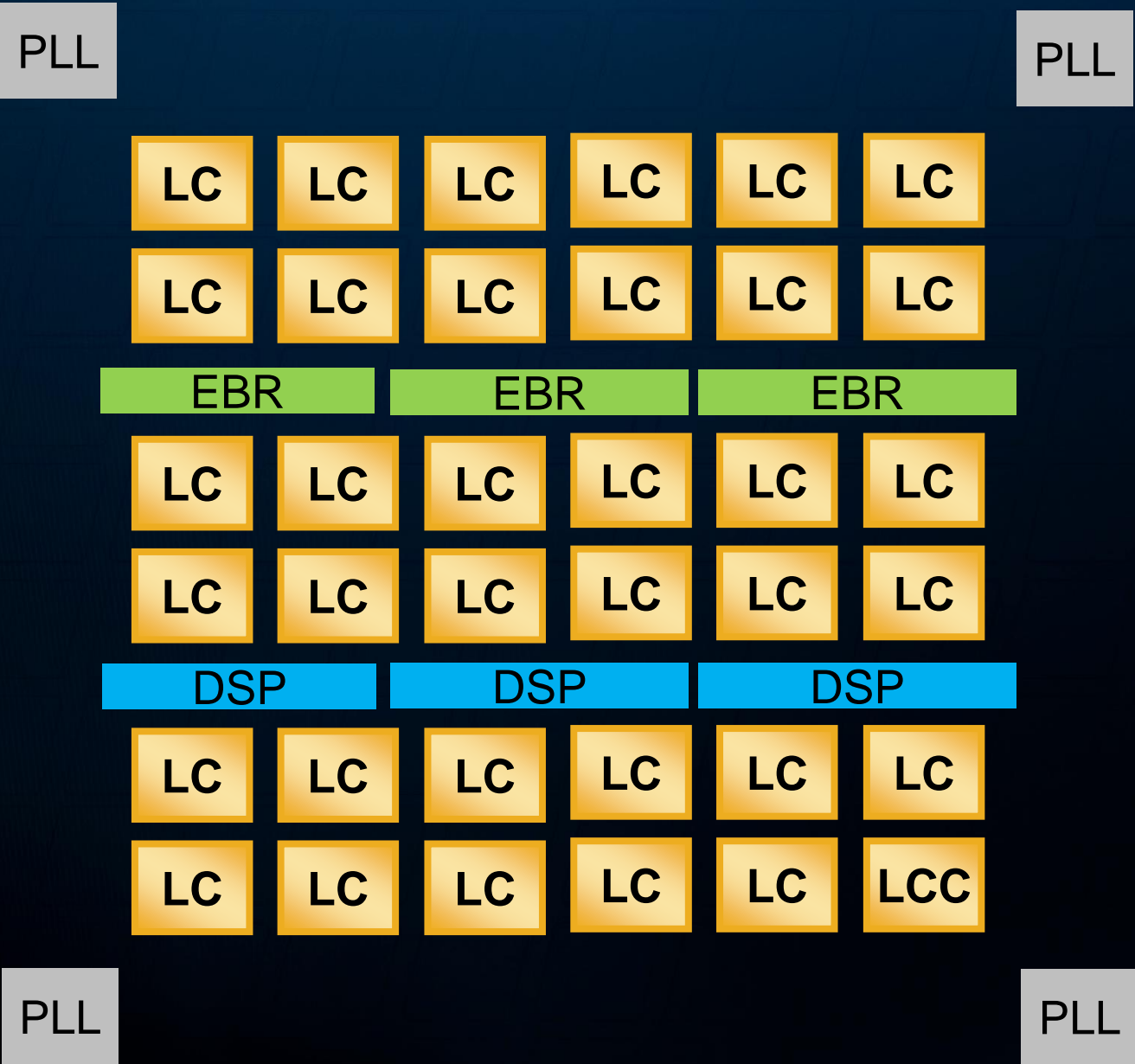
FPGA Architecture Blocks (Nexus)



Digital Signal Processing unit

DSP used for Filters, AI algorithm and image processing etc.

