



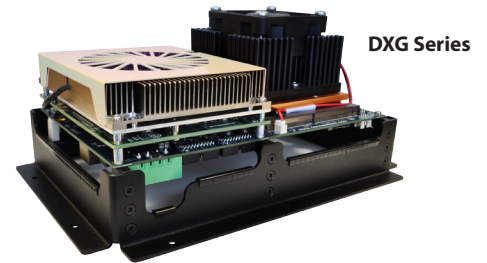
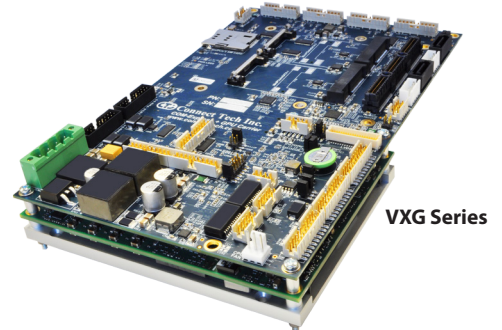
## COM Express® + GPU Embedded System

The **COM Express + GPU Embedded System** from Connect Tech combines Intel® Skylake and Kaby Lake x86 processors with high-end NVIDIA® Quadro®, Tesla®, and GeForce™ Graphics Processing Units (GPU) 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.

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



Specifications	
<b>COM Express CPU Module Options</b>	<ul style="list-style-type: none"> <li>Intel® Xeon™ E3-1505M V6 ("Kaby Lake" 7th Gen, 4 x 3.0 / 4.0 GHz, 8MB cache, 45 W)</li> <li>Intel® Xeon™ E3-1505L V6 ("Kaby Lake" 7th Gen, 4 x 2.2 / 3.0 GHz, 8MB cache, 25 W)</li> <li>Intel® Xeon™ E3-1515M V5 ("Skylake" 6th Gen, 4 x 2.8 / 3.7 GHz, 8MB cache, 35 W)</li> <li>Intel® Xeon™ E3-1505L V5 ("Skylake" 6th Gen, 4 x 2.0 / 2.8 GHz, 8MB cache, 25 W)</li> <li>* Ext Temp</li> </ul>
<b>GPU Module Options</b>	<ul style="list-style-type: none"> <li>NVIDIA® Quadro® P5000 – (Pascal, 2048 CUDA Cores, 100W)</li> <li>NVIDIA® Quadro® P3000 – (Pascal, 1280 CUDA Cores, 75W)</li> <li>NVIDIA® Quadro® M5000 SE – (Maxwell, 2048 CUDA Cores, 150W)</li> <li>NVIDIA® Quadro® M3000 SE – (Maxwell, 1024 CUDA Cores, 75W)</li> <li>NVIDIA® Tesla® M6 – (Pascal, 1536 CUDA Cores, 100W)</li> <li>NVIDIA® GeForce® GTX 1080 – (Pascal, 2560 CUDA Cores, 150W)</li> <li>NVIDIA® GeForce® GTX 1050Ti – (Pascal, 768 CUDA Cores, 60W)</li> </ul>
<b>COM Express Compatibility</b>	COM Express® Type 6 (PICMG COM Express® COM.0 R2.1)
<b>MiniPCIe Expansion</b>	2 slots (with PCIe, USB and SATA connections)
<b>PCIe/104 Expansion</b>	4 x PCIe x1 lanes 2 x SATA III (on PCIe/104 Type-2 Pins)
<b>DisplayPort/HDMI/DVI</b>	6 total - 2 outputs from COM Express, 4 outputs from GPU (On-board Circuitry enables DisplayPort or HDMI or DVI)
<b>VGA Video</b>	1 Analog CRT VGA Port
<b>LVDS Video</b>	18-24-bit LVDS
<b>Gigabit Ethernet</b>	2 x 10/100/1000 Ethernet Ports
<b>USB 2.0</b>	6 USB 2.0 Ports
<b>USB 3.0</b>	4 USB 3.0 Ports
<b>HD Audio</b>	1 stereo input, 1 stereo output
<b>RS-232</b>	3 total - 2 from PCIe UART, 1 to COM Express console port
<b>RS-485</b>	2 Ports
<b>GPIO</b>	8 -bits (Buffered 4in/4out, +3.3V or +5V selectable)
<b>Ext SATA</b>	2 external SATA connectors (capable of SATA III)
<b>mSATA</b>	2 mSATA slots (capable of SATA III)
<b>SD Card</b>	1 micro SD Card slot (from USB Host controller, with bootable option)
<b>System Interfaces</b>	I2C, SMBus, S3 Power Level Output, Reset Output
<b>I/O Connector Type</b>	Rugged Locking Positive Latching 2mm Pitch Connectors
<b>Input Power</b>	Single wide input range +12V to +48V DC
<b>Power Consumption</b>	Varies per VXG/DXG SKU with different CPU and GPU models
<b>Dimensions</b>	See online 3D Models
<b>Operating Temperature Range</b>	0°C to +55°C and -40°C to +85°C options available

