QUANTUM3D®
Technology for Solutions

Ruggedized Embedded Computer System

Thermite® TVC-2.0 Models 3500/3520

Vehicle Computing Solved

Vehicle-based computing is demanding. Tackling battlefield conditions requires ultra-high-performance computing power and ruggedness all-in-one. The Thermite TVC-2.0 series of rugged computers are designed for vehicle-based applications delivering state-of-the-art embedded computing, mobile graphics, extended environment packaging, and conduction cooling in one package.

The Thermite TVC-2.0 Difference

The Thermite TVC-2.0 models 3500/3520 embedded computers deliver mobility, moderate power consumption, ruggedness, and visualization performance for all your vehicle computing needs. The Thermite TVC-2.0 series deliver mobile graphics, conduction cooling, and support for open architecture operating systems, striking the perfect balance between affordability and performance for vehicle-mounted applications.

Lightweight Vehicle-Mounted Computing

The Thermite TVC-2.0 brings the power of PC workstations to the battlefield—for deployment on tanks, M998 High Mobility Multipurpose Wheeled Vehicles (HMMWV), Bradley Fighting Vehicles, aircraft, maritime, or other manned or unmanned vehicles. The Thermite TVC-2.0 is ideal for field-based training, mission planning, mission rehearsal, weapon system control, maintenance, and embedded computing applications such as heads-up/heads-down and digitial map displays. The Thermite TVC-2.0 sets the embedded computing standard for vehicle mounted applications.

Features and Benefits

- **Rugged** – Contained within a lightweight, rugged, sealed alloy enclosure designed for conduction cooling
- **28V Power** – Designed for vehicle use
- **Reliable Rugged Storage** – Solid State Drive storage options for shock-resistence and use extended temperature environments
- **Video Capture** – Accelerated video capture for sensor or camera input
- **Flexible Video Output** – Supports single or dual RGB QXGA and NTSC, PAL, RS-170/A, and S-Video output
- **Expandability** – Internal CardBus Slot for additional factory-installed options can be installed in extra internal slot
- **Military Spec Compliance** – MII-STD 810G certifiable
- **Standard Computing Platform** - 100% PC-compatible with both Windows and Linux operating systems
- **Processing Performance** – Intel® Pentium® M CPU, with up to 1 GB system memory
- **Graphics** - ATI Mobile Graphics or Intel® Integrated Graphics
- **MIL-STD 1553 (Model 3520)** - Serial data bus standard for use with military avionics

Specifications

Technical:

CPU
- Intel Pentium M 1.4 GHz
- 2MB L2 Cache and/or PCI/PCI Express Bus Support

Memory
- Up to 2 GB DDR2 System Memory

Graphics Processor
- Up to 128 MB DDR2 shared or dedicated frame buffer
- Single or dual analog RGB outputs
- Graphics API support for DX9 and OpenGL 2.0
- Simultaneous video outputs in S-Video, RS-170/A, NTSC, or PAL
- Accelerated real-time video capture port for camera/sensor applications

Operating Systems Supported
- Microsoft® Windows® XP Professional Standard
- Options: Microsoft XP Embedded, Redhat® Linux®, LynuxWorks® BlueCat® Linux, other

Standard Interfaces
- 2 USB 2.0 standard (option for up to 6)
- 2 PS-2 (keyboard and mouse)
- Serial I/O (RS-232C/422), stereo output, audio "mic" input
- IEEE 1394 Firewire®, 802.3 10/100 Ethernet

Factory Optional Connectors
- IEEE 802.11a/b/g with antenna
- Additional IEEE 10/100 Ethernet
- GPS with antenna
- MII-STD-1553 A/B dual redundant port

Storage Options
- 40 GB 2.5" Rotating HDD
- 32 GB 2.5" Solid State Drive
- 128 GB 2.5" Solid State Drive

Power/Performance
- 28VDC (10.5 - 30 volts DC)
- Advanced power-saving technologies
- 14W – 19W operating power (tactical mode)
- 19W – 34W operating power (training mode)

Dimensions
- 114 x 173 x 64 mm (4.5 x 6.8 x 2.5 in) (W x H x D)
- 1.13 kg (2.5 lbs) typical, including connectors

Note: Thermite TVC-2.0 Model 3520 uses MIL-STD 1553 A/B dual redundant port and RS422 port to replace Model 3500's Firewire port and USB port.

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	-10° C to +50° C	-40°C to +70° 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

The lightest of the Thermite rugged computers, designed for man-wearable applications in the field.

Thermite TVC-2.0

Designed for vehicle mounted applications, in environments where 28V power is available.

Thermite TVC-3.0

The most powerful of Thermite rugged computers, designed for compute and visual rich battlefield applications.

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