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# ATS-8760T

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## Rugged and TEMPEST NOTEBOOK

### SDIP 27 Level A



The ATS-8760T, based on miltope's RLC-3G, is an ultra-rugged and Tempest Notebook with a 15.4" WSXGA+ display. The ATI Radeon™ E4690 discrete GPU with 512 MB of on-chip memory delivers leading performance for embedded applications from interactive clients to gaming platforms. Having its own dedicated RAM allows the GPU to process graphics much faster, leading to improved 3D rendering and high definition video.

The notebook is powered by the energy efficient 45nm Intel® Core™ 2 Duo processor T9400 and features 2.53 GHz clock speed with 6 MB L2 cache and 1066 MHz front side bus. Dual Channel DDR3 (Double-Data-Rate) memory supports up to 8 GB at 1066 MHz. The most dramatic next-generation capability is in the power of Intel® Core™ 2 Duo processor technology to significantly improve range, battery life, and speed, coupled with flexible I/O design.

There are ample USB ports (4), Ethernet (Gigabit), one RS-232/485, eSATA, audio in and out, and video (analog and digital), all managed by the Intel® ICH9M I/O controller hub. The modular I/O technology can handle all kinds of I/O options specified for any program including 1553 data bus, video capture, async serial and more.

The ATS-8760T is built to operate in the harshest environments in the world.

#### Key Features:

- Intel® Core™ 2 Duo processor T9400 technology
- Delivers the fastest-3D video thanks to its ATI E4690 discrete graphics solution with 512 MB dedicated video memory
- Faster, more powerful performance in a rugged portable computing system for military tactical operations
- Developed specifically to meet qualification testing and safety/material release by the US Army
- TEMPEST SDIP 27 Level A

Preliminary specification, subject to change without notice!  
Released March 2011



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## Technical Specification:

### Processor

- Intel® Core™ 2 Duo T9400 Mobile Processor includes a 2.53 GHz Processor, 6 MB L2 cache, 1066 MHz Front Side Bus

### Operating System

- Windows® 7 32bit (Vista or XP downgrade available IAW Microsoft licensing provisions)
- Linux validated for initial release

### RAM

- Up to 8 GB DDR3
- Integrated mobile Intel® GM45 Express chipset with ICH9M-Enhanced
- ATI E4690 with 512 MB dedicated video memory

### Storage

- Removable Solid State or Rotating Shock Isolated Hard Disk Drive SATA (3 Gigabit per second)
- Rotating 80 GB standard (80-640 GB optional)
- Solid-state 160-600 GB optional

### Display System

- 15.4" WSXGA+ (1680 x 1050)
- Sunlight Readable AMLCD up to 125.000 lux

### Keyboard / Pointing Device

- Rugged 87 key, backlit keyboard with tactile feel, Touchpad and Mouse "Stick"

### Interfaces

- One Serial (232/422/485), D-Sub 9; Up to 4x USB 2.0, D-Sub 9; 1x VGA (analog); PCMCIA (2x Type I or II or 1y Type III); Express Card 54; Smart Card; One 10/100/1000 BaseT Ethernet

### Peripherals

- Internal 5" ISO standard DVD+RW/CD-RW

### Physical Characteristics

- Dimensions (WxHxD): 381x76x300 mm
- Weight: ~5,9 kg (configuration dependent)

### Power

- Single DR202 Form Factor Li-Ion 7800 mAh rechargeable battery, 18-32 VDC, MIL-STD-1275B

### Environmentals

- **Temperature:** MIL-STD-810F, Method 501.4/502.4, Proc. II (3 cycles); -18°C to +60°C, ramp of 5°C per minute (-32°C optional with heater); Proc II (5 cycles); Non-Operating -51°C to +71°C, ramp of 5°C per minute
- **Non-Operating Thermal Shock:** MIL-STD-810F, Method 503.4, Proc. I (Steady State); (+71°C to -51°C 3 cycles, high to low = 1 cycle)
- **Solar Radiation:** MIL-STD-810F, Method 505.4, Procedure I, Diurnal Cycle A1 (3-24 hour continuous cycles)
- **Transit Drop Shock:** MIL-STD-810F, Method 516.5, Procedure IV; Using quick release hook or drop tester (Notebook in and out of transit case, 90 cm drop any orientation total 26 drops; Functional and PCMCIA Card Operational Checks after each drop)