## FEATURES

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

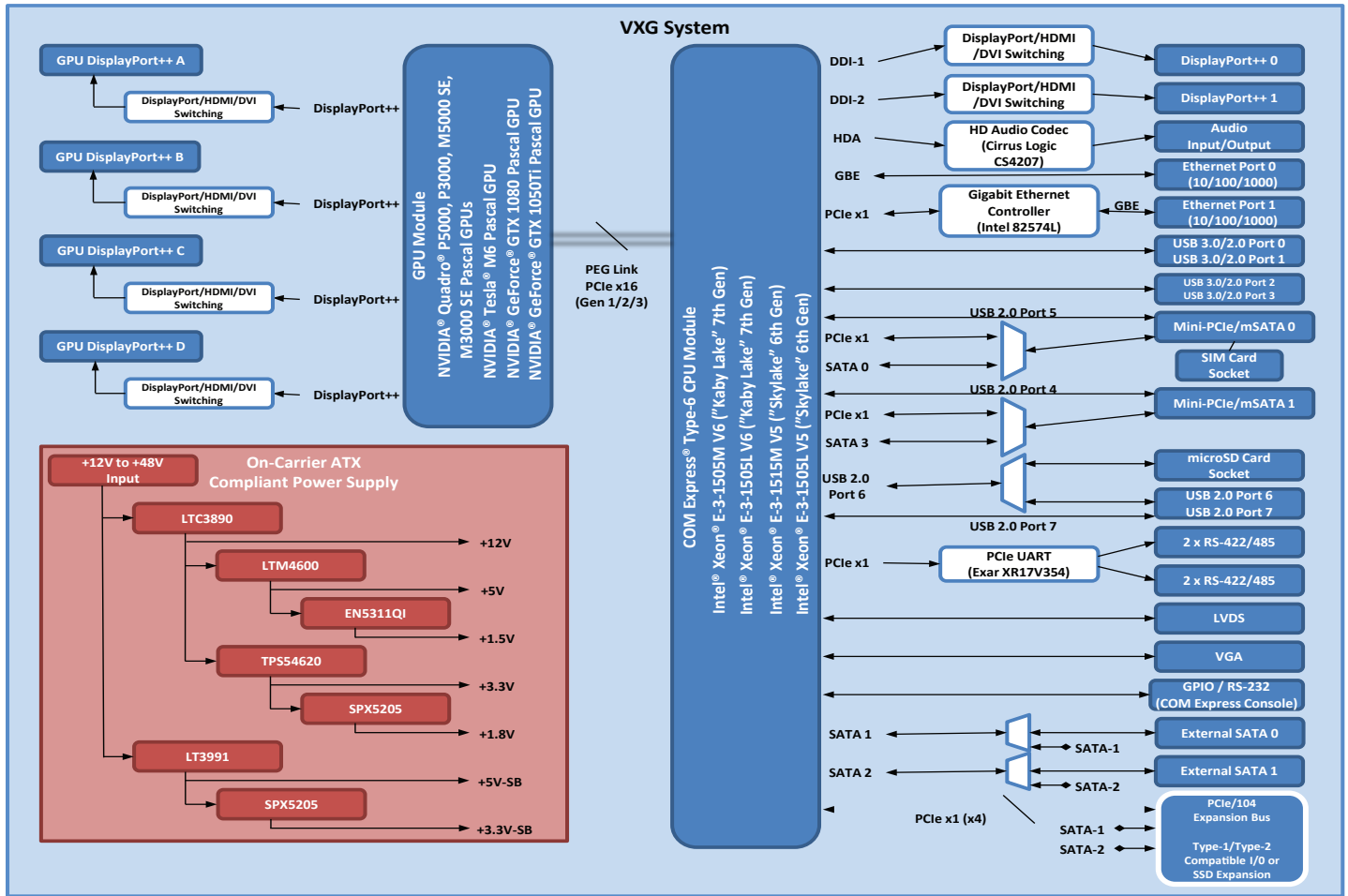
✓ *GPUs can be targeted for 4 independent display outputs OR for a headless GPU processing system utilizing CUDA cores*

✓ *System uses a building block approach, mix and match CPUs with NVIDIA® Quadro®, Tesla® or GeForce™ GPUs*

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



## 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