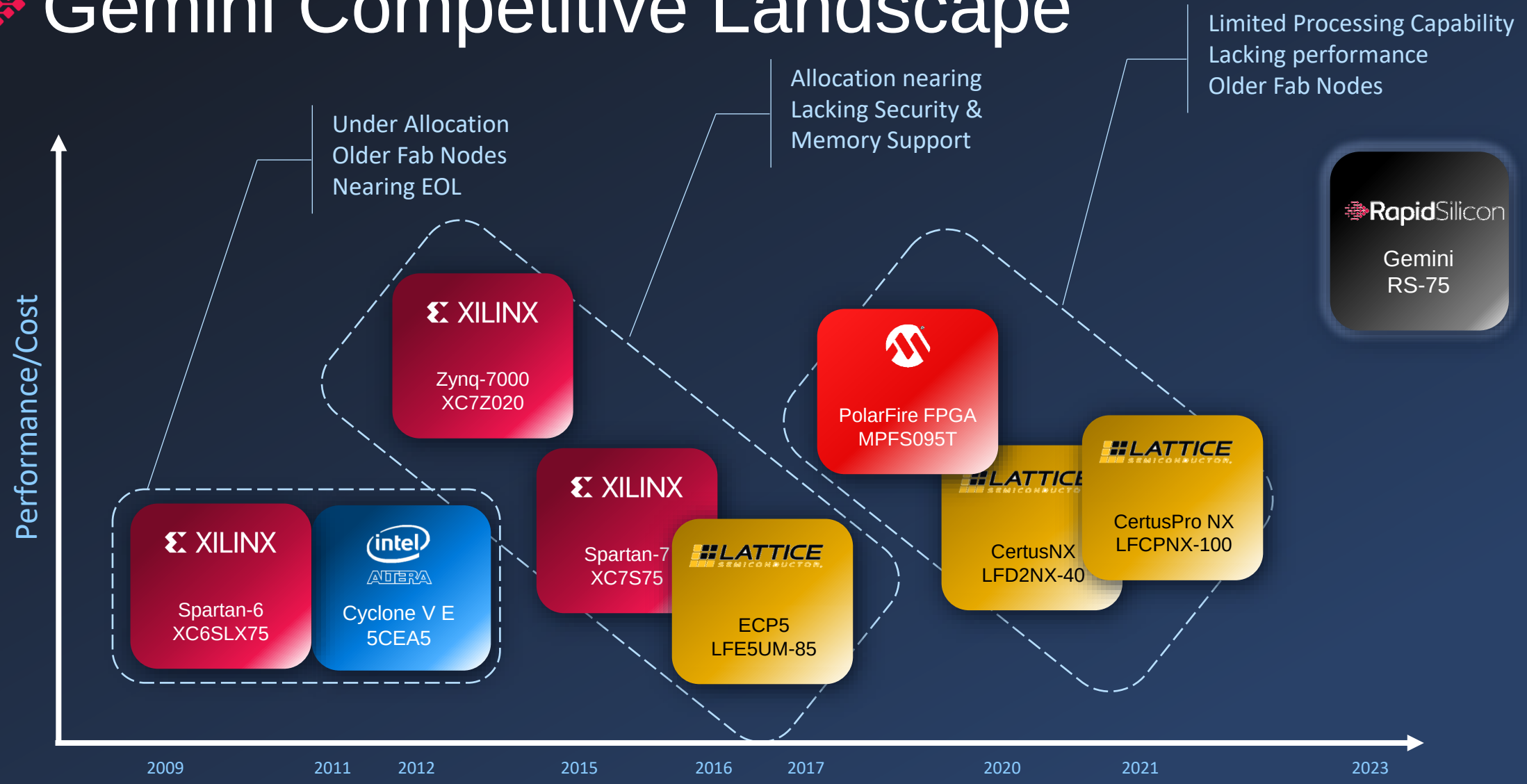
RapidSilicon

Competitive Landscape

GEMINI

Gemini Competitive Landscape



Gemini Family - FPGA Competitive Landscape

	Rapid Silicon	AMD (Xilinx)		Intel (Altera)	Lattice		Microsemi	Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**Trion**
Introduction Date	2023	2009	2015	2011	2020	2021	2012	2018
Tech Node (nm)	16	45	28	TSMC 28LP	28	28	65	SMIC 40LL
LUT Structure	LUT-6	LUT-6	LUT-6	ALM-8	LUT-4	LUT-4	LUT-4	LUT-4 + Adder
Embedded Memory	256KB OCM + 36Kb BRAM	18Kb BRAM	36Kb BRAM	10Kb M10K 640b MLAB	18Kb EBR 512KB LRAM	18Kb EBR 512KB LRAM	18Kb LSRAM 1Kb uSRAM 32KB eSRAM	5Kb SRAM
Signal Processing								
Processor Core (Soft)								
Processor Core (Hard)								
Hard NOC								
Logic Fabric Speed (MHz)								
DDR SDRAM Support								
DDR SDRAM Performance								
Transceivers								
Max. I/O Count								

Gemini Family - SoC Competitive Landscape

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)		Lattice	Microsemi	
Product	**Gemini**	**Zynq 7000S**	**Zynq-7000**	**Zynq-7000**	**Arria V (SX)**	**Cyclone-V (SX)**		**SmartFusion 2**	**PolarFire SoC**
Introduction Date	2023	2018	2011	2011	2013	2012		2012	(TBF)
Part	**RS-75**	Z-7014S	Z-7015	Z-7020		**5CSXC4**		**M2S090**	**MPFS095T**
Logic Elements (k)	76	65	74	85		40		86	93
Tech Node (nm)									
Processor Core (Hard)									
Hard NOC									
Logic Fabric Speed (MHz)									
DDR SDRAM Support									
DDR SDRAM Performance									
Transceivers									
Max. I/O Count									