- **Operating Shock:** MIL-STD-810F, Method 516.5, Procedure I (Functional); 30G, 11ms, EUT operational (3 shocks/axis/direction = 18 total shocks)
- **Thermal Shock:** MIL-STD-810F, Method 503.4; withstand temperature change from -18°C to +21°C and +52°C to +21°C in 10 minutes
- **Operating Vibration:** MIL-STD-810F, Method 514.5, Procedure I, Cat 21 (Ground Vehicles), Figure 514.5C-1 (Notebook out of transit case); Paragraph 2.3.10.8.a.(2)
- **Transportation Vibration:** MIL-STD-810F, 514.5, Procedure I, Category 4, Annex A, Figure 514.5C-3 vibration profile for composite wheeled vehicles (Notebook in transit case, each axis)
- **Minimum Integrity Test:** MIL-STD-810F, Method 514.5, Procedure I, Category 24, Figure 514.5C-17 (Notebook in transit case, each axis, 0.04g/Hz at 20-1000 Hz, -6dB/Octave at 1000-2000 Hz, 1hour/axis duration)
- **Shock Bench Handling:** MIL-STD-810, Method 516.5, Procedure VI. Survive one 45 degree rotational drop from each bottom edge
- **Altitude:** MIL-STD-810F, Method 500.4, Procedures I and II; Notebook in or out of transit case, 4.500 m operating, 12.000 m Non-Operating; minimum test duration 1 hour using 10 ms rate of change)
- **Dust and Water:** IP 54; (Notebook Protect against dust limited ingress (no harmful deposit) and protection against water sprayed from all directions to limited ingress permitted.)
- **Rain:** MIL-STD-810F, Method 506.4, Procedure I (Notebook in and out of transit case, 46mm per hour, 32 km/h wind for 30 minutes / each surface)
- **Humidity:** Operational: MIL-STD-810F, Method 507.4, Procedure I (10 to 95% five 48 hour aggravated temperature-humidity cycles (10 days total) at RH 95%/60°C with an operational test performed every 2 days); Non-Operational (in transit case): MIL-STD-810F, Method 507.4 Procedure II (5 to 95% five 48 hour aggravated temperature-humidity cycles (10 days total) at RH 95%/60°C with an operational test performed every 2 days)
- **Salt Fog:** MIL-STD-810F, Method 509.4; (Notebook in transit case, 5±1% aqueous salt)
- **Sand & Dust:** MIL-STD-810F, Method 510.4, Procedures I and II, (Notebook out of transit case 32 ±4,8 km/h for 30 minutes / each surface, at a concentration of sand 2,2±0,5 g/m³ and Dust 10,6±7 g/m³)
- **Fungus:** MIL-STD-810F, Method 508.5 (Notebook in transit case certification materials do not support fungal growth)
- **EM/EMC:** MIL-STD-461E Radiated Emissions (RE101-1 and RE102-3), para 5.15 and 5.16; Radiated Susceptibility (RS103 and RS105) para 5.19 (2 MHz to 18 GHz) and 5.20; Conducted Susceptibility (CS101, CS114, CS115 and CS116) para 5.4 and 5.5; Conducted Emissions (CE101, CE102) para 5.7, 5.12 (limit curve #3) and 5.14, MIL-STD-464A Electrostatic Discharge, para 5.73; FCC Class B, Part 15 Electronic Equipment Digital Device
- **High Altitude Electromagnetic Pulse (HEMP):** MIL-STD-461E,RS105;MIL-STD 2169B HEMP environment 1
- **Near Strike Lightning (NSL):** MIL-STD-464A, Paragraph 5.4; TOP 1-2-511
- **Acoustic Noise:** MIL-STD-810F, 515.5; (Ambient noise generated does not exceed 60dBA, measured at 1 meter in front of the unit with a low ambient noise floor)
- **Explosive Atmosphere:** MIL-STD-810F, Method 511.4, Proc I

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