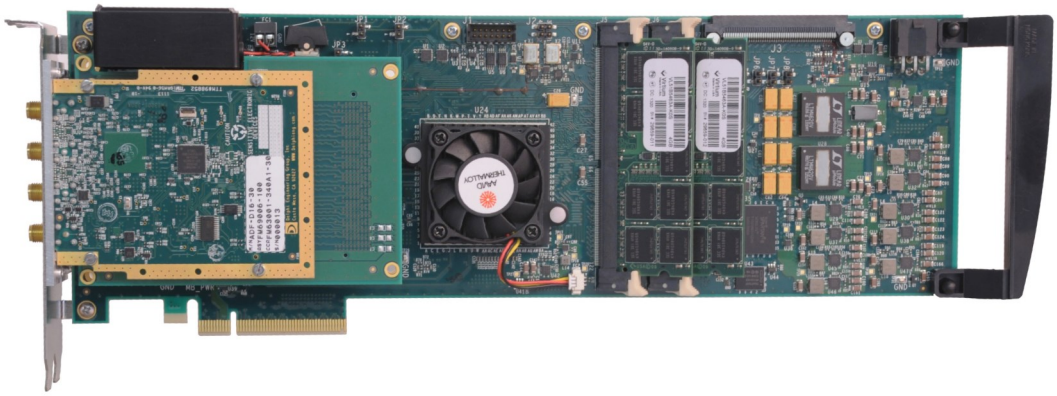
DELPHI ENGINEERING GROUP

DATASHEET

PC7-330/485/690 Dual FMC & DSP Carrier

PCI-Express Virtex-7 Carrier with Dual HPC FMC sites



BENEFITS

- Latest generation Xilinx FPGA devices with multiple options and speed grades
- Rapidly build single slot 1 - 8 channel solutions
- Support two FMC cards with rear panel I/O

FEATURES

- Virtex-7 VX330T, VX485T or VX690T FPGA
- Up to 9 GB DDR3 @ 800 MHz
- Two VITA 57.1 Compliant FMC sites with rear panel I/O
- Windows and Linux Support
- Graphical User Interface available

PERFORMANCE

- Most powerful FPGAs available
- x8 PCIe Gen3 interface
- High-speed MGT links between board
- Works with DEG broad range of FMC products

The PC7 family of FPGA carrier boards is DEG's latest Xilinx-based product innovation. With the ability to host two FMCs (FPGA Mezzanine Cards) with rear panel I/O, the PC7 product line sets the benchmark for performance and versatility in the embedded PCIe market. Coupling this flexibility with a Xilinx Virtex-7 VX330T, VX485T, or VX690T FPGA, the PC7 enables multichannel high speed data acquisition and extensive digital signal processing all within a single PCIe slot.

Performance-driven solution

To take full advantage of the Virtex-7 DSP48E slices, DEG engineers included the ability to add up to two banks of 4.5 GB DDR3 SDRAM. Each DDR3 banks sustains a maximum transfer rate of 14.4 GB/sec. Using both banks of memory yields an aggregate sustained performance of 28.8 GB/sec throughput. By using a mezzanine adapter card with the PC7 carrier, engineers can use two rear panel HPC FMC cards to provide unprecedented ADC/DAC solutions with a single FPGA carrier. This approach reduces system cost and increases I/O density and functionality.

More than the best hardware on the market

Great hardware deserves great software(and firmware). DEG offers both a signal visualization tool (ADCView) and an FPGA design kit to compliment the PC7 board. ADCView works with the PC7 and all of DEG's FMC ADC/DAC products enabling developers to view user-selectable signal and performance information in real-time. The FPGA design kit allows customers to leverage and modify DEG source code, develop within an open architecture, and rapidly integrate custom FPGA HDL with DEG's DSP functions and resources.