Gemini – Resource Comparison @ 50K LE

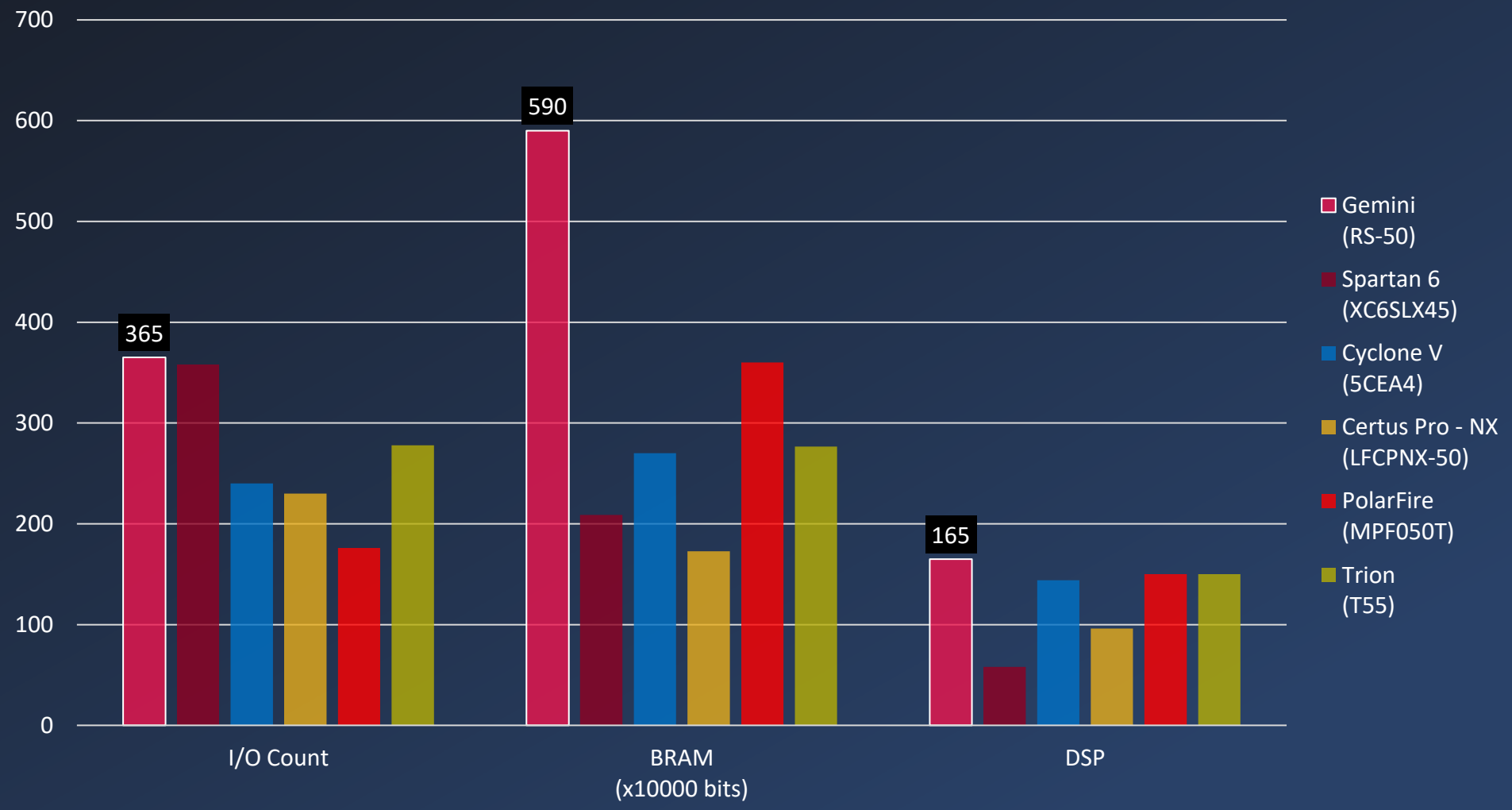
	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi			Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**		**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2011	2020	2021	2012	2012	2017	2018
Part	**RS-50**	**XC6SLX45**	**XC7S50**	**XC7Z014S**	**5CEA4**	**LFD2NX-40**	**LFCPNX-50**	**M2S050**	**M2S060**	**MPF050T**	**T55**
Logic Elements (k)	50.7	44	52	65	49	39	52	56	56	48	54
BRAM Size (Mb)											
BRAM Block Size											
Additional Embedded Memory											
DSP											
Multipliers											
Transceiver Count											
Transceiver Speed											
Total Transceiver Bandwidth											

Gemini – I/O Comparison @ 50K LE

	Rapid Silicon	AMD Xilinx			Intel Altera	Lattice		Microsemi			Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**		**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2011	2020	2021	2012	2012	2017	2018
Part	**RS-50**	**XC6SLX45**	**XC7S50**	**XC7Z014S**	**5CEA4**	**LFD2NX-40**	**LFCPNX-50**	**M2S050**	**M2S060**	**MPF050T**	**T55**
Logic Elements (k)	50.7	44	52	65	49	39	52	56	56	48	54
Max I/Os	[redacted]										
Max HVIO (3.3V)											
Max HPIO (1.8V)											
I/O per mm²											
I/O per kLE											
Max LVDS Rate											
Smallest Pkg											
Largest Pkg											
I/O Voltage				(HRIO)		(WRIO)					

1. Includes dedicated Memory Controller I/O (~81) & 84 DPIO

Gemini – Resource Comp. Chart @ 50K LE



Note: BRAM is shown as multiples of 10,000 bits to have bars' height consistent against I/O Count and DSP

Gemini – Resource Comparison @ 75K LE

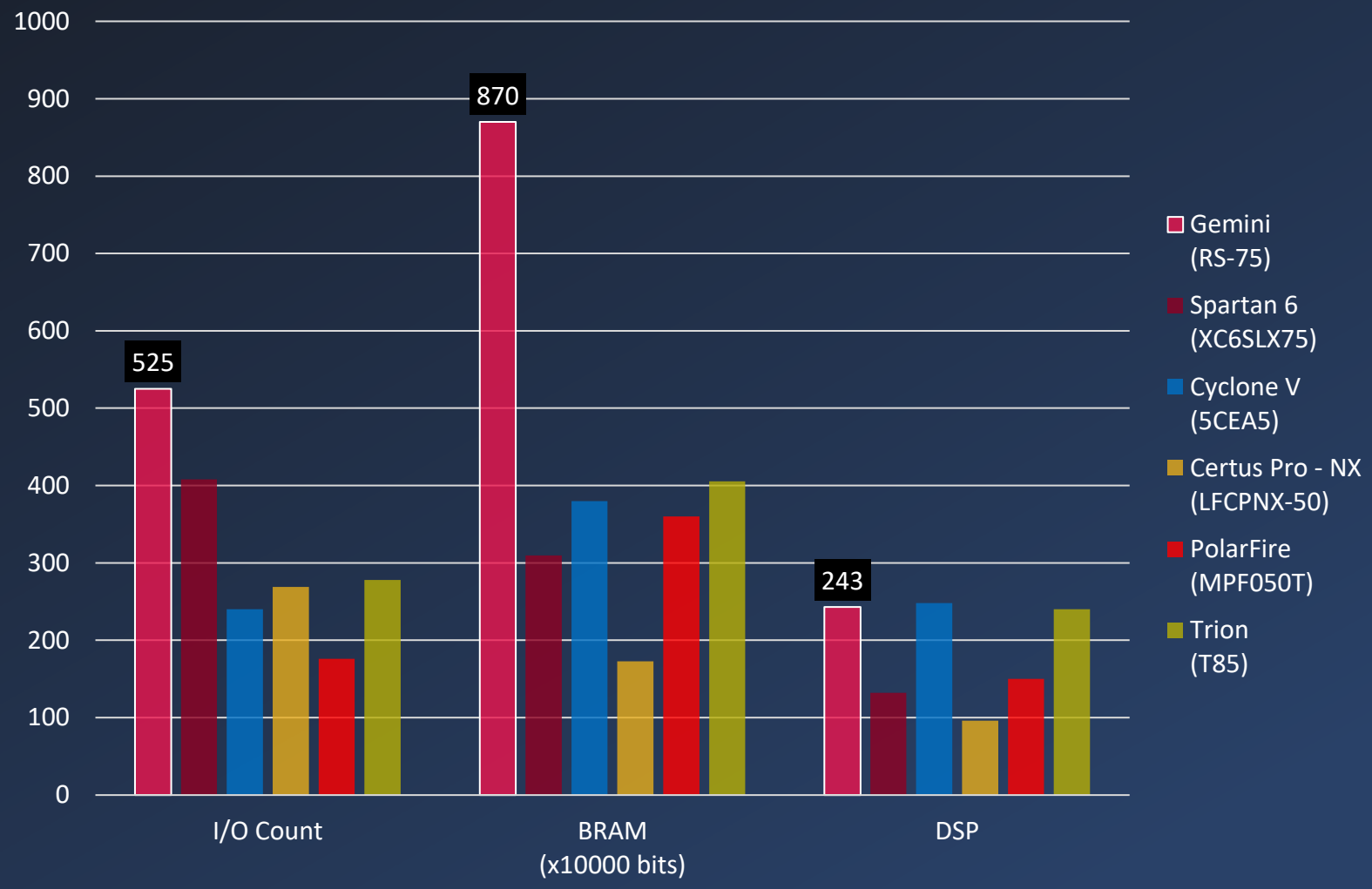
	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2011	2020	2021	2012	2017	2018
Part	**RS-75**	**XC6SLX75**	**XC7S75**	**XC7Z020**	**5CEA5**	**LFD2NX-40**	**LFCPNX-50**	**M2S090**	**MPF050T**	**T85**
Logic Elements (k)	76	74	77	85	77	39	52	86	48	84
BRAM Size (Mb)										
BRAM Block Size										
Additional Embedded Memory										
DSP										
Multipliers										
Transceiver Count										
Transceiver Speed										
Total Transceiver Bandwidth										

