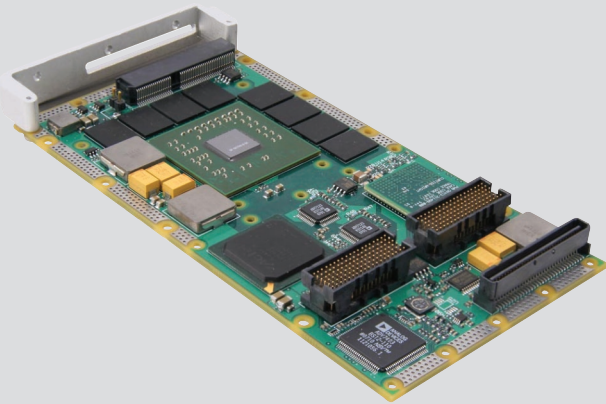# XMC-710

High-performance Graphics Controller

The XMC-710 is a high-performance graphics controller, offering leading edge features and performance of NVIDIA® G73M GPU with Curtiss-Wright Controls Embedded Computing's extensive video capture and processing capabilities.

The XMC-710 graphics controller is the first rugged Mil/Aero COTS XMC mezzanine card to make use of the industry leading NVIDIA® G7x series of GPUs. The XMC-710 offers the high-performance of NVIDIA® G73M GPU. The XMC-710 is an ideal solution for customers to design, develop and deploy high-performance graphics sub-systems capable of supporting synthetic graphics combined with analog and digital video capture and overlay.

The XMC-710 is a ruggedized VITA 42.3 PCI Express® (PCIe) based XMC form factor dual output graphics controller with video capture capability. Combined with the support for legacy and modern video interfaces, custom video modes, and enhanced bandwidth of PCIe, the XMC-710 makes an excellent choice for retrofit or new design in a wide range of ground, naval and avionics platforms.

Features

- NVIDIA® GeForce® Go 7700 GPU (G73M) with x8 PCI Express® (PCIe) interface
- 512MB DDR2 SDRAM
- Dual independent video output channels:
  - Non-interlaced RGB HV (up to two channels)
  - Single-link DVI (up to two channels)
  - Dual-link DVI
  - Interlaced outputs supporting RS-343, STANAG 3350 (A, B and C), and RS-170 (up to two channels)
  - TV output supporting NTSC or PAL
  - User-defined interlaced and non-interlaced modes (up to two channels)
- Analog output synchronization support
  - Separate H & V
  - Composite
  - Sync-on-Green or Sync-on-All (red/green/blue)
- One video capture input channel:
  - Interlaced TV (NTSC/PAL), RS-170 and STANAG B&C
  - For other video capture input, Curtiss-Wright Controls offers the XMC-270, a high-end video frame grabber
- PCIe rev 1.0a

- Voltage requirements:
  - VPWR (5V or 12V), 3.3V and 3.3V AUX
  - +12V and -12V required for analog output channels F and G
- Rear and front panel I/O versions available
- Available in air- and conduction-cooled ruggedization levels
- Available software includes:
  - RTOS: Wind River® VxWorks® 6.x, GPPLE Wind River® Linux®
  - X11R6, OpenGL ES 2.0, SC 1.0, EGL 1.3, ES Shader Language 1.0
  - Linux® and Windows® XP drivers (as provided by NVIDIA®)
- Supported on various PPC and x86 host cards

Figure 1: XMC-710 Block Diagram