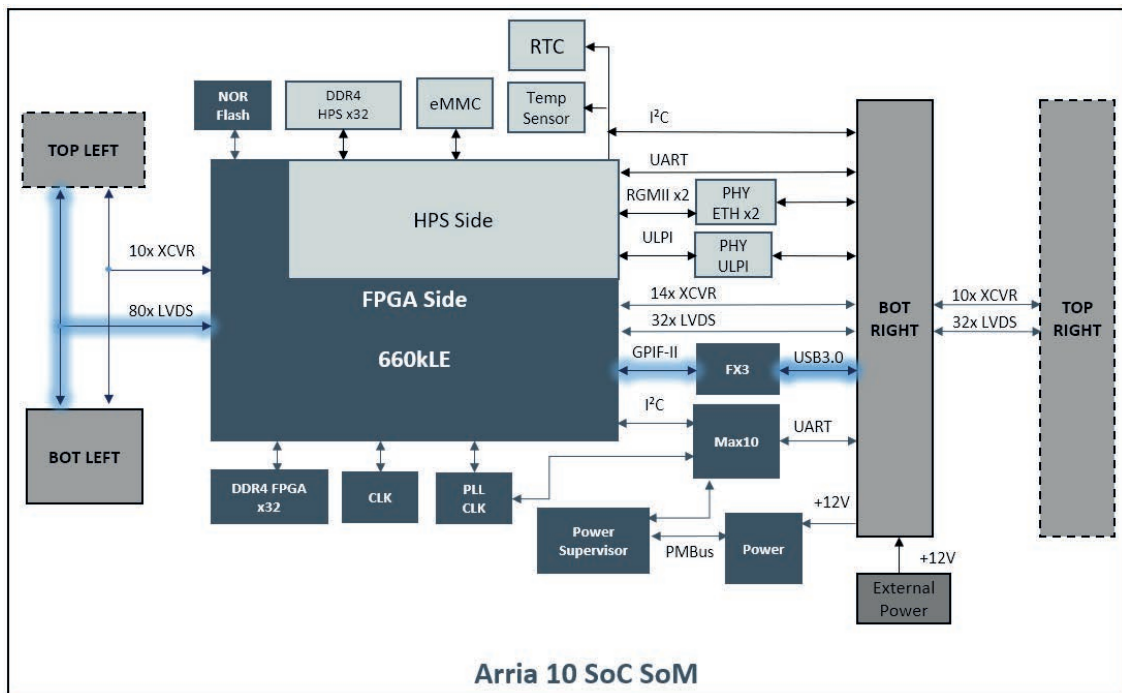




# Achilles Arria® 10 SoC System-on-Module



Intel® Arria® 10 SX  
270 or 660 KLE

PCIe Gen3 x8

- 226 SE IOs total (113 LVDS)
- 24 transceivers @10Gbps
- 2x DDR4 banks up to 2400MT/s
- Industrial Temp

- Life Science Instrumentation
- Embedded Industrial
- Printing Machines
- Radar Systems

Features	Description	Achilles "Turbo"	Achilles "Indus"	Achilles "Lite"
<b>FPGA SoC</b>	Arria® 10 FPGA with dual ARM® Cortex TM A9 MPCore™ processor based hard processor system (HPS), F34 package (1152 pins)	10AS066H2F3411HG speed grade -1	10AS066H2F3411HG speed grade -1	10AS027H3F34E2SG speed grade -2
<b>DDR4 Memory</b>	32 bit wide bank for FPGA	4GB @2400MT/s	2GB @2400MT/s	
	32 bit wide bank for HPS	4GB @2400MT/s	2GB @2133MT/s	
<b>Communication &amp; Networking</b>		2 Gigabit Ethernet RGMII on the HPS		
		USB 3.0 using Cypress FX3 super speed controller		✗
		USB 2.0 host/device OTG support connected to the HPS		
		I²C link support connected to the HPS,EEPROM, Sensor Temp		
		UART connected to System controller and to HPS		
<b>FMC Connectors</b>	<b>Top Left</b> High Pin Count (HPC)	80 LVDS pairs (1.25Gbps) usable as 160 single ended LVCMOS1.8V 10 Serial transceivers channel (RX and TX) at (7Gbps) Power Supplies Output: +12/+3.3V/1.8V/ +VADJ = +1.8V		✗
	<b>Top Right</b> Low Pin Count (LPC)	33 LVDS pairs (1.25Gbps) usable as 66 single ended LVCMOS1.8V 10 Serial transceivers channel (RX and TX) at (7Gbps) Power Supplies Output: +12/+3.3V/1.8V/ +VADJ = +1.8V		✗
	<b>Bottom Left</b> Low Pin Count (LPC)	80 LVDS pairs (1.25Gbps) usable as 160 single ended LVCMOS1.8V 10 Serial transceivers channel (RX and TX) at (10Gbps) No Power supply, respect +VADJ electrical standard (+1.8V)		
	<b>Bottom Right</b> High Pin Count (HPC)	33 LVDS pairs (1.25Gbps) usable as 66 single ended LVCMOS1.8V 14 Serial transceivers channel (RX and TX) at (10Gbps) Power Supply +12 Hard Processing ARM peripheral I/Os (GbE,USB2.0,I²C,UART) FPGA peripheral I/Os (GPIO II= USB3.0)		
<b>FPGA Configuration</b>		Onboard JTAG configuration circuitry to enable configuration over USB		
		512 Mb Quad SPI Flash for remote upgrade and failsafe configuration		
<b>Software Configuration</b>	Nand Flash eMMC (Store operating Linux system : U boot, Kernel and RootFS)	32 GB	32GB	8GB
<b>Module dimensions</b>		86mm x 95mm (3,4 x 3,8 inches)		
<b>Weight</b>		Turbo/indus module without Mechanics: 87.8g Lite module without Mechanics: 78.8g Heat Spreader: 93.9g   Heat Sink: 86.9g   Fan: 15.7g		
<b>Temperature range</b>		Commercial	Industrial	Commercial
<b>Ordering Information</b>		RXCA10S066PF34-SOM00T	RXCA10S066PF34-SOM00I	RXCA10S027PF34-SOM00L

## Deliverables

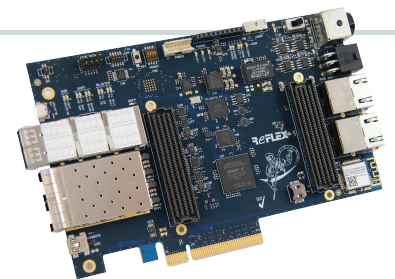
- Arria® 10 SoC module (+ heat spreader, heat sink and fan)
- Module, Starter board, PCIe carrier board documentation (Reference Manual, Starter Guide)
- Starter board & PCIe carrier board schematics
- Carrier Design Guide
- Mechanical drawings PDF, 3D Step, Assembly files PDF
- HDL Test Designs (Quartus projects) by module version
- 10GbE RefDesign
- Kernel Linux & Linaro optimized distribution, U-boot bootloader, Test scripts
- Online support at [support.reflexces.com](http://support.reflexces.com) :
  - Quartus Prime Pro DKE / OpenCL SDL license under request at [support.reflexces.com](http://support.reflexces.com)

## Related Products

### PCIe Carrier board

of the Arria® 10 SoC SoM

ORDERING INFORMATION:  
RXCA10S0000F34-FHPO5A



### Instant-DevKit Arria® 10 SoC SoM IDK

ORDERING INFORMATION:  
RXCA10S066PF34-IDK05A