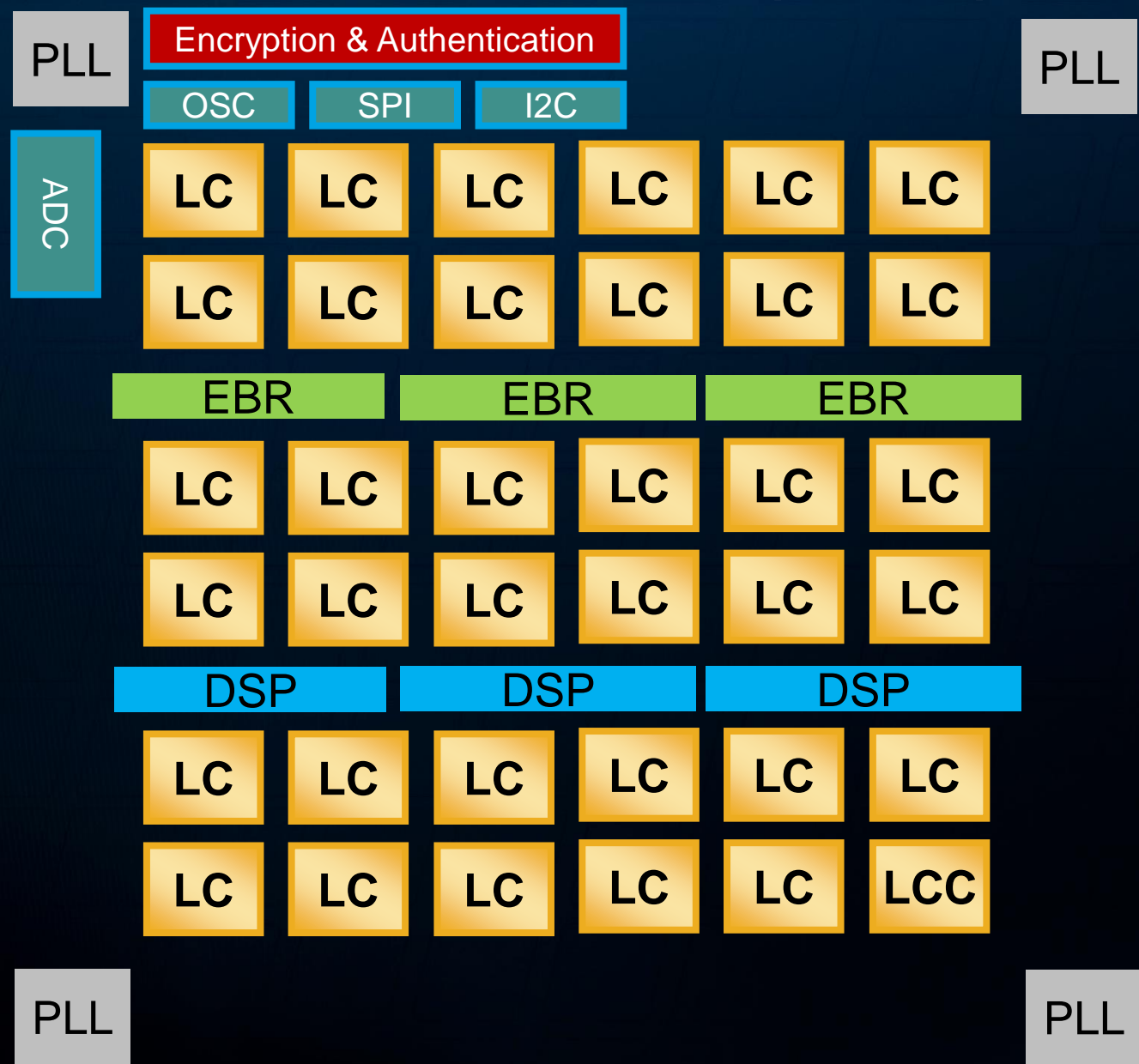
FPGA Architecture Blocks (Nexus)



Phase Lock Loop

PLL are used to generate different clocks for a design

FPGA Architecture Blocks (Nexus)



