



The Low Power Programmable Leader

# FPGA Opportunities: How to Ask the Right Questions

# Where to Start?



# Understanding the Customer's Needs

What are the main customer challenges in terms of hardware design or system performance?

- Power consumption and thermal management
- Latency and real-time processing
- Scalability and integration complexity
- Data bandwidth and memory bottlenecks
- Miniaturization and PCB space constraints
- Cost constraints and component sourcing
- Device or supply chain security concerns • Test



Any of these pain points may represent an opportunity to offer a better solution for the customer

## ■ Are you using an FPGA?

### ■ Yes:

- What brand or FPGA family do you use ?
- Any idea of the size or part number ?
- What problem does it solve?
- Are there any special interfaces you require?



### ■ No: What are the main component on the board?

- CPU, Microcontroller, DSP, ASSP
- Possibility of FPGAs to complement or consolidate existing device?



## Any Limitation with the current solution ?

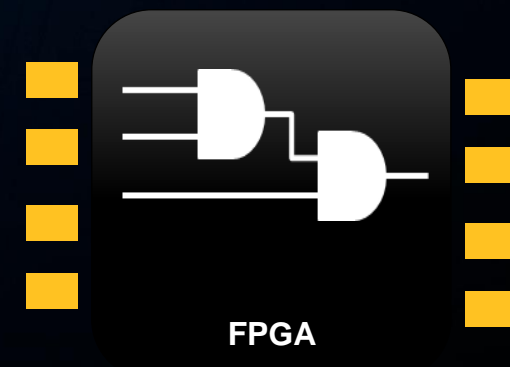
- How important is low power?
  - How important is space saving on the board?
  - How important is: High reliability?
  - What function require “Instant-On”?
  - Have you considered security aspect?
- 
- Limited number of I/Os: I/O expansion opportunity
  - Performance limitation: Co-processing opportunity
  - Space constraint : Consolidation of some ICs/functions
  - Power budget: Reduce static or dynamic power





### 3 Exploring FPGA Potential

- Do you use video interfaces
  - MIPI, CSI-2, DSI, HDMI, DP, eDP, ...?
- Do you require highspeed serial interface ?
  - USB3.0, 1/10G/25G Ethernet, PCIe Gen 1/2/3/4
- Any special interfaces or function required?
- Do you require digital signal processing ?
  - Implement digital filters or image processing (FIR, FFT,ISP...)?
- FPGA sizing questions
  - How many I/Os do you need?
  - Do you have an estimate for the logic size?
  - What package size or technology node do you prefer ?
  - What is your target power consumption ?



## Highlight the Lattice Advantages

Identify point of interest and highlight Lattice advantages!

- Lattice is the low power leader with up to 75% lower than competition
- Lattice provides end-to-end FPGA security solutions
- Lattice offer up to 10x smaller packages than competition.
- Lattice offer “Instant-On” devices ideal for control and security
- Nexus family offer up to 100x better reliability (SEU)
- For the same class of devices Lattice offer up to 2x higher SERDES & memory performance



- Power budget: Reduce static or dynamic power (always on function)
- Limited number of I/Os: I/O expansion opportunity
- Space constraint : Consolidation of some ICs/functions
- Performance limitation: Co-processing opportunity
- Security enhancement : PFR or RoT requirements



## Sizing the Opportunity & Lock Next Steps

- **Summarize key points and benefits discussed**
  - Potential FPGA opportunity
  - Project timeline
  - Potential volume
  - Decision making person & date
- **Suggest actionable steps based on the conversation, tailored to customer's needs.**
  - Deep technical follow up meeting
  - Propose supporting resources (FAE, Management, C Level involvement)
  - Plan a hardware or software demo
  - Offer evaluation boards to get started
  - Get Lattice team involved





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