Gemini – I/O Comparison @ 75K LE

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2011	2020	2021	2012	2017	2018
Part	**RS-75**	**XC6SLX75**	**XC7S75**	**XC7Z020**	**5CEA5**	**LFD2NX-40**	**LFCPNX-50**	**M2S090**	**MPF050T**	**T85**
Logic Elements (k)	76	74	77	85	76	39	52	86	48	84
Max I/Os										
Max. HVIO (3.3V)										
Max. HPIO (1.8V)										
I/O per mm²										
I/O per kLE										
Max LVDS Rate										
Smallest Pkg										
Largest Pkg										
Lgst Package Area (mm²)										
I/O Voltage	1.2 - 3.3 V	(HRIO)	(HRIO)	1.2 - 3.3 V	1.2 - 3.3 V	1.2 - 3.3 V (WRIO)	(TBD)	1.2 - 3.3 V	1.2 - 3.3V	1.2 - 3.3V

1. Includes dedicated Memory Controller I/O (~81) & 84 DPIO

Gemini – Resource Comp. Chart @ 75K LE



Note: BRAM is shown as multiples of 10,000 bits to have bars consistent against I/O Count and DSP

Gemini – Resource Comparison @ 100K LE

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**PolarFire**	**Trion**
Intro. Date	2024	2009	2015	2012	2011	2020	2021	2012	2017	2018
Part	**RS-100**	**XC6SLX100**	**XC7S100**	**XC7Z030**	**5CEA7**	**LFD2NX-40**	**LFCPNX-100**	**M2S090**	**MPF100T**	**T120**
Logic Elements (k)	101.3	100	100	125	156	39	96	86	109	112
BRAM Size (Mb)										
BRAM Block Size										
Additional Embedded Memory										
DSP										
Multipliers										
Transceiver Count										
Transceiver Speed										
Total Transceiver Bandwidth										