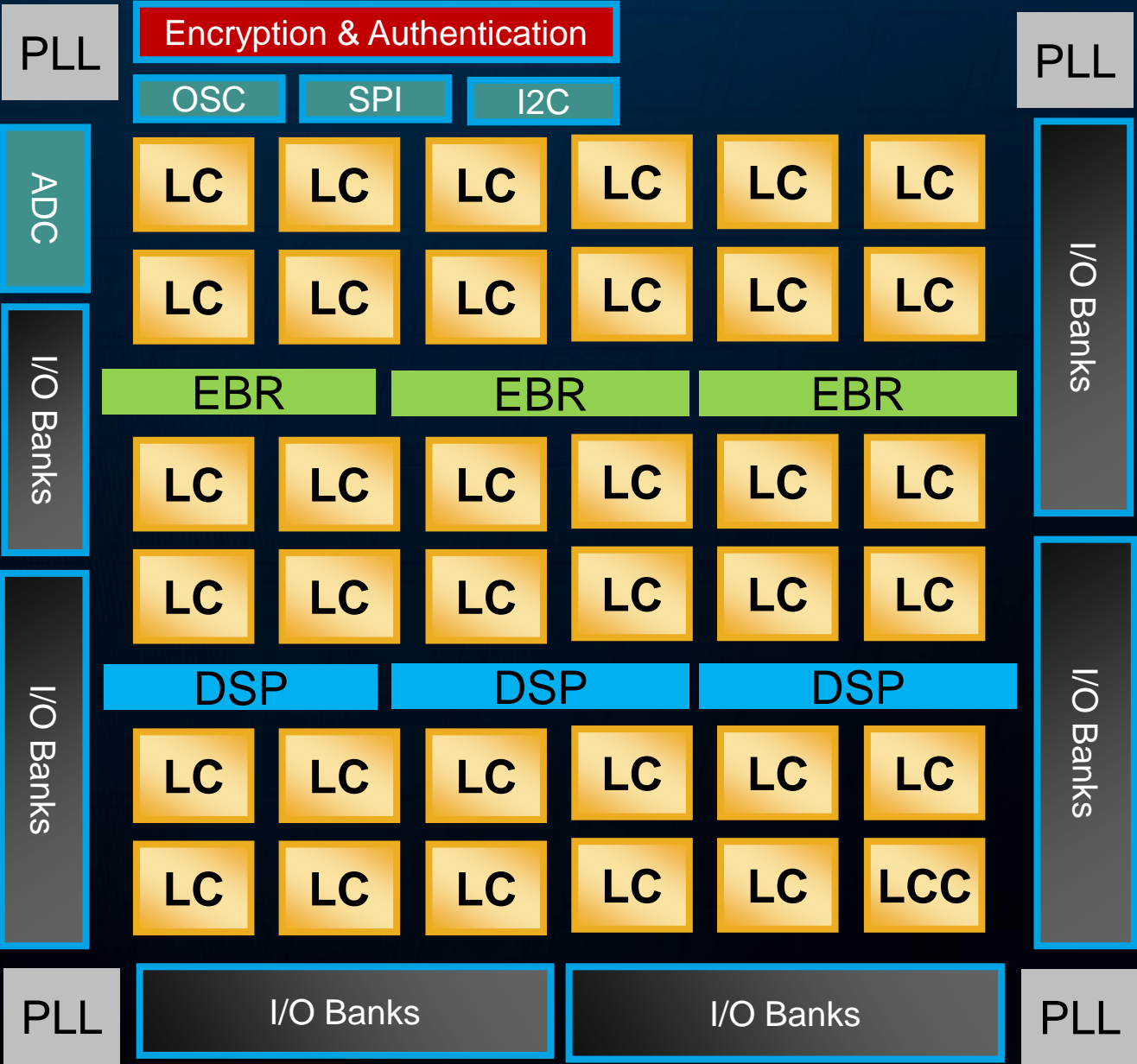
Hard IP :

ADC, SPI, I2C, OSC for configuration and user mode

Security Block:

