

# XMCV5

## Virtex-5 processor with QDR2 and DDR2 memory

### Features

- Xilinx Virtex-5 FPGA
  - FX100T with PPC440 hard cores or
  - SX95T or
  - LX110T
- External Memory
  - QDR2 SRAM
  - DDR2 SDRAM
  - SPI FLASH
- Rear I/O
  - VITA 42.3 PCIe gen2 (to 5 GHz) or
  - VITA 42.2 sRIO build option
  - Rocket I/O to 6.5 GHz via GTX ports
  - LVDS
  - GPIO
  - GbE
  - Serial ports
- Front I/O
  - GbE
  - Serial
  - LVDS
  - GPIO
- VWRAP
  - EDK and ISE project with tested cores
  - VBIT- Built-In-Test

GE Fanuc has worked closely with Xilinx to leverage the power and performance of their very latest Virtex-5 FPGAs.

Virtex-5 FX100T boasts two PowerPC® 440 embedded CPUs, multiple PCIe hard cores and GTX links at up to 6.5 Gigabits/s.

XMCV5 is the world's first rugged XMC to harness the power and flexibility of the Virtex-5 FXT with build options for SXT and LXT to address the complete range of performance requirements for demanding defense and aerospace applications.

Designed for use in harsh environments where extended temperature, shock and vibration is the norm, XMCV5 together with our market leading host Single Board Computers (SBC) and carrier cards provide the flexibility and compute power to cater for a range of deployed applications in both 3U and 6U form factors.

XMCV5 is the right choice for system architects when configurable co-processing is required to compliment GE Fanuc's range of PowerPC or Intel® architecture SBCs and AXIS Multiprocessors.

Applications ranging from signal and image processing, fast data I/O and networked processing are all within reach with this leading edge solution.

VWRAP support is delivered in the form of an ISE or EDK project with a variety of tested cores to support baseline connectivity providing a quick start reference for application development using the standard Xilinx tool chain.

Multi-processor support includes our AXIS Advanced Multiprocessor Integrated Software suite of fully integrated modules for system development, visualization and deployment running on the host CPU with support for a range of system fabrics; GbE, sRIO, PCIe, etc.

AXISView provides an intuitive GUI for system visualization and productivity tools that greatly reduce development time and shorten time to market.

AXISLib VSIPL and RSPL optimized math and function libraries provide a wide range of optimized functions for the PowerPC Altivec platform.

AXISFlow supports high through put, low latency, inter processor communication (IPC) across all system nodes to maximize system performance and flexibility.

# XMCV5 Virtex-5 processor with QDR2 and DDR2 memory

## Specifications

### Xilinx Virtex-5 FPGA

- FX100T, SX95T or LX110T build options

### External Memory

- 144 Mbits QDR2 SRAM
- 512 MBytes DDR2 SDRAM
- 384 Mbits user & configuration FLASH

### Rear I/O

- VITA 42.3 PCIe (standard) or
- VITA 42.2 sRIO build option
- 16 x Rocket I/O, 20 LVDS, 28 GPIO,
- 2 x GbE RGMII & 5 GPIO (3V3),
- 2 x RS232/422, I2Cbus

### Front I/O

- 80 pin header:
- 2x GbE (RGMII), 2x RS232/422, 28 LVDS, 24 GPIO &
- 5 GPIO (3v3), JTAG

### XMCV5TST

- Front panel break-out module for SW development

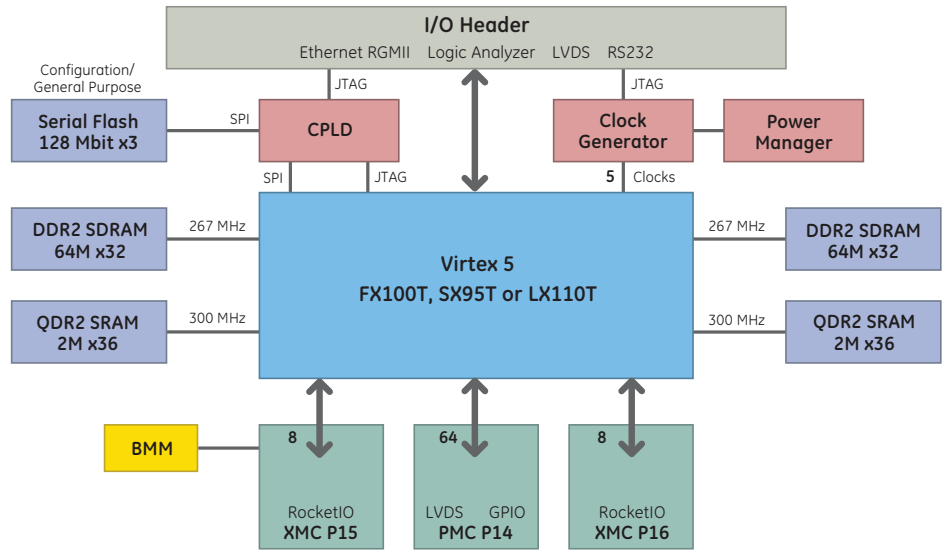
### Form Factor

- Rugged VITA 42.0 form factor for air, and conduction cooled systems

### VWRAP:

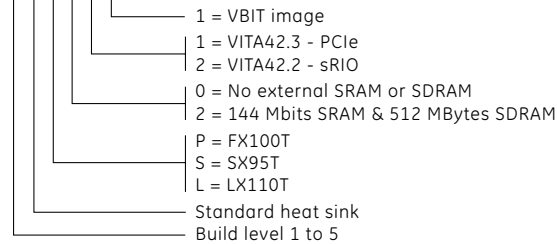
- EDK and ISE project with tested cores
- VBIT- Built-In-Test

## Block Diagram



## Ordering Information

XMCV5 - 1 0 P 2 1 1



## About GE Fanuc Intelligent Platforms Embedded Systems

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit [www.gefanuc.com](http://www.gefanuc.com).

## GE Fanuc Intelligent Platforms Information Centers

Americas:  
1 800 368 2738 or 1 703 263 1483

Asia Pacific:  
+81 3 5544 3973

Europe, Middle East and Africa:  
Germany: +49 821 5034-0  
UK: +44 1327 359444

## Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

[www.gefanuccom](http://www.gefanuccom)