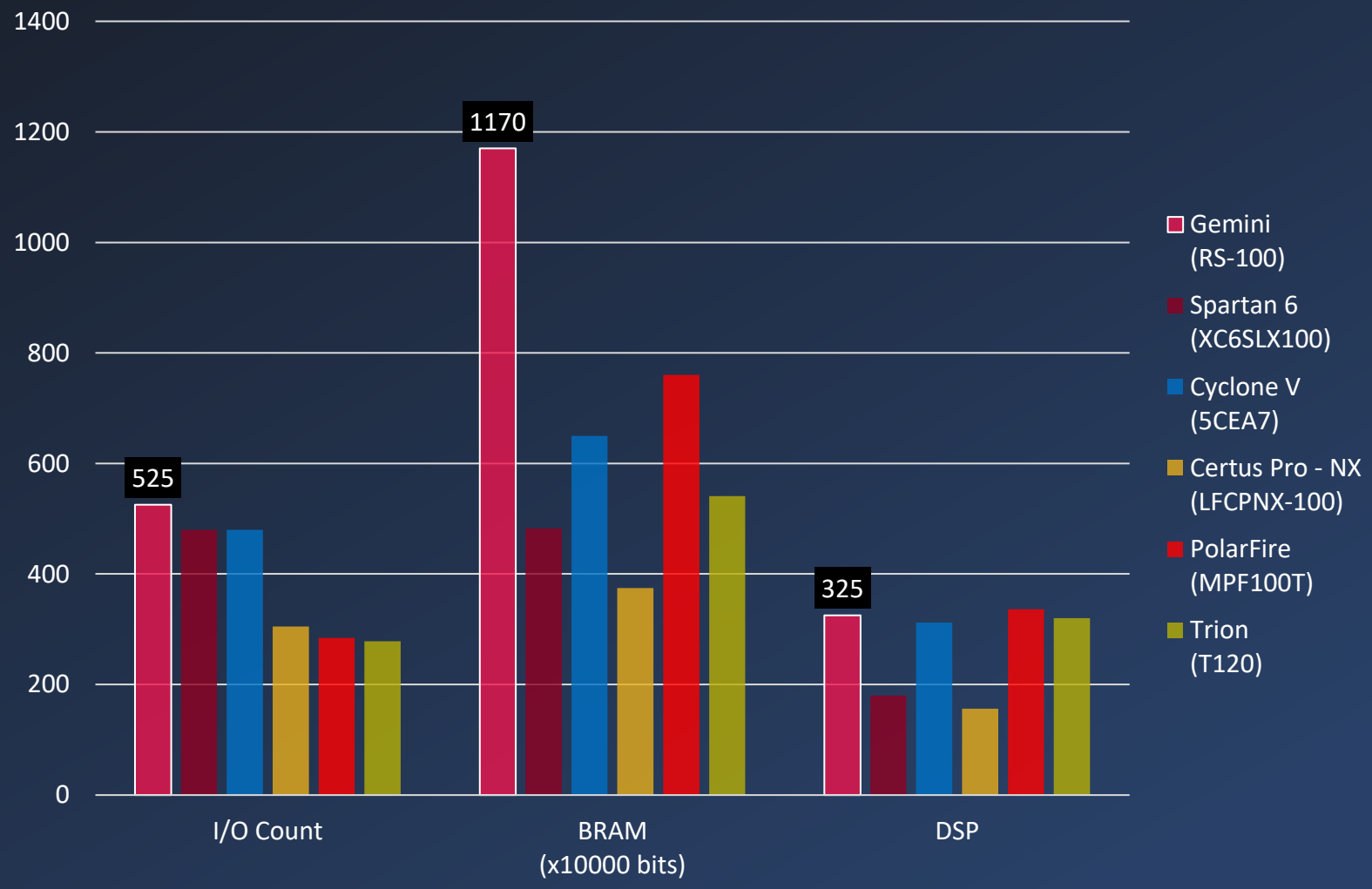
Gemini – I/O Comparison @ 100K LE

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	**Gemini**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V E**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2011	2020	2021	2012	2017	2018
Part	**RS-100**	**XC6SLX100**	**XC7S100**	**XC7Z030**	**5CEA7**	**LFD2NX-40**	**LFCPNX-100**	**M2S090**	**MPF100T**	**T120**
Logic Elements (k)	101.3	100	100	125	156	39	96	86	109	112
Max I/Os	[redacted]									
Max. HVIO (3.3V)										
Max. HPIO (1.8V)										
I/O per mm²										
I/O per kLE										
Max LVDS Rate										
Smallest Pkg										
Largest Pkg										
Lgst Package Area (mm²)										
I/O Voltage										

1. Includes dedicated Memory Controller I/O (~81) & 84 DPIO

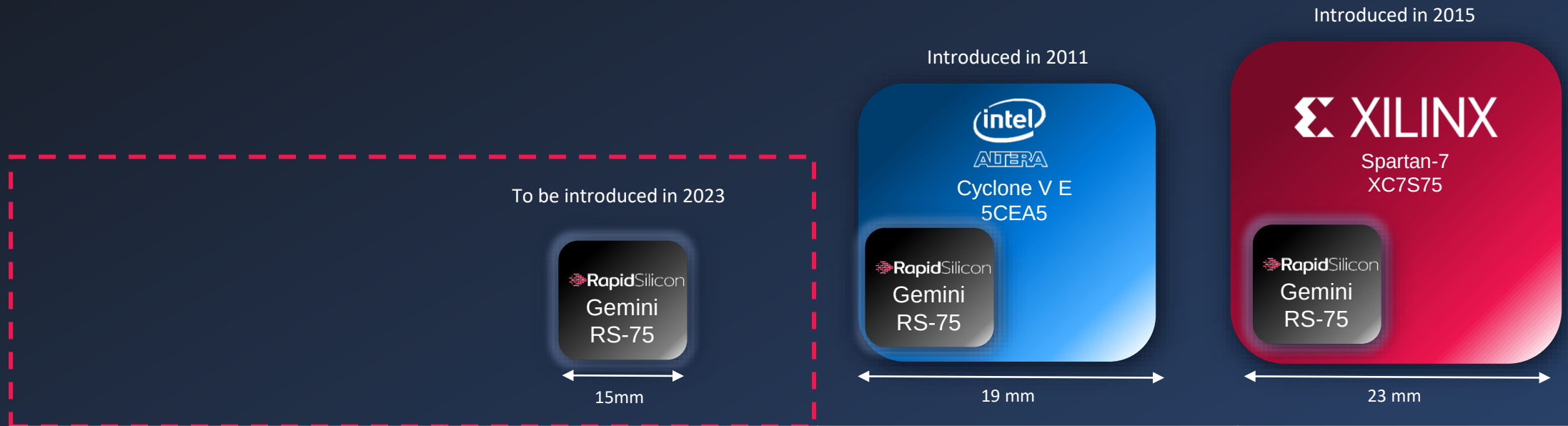
RapidSilicon

Gemini – Resource Comp. Chart @ 100K LE



Note: BRAM is shown as multiples of 10,000 bits to have bars consistent against I/O Count and DSP

