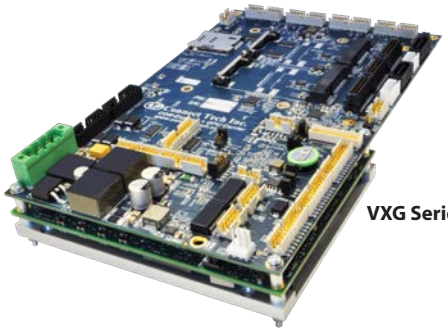
COM Express® Type 6 + GPU Embedded System

Product Name:
COM Express® + GPU Embedded System
Part Number: VXG###, DXG###

The **COM Express® Type 6 + GPU Embedded System** combines Intel® Skylake and Kaby Lake x86 processors with high-end NVIDIA® Quadro®, Tesla® and GeForce® GPUs all into a ruggedized small form factor embedded system. Choose from highest-end, highest-performance models or from low-powered extended temperature models all ideal for high-end encode/decode video applications or GPGPU CUDA® processing applications.

This embedded system exposes all of the latest generation interconnect including: Gigabit Ethernet, USB 3.0 and 2.0, DisplayPort++, VGA, LVDS, SATA III, GPIO, I2C, mSATA, miniPCIe, PCIe/104 and SD Card Expansion. This embedded system uses all locking ruggedized positive latching connectors.

VXG part numbers have Passive Heat Spreaders that are to be installed into a Customer Designed End Thermal Solution. DXG part numbers have an Active Cooling Solution with Integrated Support Frame.



VXG Series

DXG Series

Specifications	
COM Express CPU Module Options	• Intel® Xeon® E3-1505M V6 ("Kaby Lake" 7th Gen, 4 x 3.0 / 4.0 GHz, 8MB cache, 45 W) • Intel® Xeon™ E3-1505L V6 ("Kaby Lake" 7th Gen, 4 x 2.2 / 3.0 GHz, 8MB cache, 25 W) • Intel® Xeon® E3-1515M V5 ("Skylake" 6th Gen, 4 x 2.8 / 3.7 GHz, 8MB cache, 35 W) • Intel® Xeon™ E3-1505L V5 ("Skylake" 6th Gen, 4 x 2.0 / 2.8 GHz, 8MB cache, 25 W)
GPU Module Options	• NVIDIA® Quadro® P5000 – (Pascal, 2048 CUDA Cores, 100W) • NVIDIA® Quadro® P3000 – (Pascal, 1280 CUDA Cores, 75W) • NVIDIA® Quadro® M5000 SE – (Maxwell, 2048 CUDA Cores, 150W) • NVIDIA® Quadro® M3000 SE – (Maxwell, 1024 CUDA Cores, 75W) • NVIDIA® Tesla® M6 – (Pascal, 1536 CUDA Cores, 100W) • NVIDIA® GeForce® GTX 1080 – (Pascal, 2560 CUDA Cores, 150W) • NVIDIA® GeForce® GTX 1050Ti – (Pascal, 768 CUDA Cores, 60W)
COM Express Compatibility	COM Express® Type 6 (PICMG COM Express® COM.0 R2.1)
MiniPCIe Expansion	2 slots (with PCIe, USB and SATA connections)
PCIe/104 Expansion	4 x PCIe x1 lanes 2 x SATA III (on PCIe/104 Type-2 Pins)
DisplayPort/ HDMI/DVI	6 total - 2 outputs from COM Express, 4 outputs from GPU (On-board Circuitry enables DisplayPort or HDMI or DVI)
VGA Video	1 Analog CRT VGA Port
LVDS Video	18-24-bit LVDS
Gigabit Ethernet	2 x 10/100/1000 Ethernet Ports
USB 2.0	6 USB 2.0 Ports
USB 3.0	4 USB 3.0 Ports
HD Audio	1 stereo input, 1 stereo output
RS-232	3 total - 2 from PCIe UART, 1 to COM Express console port
RS-485	2 Ports
GPIO	8-bits (Buffered 4in/4out, +3.3V or +5V selectable)
Ext SATA	2 external SATA connectors (capable of SATA III)
mSATA	2 mSATA slots (capable of SATA III)
SD Card	1 micro SD Card slot (from USB Host controller, with bootable option)
System Interfaces	I2C, SMBus, S3 Power Level Output, Reset Output
I/O Connector Type	Rugged Locking Positive Latching 2mm Pitch Connectors
Input Power	Single wide input range +16V to +48V DC**
Power Consumption	Varies per VXG/DXG SKU with different CPU and GPU models
Dimensions	See online 3D Models
Operating Temperature Range	0°C to +55°C and -40°C to +85°C options available

