Connect Tech Inc.
Embedded Computing Experts

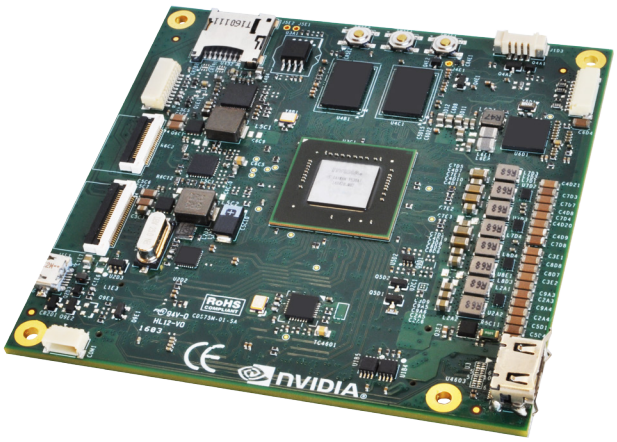
COM Express® Tegra K1

Product Name: COM Express® Tegra K1
Part Number: CMG601

This COM Express® product is based on the NVIDIA® Tegra K1 SoC. It is compliant with the COM Express® Type 6 pinout, provides advanced CUDA-computing capability, edge graphics APIs, breakthrough performance with low-power, and is ideal for small form factor and embedded market systems.

The NVIDIA® Tegra K1 (TK1) contains 192 supercomputer-class GPU cores with the NVIDIA® 4-Plus-1™ 2.3GHz quad-core ARM® Cortex™-A15 CPU. The CMG601 delivers 325 GFLOPS computing power with a low 15 Watt energy level.

This product is designed to be deployed with a COM Express® Type 6 carrier board.
The COM Express® Tegra K1 is able to operate at a commercial temperature of 0°C to 55°C or extended -20°C to 70°C (two models), yielding high reliability and capability for applications requiring faster performance but are SWaP-constrained in harsh environments.



Specifications

Processor	NVIDIA® Tegra K1 (TK1) 4-Plus-1 ARM® Cortex A15 "r3"
Bus Type	COM Express® Type 6
CUDA Core	192
Memory Size	2GB DDR3L
Memory Clock (MHz)	933
Memory Interface Width	64-bit
Operating System	Ubuntu 14.04 LTS
Display	HDMI 1.4B - Maximum resolution: 3840x2160 30Hz eDP 1.4 - Maximum resolution: 3200 x 2000 60Hz Single Channel LVDS - 1920 x 1200 60Hz
I/O	2x MIPI CSI 1x GbE 1x SATA(3Gb/s) 1x micro SD slot 5x USB2.0 Host Ports(1 for OTG) 1x USB3.0 Host Port 4x UARTs(1x 1.8V and 3x 3.3V tolerance) 4x GPI, 4x GPO 1x HD Audio or 1x I2S
Power Consumption	15 Watts maximum (+ 12VDC)
Thermal	Heat Spreader
Dimensions	95mm x 95mm (3.74" x 3.74")
Operating Temperature	TK1: 0℃ to 55℃ (32℉ to 131℉) TK1-B: -20℃ to +70℃ (-4℉ to 158℉)
Storage Temperature	-40℃ to 125℃ (-40℉ to 257℉)
Operating Humidity	10-90%, no condensation
Mass Storage	16GB eMMC 4.51 Flash 1x serial SATA interface (3Gb/s) 1x micro SD slot

FEATURES

- ✓ *Small Form Factor: 95mm x 95mm (3.74" x 3.74")*
- ✓ *2x MIPI CSI, 1x GbE, 1x SATA, 1x micro SD, 5x USB 2.0, 1x USB 3.0, 4x UARTS*
- ✓ *15 watts max (+12VDC)*
- ✓ *Ubuntu 14.04 LTS Operating System*

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