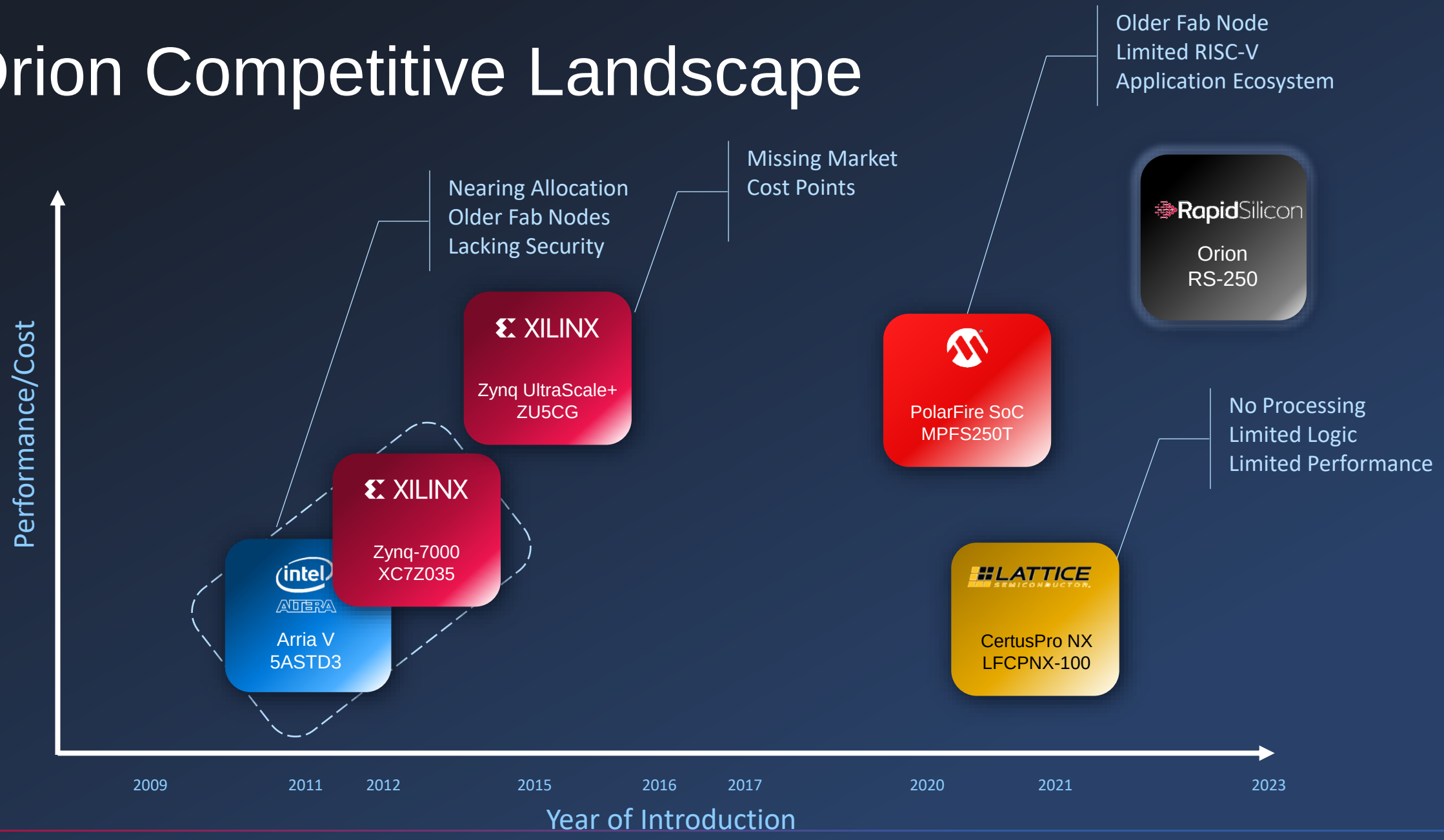
Gemini – Competitive Comparison



	Gemini 75k LE	**Intel Cyclone V (E)** 76k LE	**Spartan 7** 76k LE
1.2x smaller size	15 x 15 mm	19 x 19 mm	23 x 23 mm
2.6x more I/Os	I/O per mm^2 = 1.95	I/O per mm^2 = 0.75	I/O per mm^2 = 0.63
2.85x faster I/Os	Diff I/O Speed = 2500 Mbps	Diff I/O Speed = 840 - 875 Mbps	Diff I/O Speed = 1250 Mbps

ORION

Orion Competitive Landscape



Orion Competitive Landscape

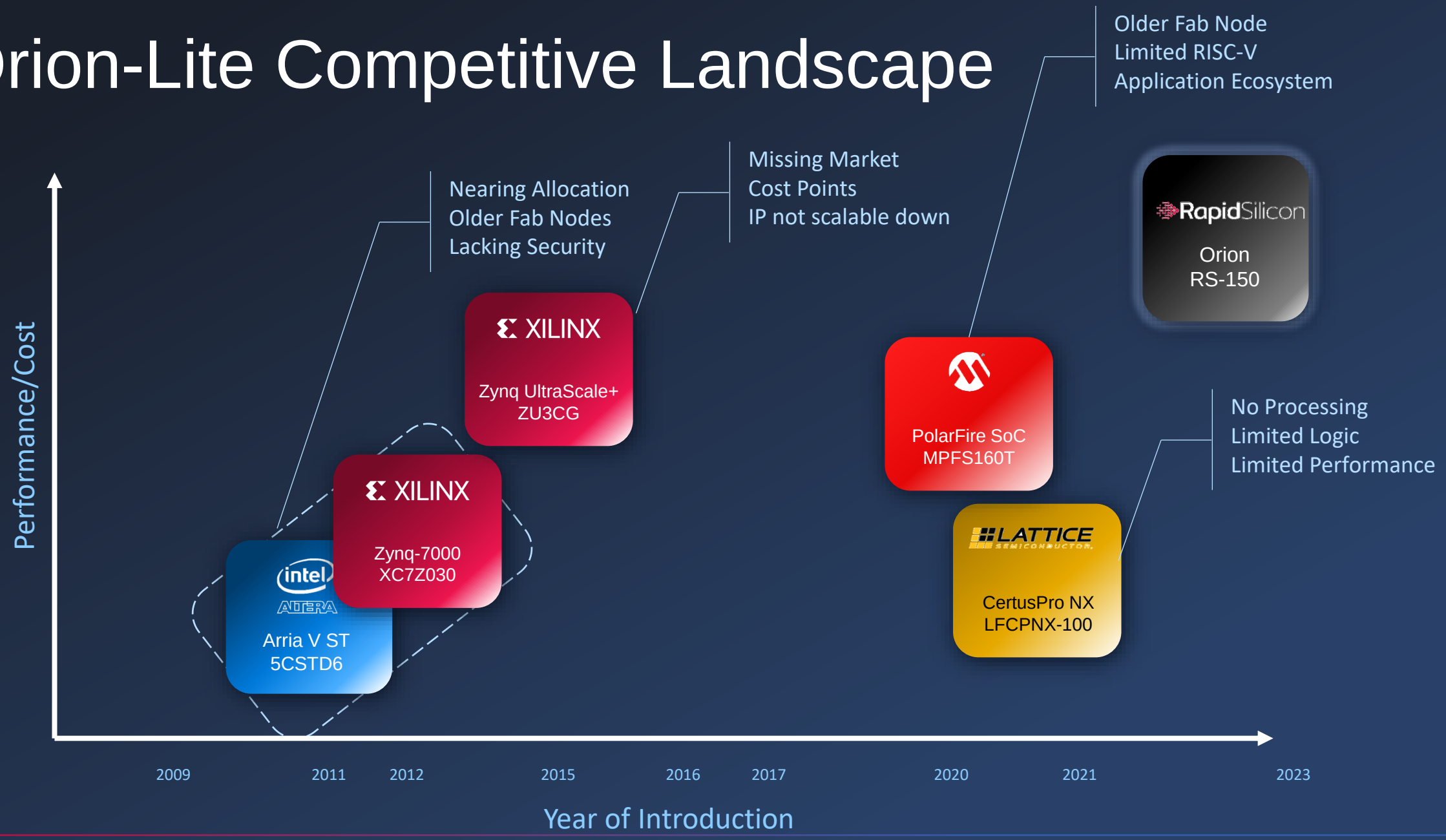
	Rapid Silicon	AMD (Xilinx)		Intel (Altera)			Microchip	Lattice
Product	**Orion**	**Zynq Ultrascale+**	**Zynq-7000**	**Sundance Mesa (Perf. Optimized)**	**Sundance Mesa (Power Optimized)**	Arria V	**PolarFire SoC**	**CertusPro-NX**
Introduction Date	2023	2013	2011			2011	2019	2021
Part	**RS-250**	ZU5CG	**Z-7035**			5ASTD3	MPFS250T	LFCPNX-100
Logic Elements (k)	250	256	275	138 – 656k		350	254	96
Tech Node (nm)								
Processor Core (Hard)								
Hard NOC								
Logic Fabric Speed (MHz)								
DDR SDRAM Support								
DDR SDRAM Performance								
Transceivers								
PCIe Hard IP								
Max. I/O Count								

Orion - I/O Comparison

	Rapid Silicon	AMD (Xilinx)		Intel (Altera)	Microchip	Lattice	Efinix
Product	**Orion**	**Zynq Ultrascale+**	**Zynq-7000**	Arria V	**PolarFire SoC**	**CertusPro-NX**	**Trion**
Introduction Date	2023	2013	2011	2011	2019	2021	
Part	**RS-250**	ZU5CG	**Z-7035**	5ASTD3	MPFS250T	LFCPNX-100	T120
Logic Elements (k)	250	256	275	350	254	96	112
Max. IOs							
Max. PS IOs (MIO + DDRIO)							
Max. HVIO (3.3V)							
Max. HPIO (1.8V)							
I/O per mm2							
I/O per kLE							
Max LVDS Rate							
Total Transceiver Count							
Total. Transceiver Bandwidth							
Smallest Pkg							
Largest Pkg							