** +12V DC input supported in some applications

FEATURES

✓*Combines High-End GPUs with Latest Generation x86 Processors in a ruggedized small form factor*

✓*GPUs can be targeted for 4 independent display outputs OR for a headless GPU processing system utilizing CUDA cores*

✓*System uses a building block approach: Mix and match Intel® CPUs with NVIDIA® GPUs*

✓*Choose from:*
- *VXG part number with Passive Heat Spreaders to install into a Customer Designed End Thermal Solution*
- *DXG part number with an Active Cooling Solution with Integrated Support Frame*

RoHS

Specifications subject to change without notice.

Sept. 6, 2018

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COM Express + GPU

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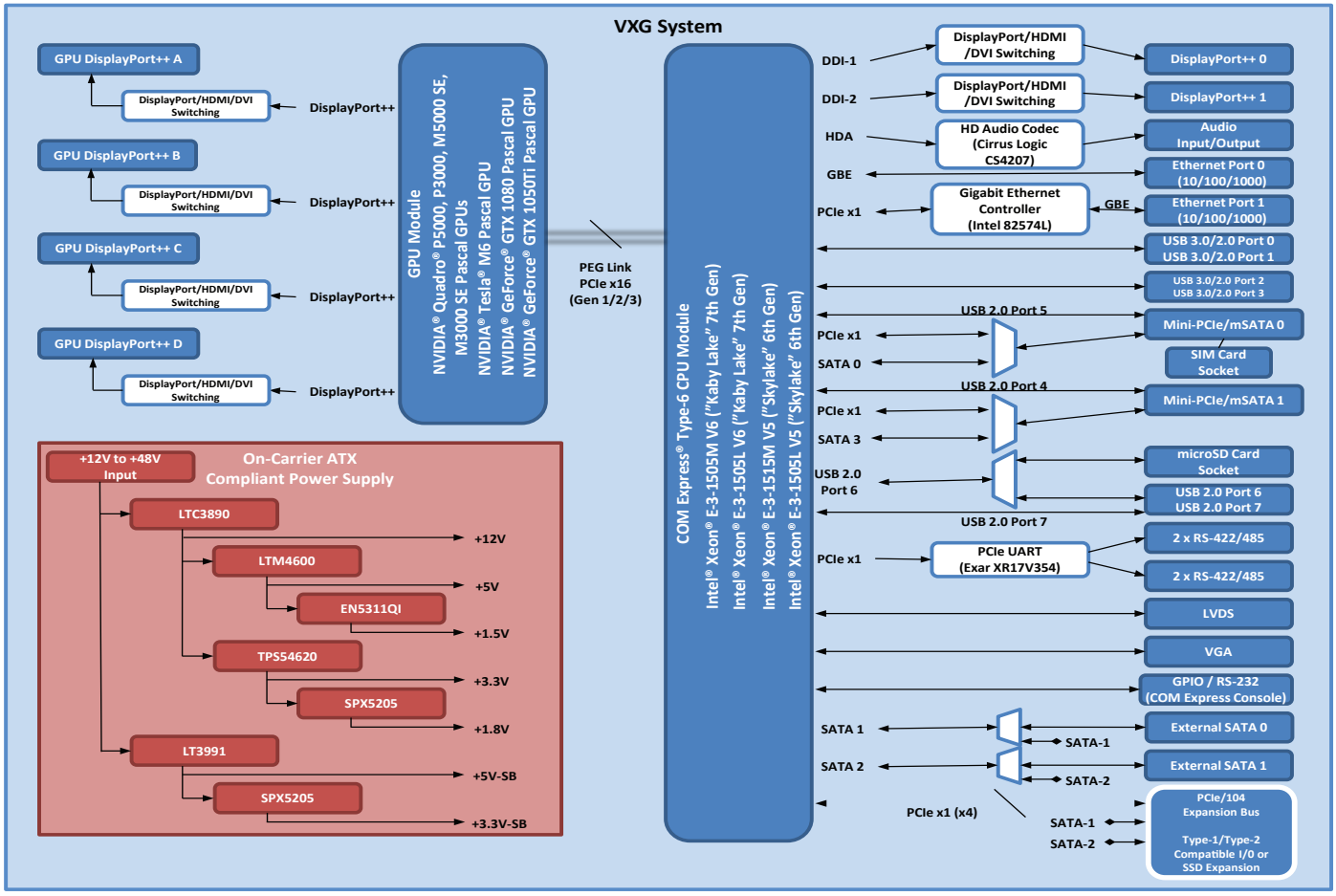

