EGX-MXM-P2000

Mobile PCI Express Module with NVIDIA® Quadro® Embedded P2000

Features

- Standard MXM 3.1 Type A form factor (82 x 70 mm)
- 768 NVIDIA® CUDA® cores
- 2.3 TFLOPS SP peak performance
- 4GB GDDR5 memory, 128-bit
- 96GB/s maximum memory bandwidth
- Support up to 4 UHD displays, 58W TDP
- 5-year availability

NVIDIA QUADRO CERTIFIED
- EMBEDDED

Introduction

The EGX-MXM-P2000 features advanced NVIDIA Quadro GPU with NVIDIA Pascal™ Architecture technology in MXM 3.1 Type A form factor. The EGX-MXM-P2000 has 768 NVIDIA CUDA cores and a peak single-precision floating-point performance of 2.3 TFLOPS. The EGX-MXM-P2000 has 4GB of GDDR5 memory and supports NVIDIA GPUDirect™ RDMA which helps increase data throughput by up to 80% and consequently system responsiveness by up to 60%*. Additionally, 4 UHD display outputs and an extended operating temperature range of -40°C to 85°C are supported. The embedded graphics product is suitable for mission-critical harsh-environment edge computing applications with size, weight, and power (SWaP) and network connectivity constraints.
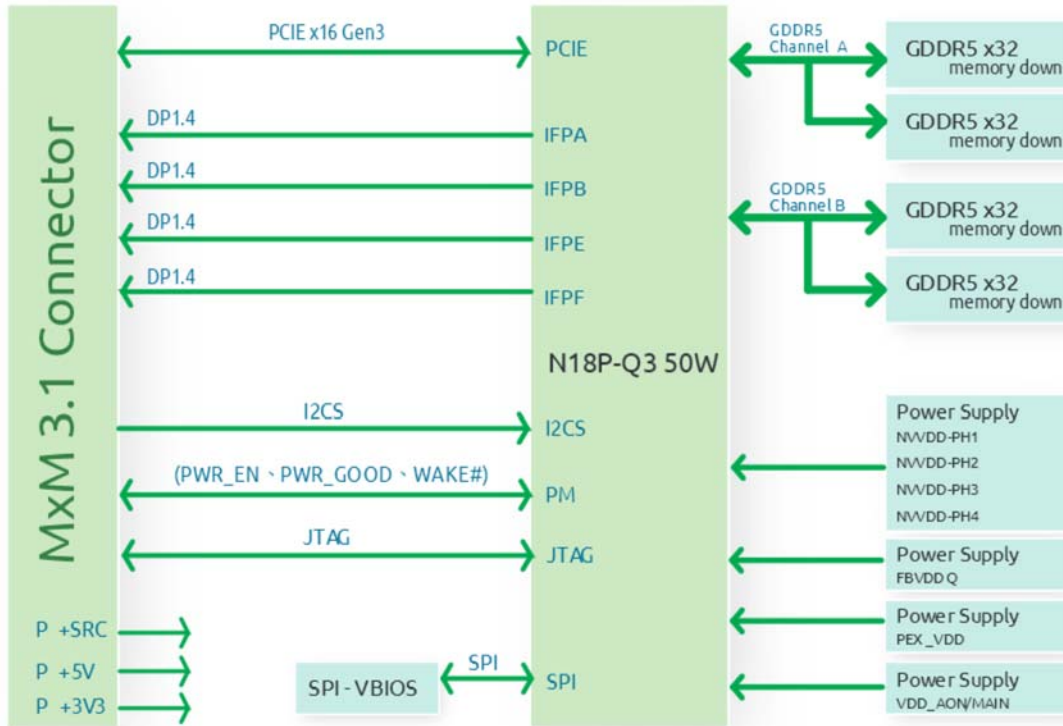
Ordering Information

- **EGX-MXM-P2000**
  NVIDIA Quadro Embedded P2000, MXM 3.1 type A, 82 x 70mm, PCIe x16 Gen3

Specifications

	EGX-MXM-P2000
Graphic Core	
GPU	Quadro® P2000
Memory	4GB GDDR5 memory, 128-bit, Bandwidth: 96 GB/s
GPGPU Computing	
CUDA Cores	768 CUDA® cores, 2.3 TFLOPS SP Peak
Compute API	CUDA Toolkit 8.0, CUDA Compute version 6.1, OpenCL™ 1.2
Graphics API	DirectX® 12, OpenGL 4.5, Vulcan 1.0
Display	
Display Outputs	4x DisplayPort 1.4 digital video outputs (DP++) 4K at 120Hz or 5K at 60Hz
Interface	MXM 3.1, PCI Express Gen3 x16 support
Mechanicals	
Dimensions	82 (W) x 70 (D) x 4.8 (H) mm
Form Factor	Standard MXM 3.1 Type A
Environmental	
Operating Temp.	Standard: 0°C to 55°C, -40˚C to 85˚C
Storage Temp.	-40˚C to 85˚C
Module Power Consumption	58W
SW supports	
OS Support	Windows 10 & Linux drivers, 64-bit

Block Diagram

MxM 3.1 Connector

		N18P-Q3 50W		
PCIE x16 Gen3	→	PCIE	← GDDR5 Channel A →	GDDR5 x32 memory down
				GDDR5 x32 memory down
DP1.4	→	IFPA		
DP1.4	→	IFPB	← GDDR5 Channel B →	GDDR5 x32 memory down
DP1.4	→	IFPE		GDDR5 x32 memory down
DP1.4	→	IFPF		

- I2CS → I2CS ← Power Supply NVVDD-PH1, NVVDD-PH2, NVVDD-PH3, NVVDD-PH4
- (PWR_EN、PWR_GOOD、WAKE#) → PM ← Power Supply FBVDD Q
- JTAG → JTAG ← Power Supply PEX_VDD
- P +SRC →
- P +5V →
- P +3V3 →
- SPI - VBIOS ← SPI → SPI ← Power Supply VDD_AON/MAIN

Mechanical Drawing

Ø 3.20 x6   Ø 6 x6

70 ±0.13

82 ±0.13

(1.20)

Ø 7 x4

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