ORION-LITE

Orion-Lite Competitive Landscape



Orion-Lite Competitive Landscape

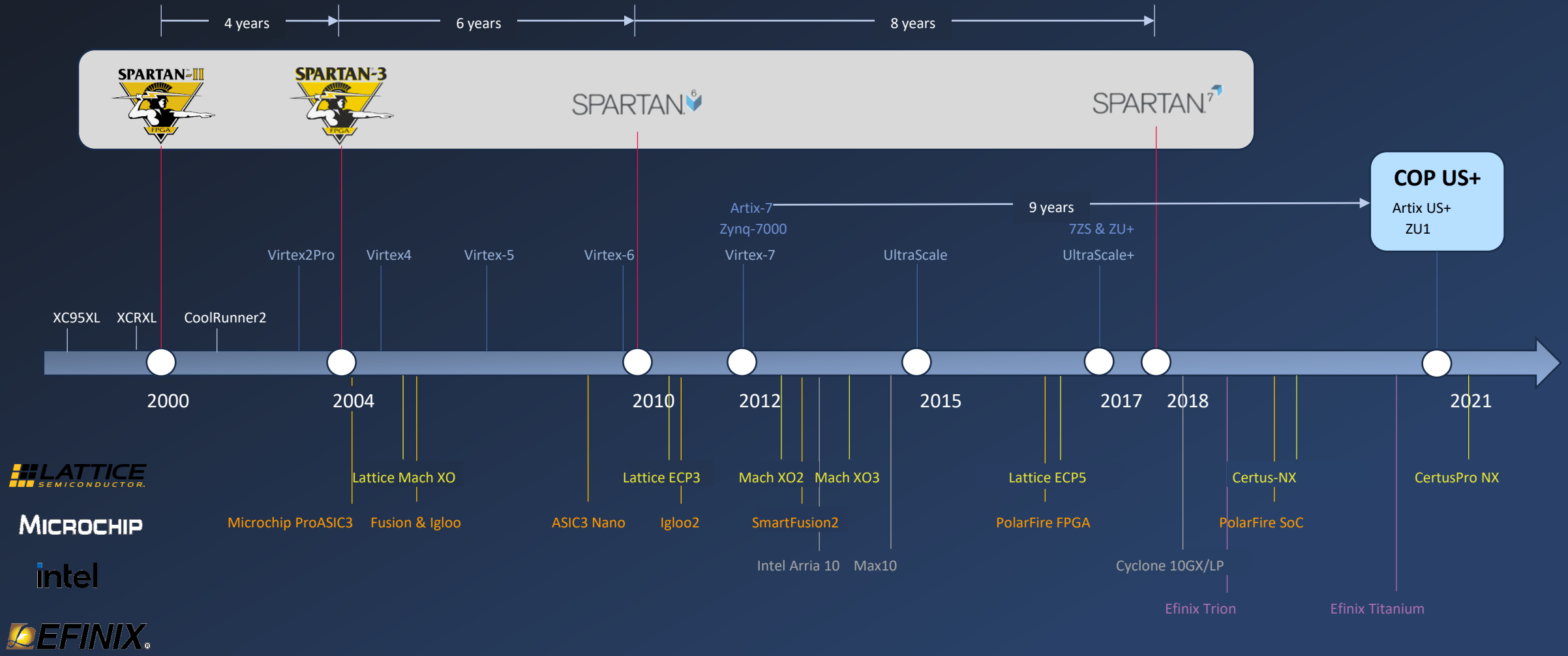
	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Microchip	Lattice
Product	**Orion-lite**	**Zynq Ultrascale+**		**Zynq-7000**	**Cyclone-V ST**	**PolarFire SoC**	**CertusPro-NX**
Introduction Date	2024	2013	2022	2010	2011	2019	2021
Part	**RS-150**	ZU3CG	**ZU3TCG**	**Z-7030**	**5CSTD6**	MPFS160T	LFCPNX-100
Logic Elements (k)	150	154	157	125	110	161	96
Tech Node (nm)							
Processor Core (Hard)							
Hard NOC							
Logic Fabric Speed (MHz)							
DDR SDRAM Support							
DDR SDRAM Performance							
Transceivers							
PCIe Hard IP							
Max. I/O Count							

Orion-Lite I/O Comparison

	Rapid Silicon	AMD (Xilinx)				Intel (Altera)	Microchip	Lattice	Efinix
Product	**Orion-Lite**	**Zynq Ultrascale+**			**Zynq-7000**	Cyclone-V	**PolarFire SoC**	**CertusPro-NX**	**Trion**
Introduction Date		2013	2022	2013	2010	2011	2019	2021	
Part		ZU3CG	ZUTCG	ZU4CG	Z-7030	5CSTD6	MPFS160T	LFCPNX-100	T120
Logic Elements (k)		154	157	192	125	110	161	96	112
Max. IOs									
Max. PS IOs (MIO + DDRIO)									
Max. HVIO (3.3V)									
Max. HPIO (1.8V)									
I/O per mm2									
I/O per kLE									
Max LVDS Rate									
Total Transceiver Count									
Total. Transceiver Bandwidth									
Smallest Pkg									
Largest Pkg						Only)			

Aging Competitor Low-End

Competitors abandoning the low-end



GEMINI+

Gemini+ Family FPGA Competitive Landscape

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	Gemini+	Spartan-6	Spartan-7	Zynq 7000	Cyclone-V SE	Certus-NX	CertusPro-NX	Smartfusion 2	PolarFire SoC	Trion
Introduction Date	2023	2009	2015	2018	2012	2020	2021	2012	2019	2018
Tech Node (nm)	16	45	28	28	TSMC 28LP	28	28	65	28	SMIC 40LL
LUT Structure	LUT-6	LUT-6	LUT-6	LUT-6	ALM-8	LUT-4	LUT-4	LUT-4	LUT-4	LUT-4 + Adder
Embedded Memory								18Kb LSRAM		
Signal Processing [# of MAC fractionable modes]										
Processor Core (Soft)										@
Processor Core (Hard)										
Hard NOC										
Global Clock Perf (MHz)										
DDR SDRAM Support										
DDR SDRAM Performance										
Transceivers[5]										

1. 2 x 8x10
2. 9x9, 18x19, 18x18, 27x27, 18x25, 20x24, 2x 18x19, 18x18 w/ 36-bit I/P
3. 36*36, 18*36, 18x18, 9x9
4. 18x18, 18x18 w/ 48 bit sum, 18x19 w/ pre adder, 2 x 9x9, 9x9 Dot Product, Complex 18x19
5. Part Specific

