

KINTEX-7 FPGAS



Kintex®-7 FPGAs
Optimized for Best Price-Performance
(1.0V, 0.9V)

| Part Number | | XC7K70T | XC7K160T | XC7K325T | XC7K355T | XC7K410T | XC7K420T | XC7K480T |
|---|---------------------------------------|-----------------|--------------|---|--------------|---------------|-------------|-------------|
| EasyPath™ Cost Reduction Solutions ⁽¹⁾ | | — | — | XCE7K325T | XCE7K355T | XCE7K410T | XCE7K420T | XCE7K480T |
| Logic Resources | Slices | 10,250 | 25,350 | 50,950 | 55,650 | 63,550 | 65,150 | 74,650 |
| | Logic Cells | 65,600 | 162,240 | 326,080 | 356,160 | 406,720 | 416,960 | 477,760 |
| | CLB Flip-Flops | 82,000 | 202,800 | 407,600 | 445,200 | 508,400 | 521,200 | 597,200 |
| Memory Resources | Maximum Distributed RAM (Kb) | 838 | 2,188 | 4,000 | 5,088 | 5,663 | 5,938 | 6,788 |
| | Block RAM/FIFO w/ ECC (36 Kb each) | 135 | 325 | 445 | 715 | 795 | 835 | 955 |
| | Total Block RAM (Kb) | 4,860 | 11,700 | 16,020 | 25,740 | 28,620 | 30,060 | 34,380 |
| Clock Resources | CMTs (1 MMCM + 1 PLL) | 6 | 8 | 10 | 6 | 10 | 8 | 8 |
| I/O Resources | Maximum Single-Ended I/O | 300 | 400 | 500 | 300 | 500 | 400 | 400 |
| | Maximum Differential I/O Pairs | 144 | 192 | 240 | 144 | 240 | 192 | 192 |
| Integrated IP Resources | DSP48 Slices | 240 | 600 | 840 | 1,440 | 1,540 | 1,680 | 1,920 |
| | PCIe® Gen2 ⁽²⁾ | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Analog Mixed Signal (AMS) / XADC | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Configuration AES / HMAC Blocks | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | GTX Transceivers (12.5 Gb/s Max Rate) | 8 | 8 | 16 | 24 | 16 | 32 | 32 |
| Speed Grades | Commercial | -1, -2 | -1, -2 | -1, -2 | -1, -2 | -1, -2 | -1, -2 | -1, -2 |
| | Extended | -2L, -3 | -2L, -3 | -2L, -3 | -2L, -3 | -2L, -3 | -2L, -3 | -2L, -3 |
| | Industrial | -1, -2 | -1, -2, -2L | -1, -2, -2L | -1, -2, -2L | -1, -2, -2L | -1, -2, -2L | -1, -2, -2L |
| Package ⁽⁴⁾ | | Dimensions (mm) | | Available User I/O: 3.3V HR I/O, 1.8V HP I/Os (GTX) | | | | |
| Footprint Compatible | FBG484 | 23 x 23 | 185, 100 (4) | 185, 100 (4) | | | | |
| | FBG676 | 27 x 27 | 200, 100 (8) | 250, 150 (8) | | 250, 150 (8) | | |
| | FFG676 | 27 x 27 | | 250, 150 (8) | 250, 150 (8) | 250, 150 (8) | | |
| Footprint Compatible | FBG900 | 31 x 31 | | 350, 150 (16) | | 350, 150 (16) | | |
| | FFG900 | 31 x 31 | | 350, 150 (16) | | 350, 150 (16) | | |
| | FFG901 | 31 x 31 | | | 300, 0 (24) | | 380, 0 (28) | 380, 0 (28) |
| | FFG1156 | 35 x 35 | | | | | 400, 0 (32) | 400, 0 (32) |

XMP085 (v3.7)

FBG: 1.0mm Lidless flip-chip; **FFG:** 1.0mm Flip-chip fine-pitch

- Notes: 1. EasyPath™ solutions provide a fast and conversion-free path for cost reduction.
2. Hard block supports PCI Express Base 2.1 specification at Gen1 and Gen2 data rates. Gen3 supported with soft IP.