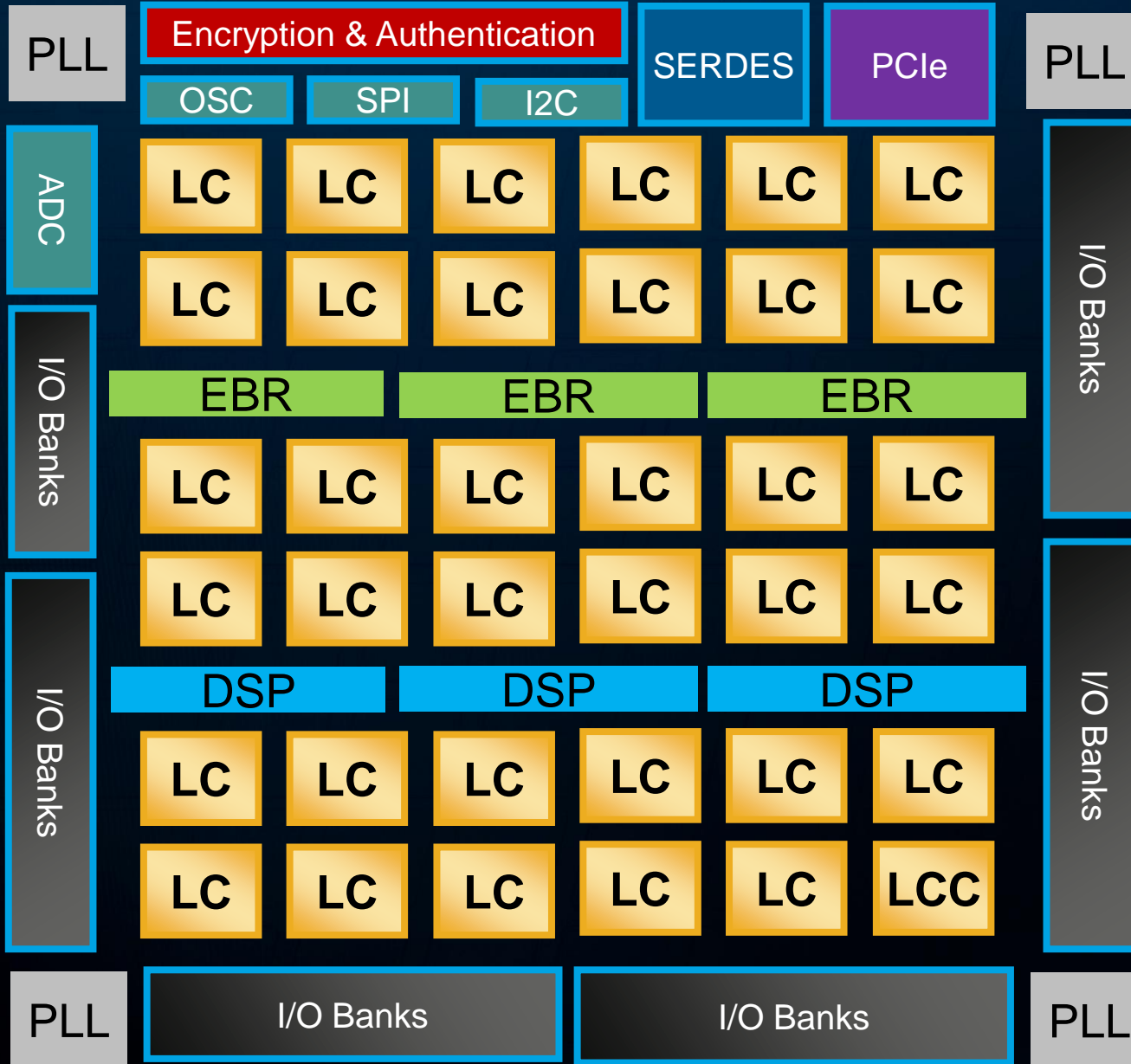
Bitstream encryption and authentication.