Gemini + – Resource Comparison @ 50K LE

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi			Efinix
Product	**Gemini +**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V SE**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**		**PolarFire SoC**	**Trion**
Intro. Date	2023	2009	2015	2012	2012	2020	2021	2012	2012	2019	2018
Part	**RS-50**	**XC6SLX45**	**XC7S50**	**XC7Z012S**	**5CSEA4**	**LFD2NX-40**	**LFCPNX-50**	**M2S050**	**M2S060**	**MPFS025T**	**T55**
Logic Elements (k)	50	44	52	55	40	39	52	56	56	23	54
BRAM Size (Mb)											
BRAM Block Size											
Additional Embedded Memory											
DSP											
Multipliers											
Transceiver Count											
Transceiver Speed											
Total Transceiver Bandwidth											

Gemini+ – I/O Comparison @ 50K LE

	Rapid Silicon	AMD Xilinx			Intel Altera	Lattice		Microsemi			Efinix
Product	**Gemini+**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V SE**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**		**PolarFire SoC**	**Trion**
Intro. Date	2023	2009	2015	2012	2012	2020	2021	2012	2012	2019	2018
Part	**RS-50**	**XC6SLX45**	**XC7S50**	**XC7Z012S**	**5CSEA4**	**LFD2NX-40**	**LFCPNX-50**	**M2S050**	**M2S060**	**MPFS025T**	**T55**
Logic Elements (k)	50	44	52	55	40	39	52	56	56	23	54
Max I/Os											
Max HRIO											
Max HPIO											
I/O per mm²											
I/O per kLE											
Max LVDS Rate											ps
Smallest Pkg											
Largest Pkg											
I/O Voltage											

1. Includes dedicated Memory Controller I/O (54), SoC I/O (40), Configurable I/O (120)

Gemini + – Resource Comparison @ 100K LE

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	**Gemini +**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V SE**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2012	2020	2021	2012	2019	2018
Part	**RS-100**	**XC6SLX100**	**XC7S100**	**XC7Z020**	**5CSEA6**	**LFD2NX-40**	**LFCPNX-100**	**M2S090**	**MPFS095T**	**T120**
Logic Elements (k)	100	100	100	85	110	39	96	86	93	112
BRAM Size (Mb)										
BRAM Block Size										
Additional Embedded Memory										
DSP										
Multipliers										
Transceiver Count										
Transceiver Speed										
Total Transceiver Bandwidth										

Gemini + – I/O Comparison @ 100K LE

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)	Lattice		Microsemi		Efinix
Product	**Gemini +**	**Spartan-6**	**Spartan-7**	**Zynq-7000**	**Cyclone-V SE**	**Certus-NX**	**CertusPro-NX**	**Smartfusion 2**	**PolarFire**	**Trion**
Intro. Date	2023	2009	2015	2012	2012	2020	2021	2012	2019	2018
Part	**RS-100**	**XC6SLX100**	**XC7S100**	**XC7Z020**	**5CSEA6**	**LFD2NX-40**	**LFCPNX-100**	**M2S090**	**MPFS095T**	**T120**
Logic Elements (k)	100	100	100	85	110	39	96	86	93	112
Max I/Os										
Max. HVIO (3.3V)										
Max. HPIO (1.8V)										
I/O per mm²										
I/O per kLE										
Max LVDS Rate										
Smallest Pkg										
Largest Pkg										
Lgst Package Area (mm²)										
I/O Voltage	1 1.8 - 3.3 V (HVIO)									

Gemini+ - Resource Comparison @ 100k LE

	Rapid Silicon	AMD(Xilinx)			Intel (Altera)	Lattice	Microchip	Efinix
Product Family	Gemini+	Zynq 7000	Zynq US+ MPSoC (CG)	Spartan US+	Cyclone-V SE	CertusPro-NX	PolarFire SoC	Topaz
Part	1GE100	XC7Z030	ZU2CG	SU100P	5CSEA6	LFCPNX-100	MPFS095T	TZ100
Intro Year	TBD	2012	2013	2024	2012	2021	2019	2024
Tech Node (nm)								
Logic Count (k)								
LUT Structure								
BRAM Size Each								
Cumul Embedded Memory								
DSP								
Processor Core (Hard)								
Global Clock Freq								
DDR Support								
DDR Perf (Mbps)								
Transceivers								
Max IO Count								

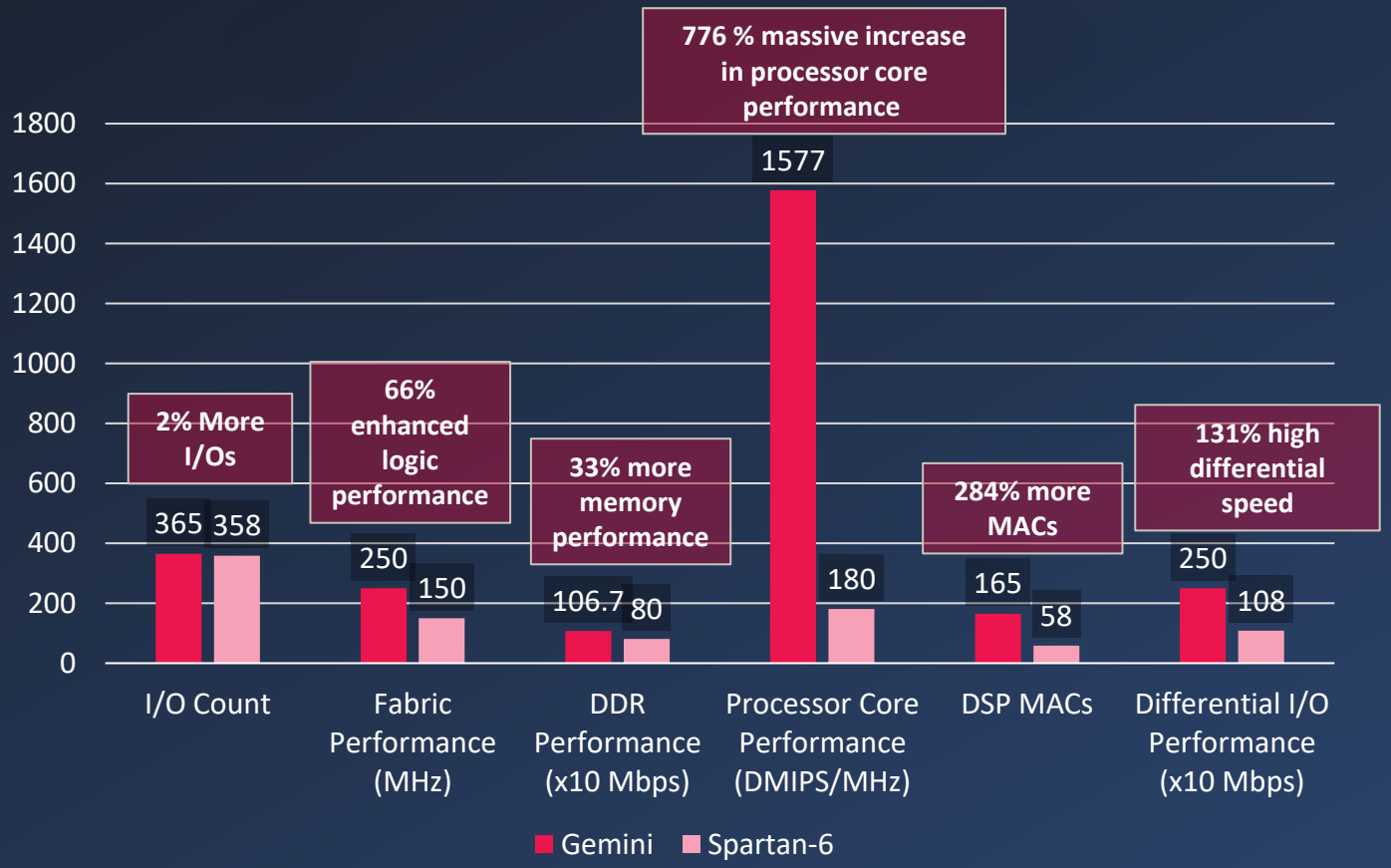
Orion VS Latest Comp Product Introductions