Product Selection Guide

Part Number Format: **PC7-FPGA-Speed-Memory**

FPGA Options	VX330T	VX485T	VX690T
Speed Grade Options	-1, -2, -3	-1, -2, -3	-1, -2, -3
DDR3 SDRAM Options	0, 4.5GB, 9GB	0, 4.5GB, 9GB	0, 4.5GB, 9GB

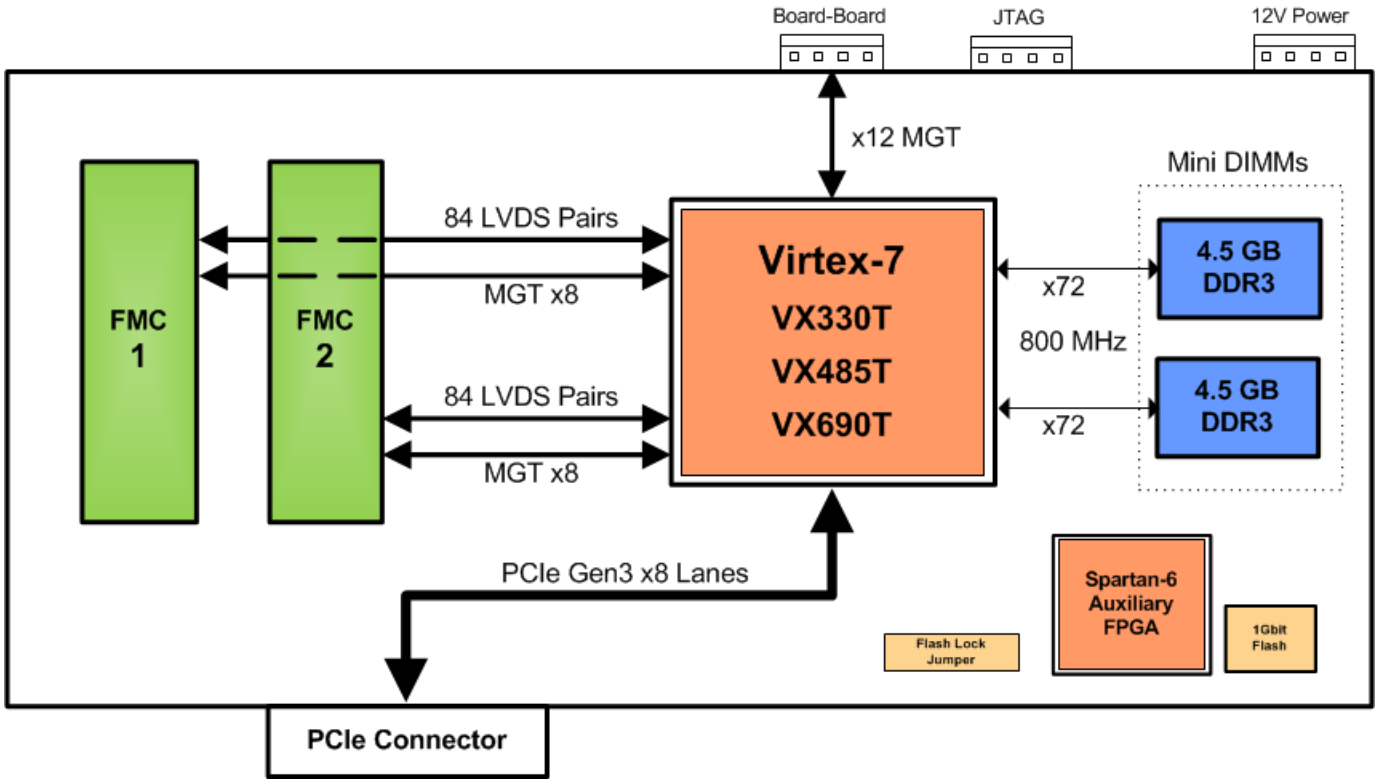
Sample Part Numbers

PC7-330-1 : PC7 with VX330T, speed grade 1, with no SDRAM

PC7-485-3-2 : PC7 with VX485T, speed grade 3, with 4.5 GB SDRAM

PC7-690-2-3 : PC7 with VX690T, speed grade 2, with 9 GB SDRAM

PC7-330/485/690 Block Diagram



About DEG

The Delphi Engineering Group (DEG) provides a full range of high-performance COTS-based and customized digital receiver technology, products, and services for mission-critical applications in the aerospace, defense, and communications industries.

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