

FPGAs in Pentek Products

These charts show the Xilinx FPGA families as used in the various Pentek board-level products. These products use some FPGA resources to implement standard factory functions as well as installed IP cores.

These charts show the percentage of unused system slices and RAM available to the user for extending the FPGA to include custom algorithms.



Available FPGA Resources for Pentek Boards

		Xilinx Virtex-5			Xilinx Virtex-6			Xilinx Virtex-7									
		-SX50T	-SX95T	-LX155T	-LX130T	-LX240T	-SX315T	-VX330T	-VX690T								
Logic Cells		52,224	94,208	155,648	128,000	241,152	314,880	326,400	693,120								
CLB Slices		8,160	14,720	24,320	20,000	37,680	49,200	51,000	108,300								
CLB Flip-Flops		32,640	58,880	97,280	160,000	301,440	393,600	408,000	866,400								
Max. Block RAM (kb)		4,752	8,784	7,632	9,504	14,976	25,344	27,000	52,920								
DSP48E Blocks		288	640	128	480	768	1,344	1120	3,600								
PCIExpressSupport		-	-	-	Gen2, x8	Gen2, x8	Gen2, x8	Gen3, x8	Gen3, x8								
Pentek Model	Board Type	No. of FPGAs	% Available to User						% Available to User								
			Slices	RAM	Slices	RAM	Slices	RAM	Slices	RAM	Slices	RAM	Slices	RAM			
7150*	PMC/XMC	2	7%	75%	36%	86%	64%	84%	-	-	-	-	-	-	-	-	
7153*	PMC/XMC	2	-	-	42%	45%	-	-	-	-	-	-	-	-	-	-	
7156*	PMC/XMC	2	16%	59%	50%	78%	69%	74%	-	-	-	-	-	-	-	-	
7158*	PMC/XMC	2	16%	59%	50%	78%	69%	74%	-	-	-	-	-	-	-	-	
71620**	XMC	1	-	-	-	-	-	68%	75%	83%	82%	87%	90%	-	-	-	
71621**	XMC	1	-	-	-	-	-	-	-	66%	63%	74%	78%	-	-	-	
71624**	XMC	1	-	-	-	-	-	-	-	-	-	N/A	N/A	-	-	-	
71630**	XMC	1	-	-	-	-	-	55%	64%	76%	77%	81%	86%	-	-	-	
71640**	XMC	1	-	-	-	-	-	8%	64%	46%	77%	59%	86%	-	-	-	
71641**	XMC	1	-	-	-	-	-	-	-	-	-	N/A	N/A	-	-	-	
71650**	XMC	1	-	-	-	-	-	66%	74%	82%	84%	86%	90%	-	-	-	
71651**	XMC	1	-	-	-	-	-	-	-	47%	65%	58%	79%	-	-	-	
71660**	XMC	1	-	-	-	-	-	69%	75%	76%	85%	88%	92%	-	-	-	
71661**	XMC	1	-	-	-	-	-	-	-	43%	67%	73%	81%	-	-	-	
71662**	XMC	1	-	-	-	-	-	-	-	N/A	N/A	48%	62%	-	-	-	
71663**	XMC	1	-	-	-	-	-	-	-	-	-	N/A	N/A	-	-	-	
71670**	XMC	1	-	-	-	-	-	24%	46%	58%	65%	68%	80%	-	-	-	
71671**	XMC	1	-	-	-	-	-	-	-	58%	65%	68%	80%	-	-	-	
71690**	XMC	1	-	-	-	-	-	80%	87%	89%	91%	91%	95%	-	-	-	
71720***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	52%	80%	77%	90%
71721***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	44%	69%	71%	16%
71730***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	52%	80%	77%	90%
71741***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	40%	77%	69%	88%
71751***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	48%	75%	75%	87%
71760***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	57%	83%	78%	91%
71761***	XMC	1	-	-	-	-	-	-	-	-	-	-	-	43%	73%	70%	86%

\* Other form factors: 72xx = 6U cPCI; 73xx = 3U cPCI; 76xx = PCI; 78xx = x8 PCIe; 53xx = 3U VPX

\*\*Cobalt form factors: 716xx = XMC; 726xx = 6U CPCI; 736xx = 3U cPCI; 746xx = 6U CPCI (Dual XMC); 786xx = x8 PCIe; 536xx = 3U VPX - Format 1; 526xx = 3U VPX - Format 2; 566xx = AMC; 576xx = 6U VPX; 586xx = 6U VPX (Dual XMC)

\*\*\*Onyx form factors: 717xx = XMC; 727xx = 6U CPCI; 737xx = 3U cPCI; 747xx = 6U CPCI (Dual XMC); 787xx = x8 PCIe; 537xx = 3U VPX - Format 1; 527xx = 3U VPX - Format 2; 567xx = AMC; 577xx = 6U VPX; 587xx = 6U VPX (Dual XMC)

%Available to User: Applies to the Processing FPGA(s) of certain products; % Available can vary slightly due to rounding

N/A = No FPGA resources are available because the installed IP utilizes all of the resources