Ordering Information

Part Number	CPU	GPU	Temperature Range	Thermal/Mounting Solution
VXG101	Intel® Xeon® E3-1505L V5, 32GB DDR4	NVIDIA® GeForce® GTX 1050Ti	-40°C to +85°C (-40°F to +185°F)	Passive Heat Spreaders (Customer Designed End Thermal Solution)
VXG102	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® GeForce® GTX 1080	0°C to +55°C (+32°F to +131°F)	
VXG201	Intel® Xeon® E3-1505M V6, 32GB DDR4	NVIDIA® Quadro® P5000	0°C to +55°C (+32°F to +131°F)	
VXG202	Intel® Xeon® E3-1505L V6, 32GB DDR4	NVIDIA® Quadro® P3000	0°C to +55°C (+32°F to +131°F)	
VXG203	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® Quadro® P5000	0°C to +55°C (+32°F to +131°F)	
VXG204	Intel® Xeon® E3-1505L V5, 32GB DDR4	NVIDIA® Quadro® P3000	0°C to +55°C (+32°F to +131°F)	
VXG205	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® Quadro® M5000 SE	0°C to +55°C (+32°F to +131°F)	
VXG206	Intel® Xeon® E3-1505L V5, 32GB DDR4	NVIDIA® Quadro® M3000 SE	0°C to +55°C (+32°F to +131°F)	
VXG301	Intel® Xeon® E3-1505M V6, 32GB DDR4	NVIDIA® Tesla® M6	0°C to +55°C (+32°F to +131°F)	
VXG302	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® Tesla® M6	0°C to +55°C (+32°F to +131°F)	
DXG101	Intel® Xeon® E3-1505L V5, 32GB DDR4	NVIDIA® GeForce® GTX 1050Ti	0°C to +55°C (+32°F to +131°F)	Active Cooling Solution (with Integrated Support Frame)
DXG102	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® GeForce® GTX 1080	0°C to +55°C (+32°F to +131°F)	
DXG201	Intel® Xeon® E3-1505M V6, 32GB DDR4	NVIDIA® Quadro® P5000	0°C to +55°C (+32°F to +131°F)	
DXG202	Intel® Xeon® E3-1505L V6, 32GB DDR4	NVIDIA® Quadro® P3000	0°C to +55°C (+32°F to +131°F)	
DXG203	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® Quadro® P5000	0°C to +55°C (+32°F to +131°F)	
DXG204	Intel® Xeon® E3-1505L V5, 32GB DDR4	NVIDIA® Quadro® P3000	0°C to +55°C (+32°F to +131°F)	
DXG205	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® Quadro® M5000 SE	0°C to +55°C (+32°F to +131°F)	
DXG206	Intel® Xeon® E3-1505L V5, 32GB DDR4	NVIDIA® Quadro® M3000 SE	0°C to +55°C (+32°F to +131°F)	
DXG301	Intel® Xeon® E3-1505M V6, 32GB DDR4	NVIDIA® Tesla® M6	0°C to +55°C (+32°F to +131°F)	
DXG302	Intel® Xeon® E3-1515M V5, 32GB DDR4	NVIDIA® Tesla® M6	0°C to +55°C (+32°F to +131°F)	

Note: Other CPU and memory options available upon request

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