FPGA Architecture Blocks (Nexus)



I/Os Banks to interface with other components on the board

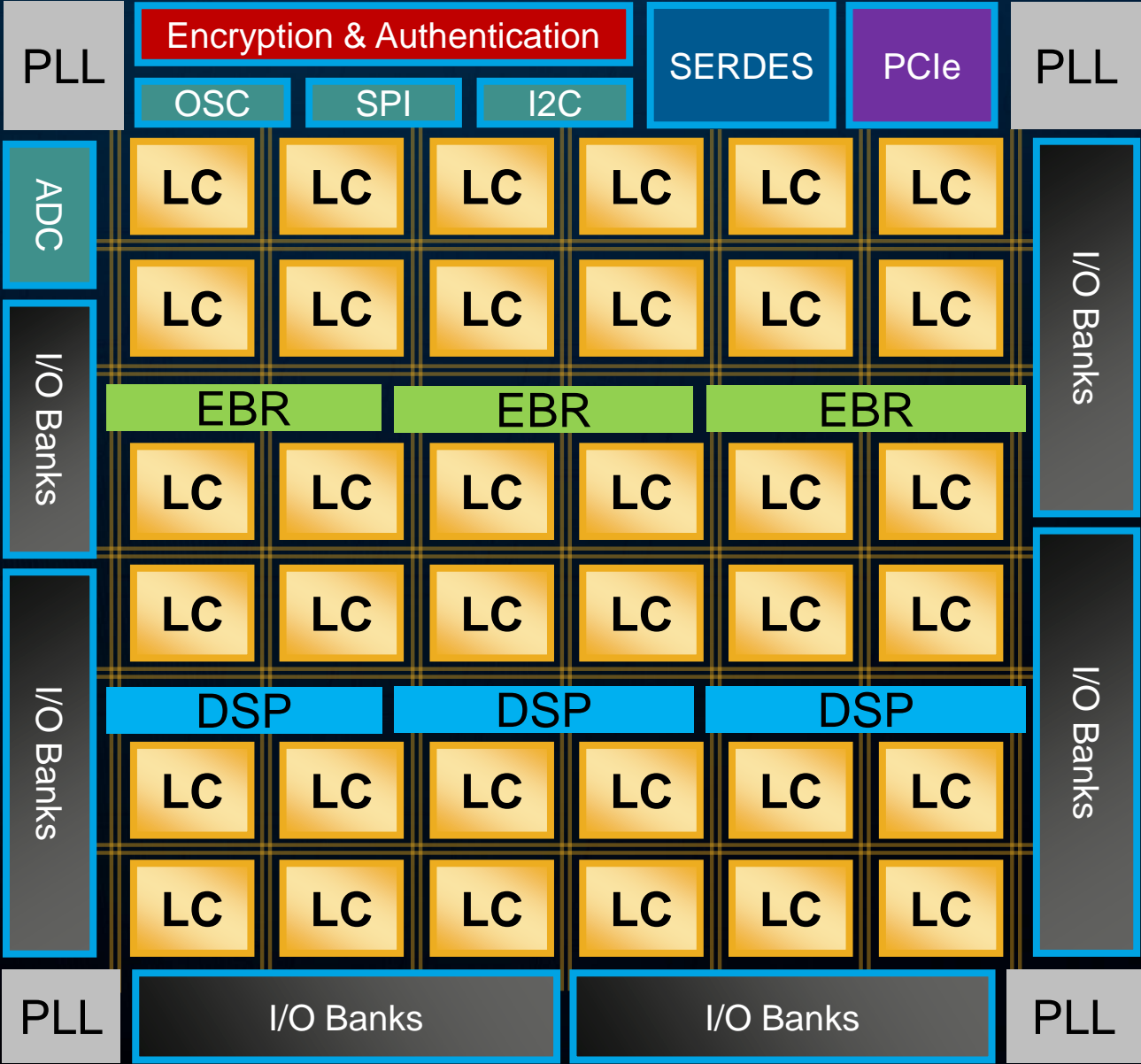
FPGA Architecture Blocks (Nexus)



High Speed SERDES

Implement protocols like:
PCIe, DP, Ethernet, ...

FPGA Architecture Blocks (Nexus)



Routing/Interconnect



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