QUANTUM3D®
Technology for Solutions

Ruggedized Embedded Computer System

Thermite® TVC-3.0 Model 1100

High Performance in Any Environment

The Thermite TVC-3.0 Model 1100 offers state-of-the-art embedded computing, mobile graphics, and conduction cooling, delivering unparalleled graphics and processor performance for rugged battlefield applications. The Thermite TVC-3.0 Model 1100 is perfect for high-performance computing, advanced graphics, shader-based rendering, and GPGPU processing in a compact form factor for any environment.

The Thermite TVC-3.0 Difference

The Thermite TVC-3.0 features a 1.6 GHz Intel Core 2 Duo processor with a NVIDIA FX770M GPU for superior compute and graphics processing performance, making it ideal for performance rich applications in battlefield, ground, air and maritime environments.

Processing Powerhouse

The Thermite TVC-3.0 Model 1100 with a CUDA enabled GPU can handle accelerated GPGPU operations to solve complex compute-intensive applications in the most demanding of environments. The Thermite TVC-3.0 is perfect for field-based training, situational awareness, sensor processing/display, mission planning, mission rehearsal, weapon system control, maintenance, and other augmented reality simulations.

CUDA is a general purpose parallel computing architecture that leverages the parallel compute engine in NVIDIA graphics processing units to solve many complex computational problems in a fraction of the time required on a CPU. The fast parallel computing architecture is easily accessed using the most common programming languages in use today.

The Thermite TVC-3.0 brings capabilities of the most powerful PC workstations to the battlefield—for deployment on Ground Vehicles, Aircraft, Maritime, or other vehicles.

Benefits/Features of the TVC-3.0

- **Aggressive Performance** – Intel® Core 2 Duo LV processor and a CUDA-enabled GPU

- **3D Graphics** - NVIDIA® Quadro® FX770M GPU for visual rich applications

- **Power Efficient** – Dynamic power control manages power consumption and thermal dissipation

- **Versatile I/O** – Built-in USB, RS-232, RS-422, and gigabit Ethernet

- **Rugged** - Designed to work in the most demanding field environments

- **Storage for your needs** – Drive size and drive type to suit your needs

- **Video Capture** – Quantum3D's Eidetix advanced PCIe-based video capture and processing options for real-time video capture

Specifications

Technical:

CPU
- Intel Core 2 Duo LV 1.6 GHz
- Intel 965GME "Santa Rosa" MCH, ICH8-M south bridge
- Up to 4MB L2 Cache

Memory
- 4 GB dual-channel DDR2 DRAM

Graphics Processor
- NVIDIA® FX770 CUDA parallel computing processor
- 32- core GPU module
- 256 MB DDR2 DRAM
- PCIe x16 interface

Operating System
- Microsoft® Windows® XP Embedded

Removable Storage Options
- High-performance rugged SSDs: 32GB or 128GB
- Rotating Hard Drive: 80GB

Interfaces
- VGA
- Eidetix PCIe video capture
- IEEE 802.3 10/100/1000 Ethernet
- Two USB 2.0
- 2 RS-232C, 1 RS-422 Asynchronous, 1 RS-422 Synchronous (SDLC)
- MIL-STD 1553 A/B Dual Redundant Bus (opt.)

Power/Performance
- 10 – 36 VDC (Designed for MIL-STD-704F, STANAG 1008 and MIL-STD 1275)
- Advanced power-saving technologies

Dimensions & Weight
- 244 mm x 160 mm x 81.5 mm (D x W x H)
- 4 kg (8.8 lbs)

Environmental*:

	With Rotating Disk Drive		With Solid State Drive	
	Operating	Non - Operating	Operating	Non - Operating
Ambient Temperature	0° C to +50 °C	-40° C to +70 °C	-25° C to +62 °C	-40° C to +85 °C
Humidity Level	5% - 90%, NC	5% - 95%, NC	5% - 90%, NC	5% - 95%, NC
Altitude Level	-200 to 10,000 ft	-200 to 40,000 ft	-200 to 40,000 ft	-200 to 40,000 ft
Vibration Resistance	1 G, 15 -500 Hz	5 G , 22 -500 Hz	Up to 12 G RMS	Up to 12 G RMS
Shock Resistance	Up to 20 G	Up to 40 G	Up to 40 G	Up to 40 G
Immersion Resistance	1m for 30 minutes	1m for 30 minutes	1m for 30 minutes	1m for 30 minutes

*Subject to validation testing, and subject to change at any time

Which Thermite is right for you?

Thermite TVC-2.0 TL	Thermite TVC-2.0	Thermite TVC-3.0
The lightest of the Thermite rugged computers, designed for man-wearable applications in the field.	Designed for vehicle mounted applications, in environments where 28V power is available.	The most powerful of Thermite rugged computers, designed for compute and visual rich battlefield applications.