Product	Orion	Intel - Sundance Mesa (Perform Opt)	Intel - Sundance Mesa (Pow Opt)	Zynq US+ CG (AMD)	Artiq US+ (AMD)	Avant (Lattice)	
Process Node	16 nm	Intel 7 (10-nm)	Intel 7 (10-nm)	16	16	16	
Product Class	Low-End	Low-End	Low-End	Low-End	High-End	Mid-Range	
Target Market	Edge, Embedded, Network	Edge, Embedded, Network	Edge, Embedded, Network	Network, Embedded, Medic	Network, Embedded, Compu	Edge, Comms, Indus, Compu, Auto	
Density							
Block RAM (Mb)							
BRAM Blocks							
DSP Blocks							
Multipliers							
Transceivers							
PCIe							
Ethernet							
TSN Controller							
Processors							
DDR							
DDR Perfom.							
MIPI							
IO							
Package Ball Pitch							

*1: Speed is Package Dependent

Gemini - The Powerful Replacement

Optimized connectivity, high performance at lowest power expense



RapidSilicon

Note: On horizontal axis, x 10 w/ axis' titles mean “Actual Value multiplied by 10 – Actual Value x 10” and shouldn’t be confused as no. of channels. The purpose is to normalize bars across graph

Rapid Silicon VS Intel's Latest Prod. Introductions

Not the RS Competitive Product Class

Product	Agilex D-Series	Sundance Mesa (Performance Optimized)	Sundance Mesa (Power Optimized)	Orion
Process Node	Intel 7 (10-nm)	Intel 7 (10-nm)	Intel 7 (10-nm)	16 nm
Product Class	**Midrange**	Low-End	**Low-End**	**Low-End**
Target Market	Wireless, 8k Broadcast	Edge, Embedded, Network	Edge, Embedded, Network	Edge, Embedded, Network
Density	130-644K LE	138-656k LE		<250k LE
M20K Blocks				
DSP Blocks				
18x19 Multipliers				
TFLOPS				
Transceivers				
PCIe				
Ethernet				
TSN Controller				
Processors				
DDR				
MIPI				
IO				
Core Voltage				
Package Ball Pitch				

[redacted]

Competition to Orion

Rapid Silicon VS Intel's Latest Prod. Introductions

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M20K Blocks					
DSP Blocks					
18x19 Multipliers					
TFLOPS					
Transceivers					
PCIe					
Ethernet					
TSN Controller					
Processors					
DDR					
MIPI	@				
IO					
Core Voltage					
Package Ball Pitch	0.65 mm		0.5 mm		

[redacted]

INTEL vs Rapid Silicon
(Competition to Orion)

Orion Competitive Landscape

Improvements

- Enhanced DSP capability w/ AI Tensor Block
- Integrated TSN Block
- Integrated MIPI D-PHY
- Hyperflex FPGA arch & SmartVID Power Management Tech (Proven & already in use)

	Rapid Silicon	AMD (Xilinx)		Intel (Altera)		Microchip	Lattice
Product	**Orion**	**Zynq Ultrascale+**	**Zynq-7000**	Agilex (D-Series)	Arria V	**PolarFire SoC**	**CertusPro-NX**
Introduction Date	2023	2013	2011	2022	2011	2019	2021
Part							
Logic Elements (k)							
Tech Node (nm)							
Processor Core (Hard)							
Hard NOC							
Logic Fabric Speed (MHz)							
DDR SDRAM Support							
DDR SDRAM Performance							
Transceivers							
PCIe Hard IP							
Max. I/O Count							

Gemini Family - SoC Competitive Landscape

	Rapid Silicon	AMD (Xilinx)			Intel (Altera)		Lattice	Microsemi	
Product	Gemini	Zynq 7000S	Zynq-7000	Zynq-7000	Agilex (D-Series)	Cyclone-V (SX)		SmartFusion 2	PolarFire SoC
Introduction Date	2023	2018	2011	2011	2022	2012		2012	(TBF)
Part									
Logic Elements (k)									
Tech Node (nm)									
Processor Core (Hard)									
Hard NOC									
Logic Fabric Speed (MHz)									
DDR SDRAM Support									
DDR SDRAM Performance									
Transceivers									
Max. I/O Count									

New Comp. Introductions: Addressing Claims

Gemini VS XILINX: ZU3T

Defend

Attack

ZU3T - XILINX	
Claims	**Our Response**
154.4 Gbps - 5x transceiver bandwidth than other ZU3s	[redacted]
157k LE - Lowest logic density with programmable logic-based transceivers	
21.2 Mb RAM & 256 kB OCM - High Memory Ratio	
Available in automotive grade	automotive grade components.

New Comp. Introductions: Addressing Claims

Gemini VS XILINX: AU7P

Defend

Attack

AU7P - XILINX	
Claims	**Our Response**
?? - 50% lower static power than AU10P	Results awaited
3.02 - 20% more I/O-to-logic ratio than AU10P	
144 HDIO - Twice as many 3.3V HDIO compared to the AU10P	
8.5mm x 10.5mm footprint	
4.9 Mb of total embedded memory - High Memory Ratio	
Available in automotive grade	

New Comp. Introductions: Addressing Claims

Gemini VS Lattice: Avant-E

Defend

Attack

Avant-E - Lattice	
Claims	**Our Response**
2.75Watt @ 350 MHz - Lowest Power	Results Awaited
4-I/P LUT to minimize power consumption	[redacted]
350 MHz - Highest Performance	
7200 INT8 multipliers - AI optimized DSPs	
35.6 Mb Embedded Memory @ 500k LE - High Embedded Memory	
10 ms - Fast I/O Configuration	
60 ms for 500k LE part - Fast Full Device Configuration	
25 Gb configurable SERDES	control, image processing, signal processing, and data acquisition.

New Comp. Introductions: Addressing Claims

Gemini VS Intel: Sundance Mesa

Defend

Attack

Sundance Mesa - Intel	
Claims	**Our Response**
10-nm for lower power consumption and small form factors	[redacted]
Hyperflex architecture for max performance and lower power consumption	
28.1 Gbps Transceivers	
AI optimized DSP blocks	
TSN and MIPI support for interfacing w/ latest image sensors	