Mechanical and Materials Engineering Division
July 31, 2009

SUMMARY OF TESTS PERFORMED

Project Number: 18.04481.16.101

Company: Panasonic Computer Solutions Company
Three Panasonic Way, 2F-12
Secaucus, NJ 07094
Attn: Angela MacNeill

Equipment Tested: Panasonic CF-19

Test Dates: May 2009 – July 2009

Notes: *The test item was evaluated for ability to boot into the Microsoft Windows® XP operating system following each of the tests described within this summary report. A listing of summarized tests and results appear in the accompanying table.*

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[redacted]

Summary of Tests Performed on the Panasonic CF-19

Test Description	Test Parameters	Test Results*
Altitude: Storage/Air Transport	MIL-STD-810G, Method 500.5, Procedure I • 15,000ft Non-Operating	Pass^
Altitude: Operation/Air Carriage	MIL-STD-810G, Method 500.5, Procedure II • 15,000ft Operating	Pass^
High Temperature: Storage	MIL-STD-810G, Method 501.5, Procedure I • 160°F Non-Operating	Pass^
High Temperature: Operation	MIL-STD-810G, Method 501.5, Procedure II • 140°F Operating	Pass^
High Temperature: Tactical–Standby to Operational	MIL-STD-810G, Method 501.5, Procedure III • High storage (non-operating) to high operating (test for operation) • Test results are for battery operation	Pass
Low Temperature: Storage	MIL-STD-810G, Method 502.5, Procedure I • -60°F Non-Operating	Pass^
Low Temperature: Operation	MIL-STD-810G, Method 502.5, Procedure II • -10°F Operating	Pass^
Temperature Shock	MIL-STD-810G, Method 503.5, Procedure I • From 200°F to -60°F, three cycles	Pass^
Rain: Blowing	MIL-STD-810G, Method 506.5, Procedure I • 5.8in/hr rain, 70mph wind, 30 minutes per surface • Unit operating	Pass
Rain: Drip	MIL-STD-810G, Method 506.5, Procedure III • 15 minute exposure, drip test	Pass^
Humidity	MIL-STD-810G, Method 507.5, Procedure II (Aggravated) • Temp. cycles 86°F to 140°F; 95%RH	Pass^
Sand and Dust: Dust	MIL-STD-810G, Method 510.5, Procedure I • Blowing Dust (operating) • Operating temperature of 140°F	Pass^
Sand and Dust: Sand	MIL-STD-810G, Method 510.5, Procedure II • Blowing Sand (operating) • Operating temperature of 140°F	Pass^
Explosive Atmosphere	MIL-STD-810G, Method 511.5, Procedure I	Pass^
Vibration: General Vibration – operating	MIL-STD-810G, Method 514.6, Procedure I (Transportation) • Panasonic provided conditions (operating)	Pass^
Vibration: General Vibration – non-operating	MIL-STD-810G, Method 514.6, Procedure I (Transportation) • Category 24, general minimal integrity (non-operating)	Pass^
Vibration: Loose Cargo Transportation	MIL-STD-810G, Method 514.6, Procedure II	Pass
Shock: Functional	MIL-STD-810G, Method 516.6, Procedure I • 40g, 11ms Operating	Pass^

+ *Full details will be provided in [redacted] Report Number 18.04481.16.100.FR1*
* *Test previously performed using comparable MIL-STD-810F procedure. See [redacted] Report 18.04481.09.FR2*
^ *Test previously performed using comparable MIL-STD-810F procedure. See [redacted] Report 18.04481.09.201a*

Test Description	Test Parameters	Test Results*
Shock: Transit-Drop 48-inch	MIL-STD-810G, Method 516.6, Procedure IV • 26 drops – 48in height on to 2in plywood – non operating • All drops performed on the same unit	Pass
Shock: Transit-Drop 60-inch	MIL-STD-810G, Method 516.6, Procedure IV • 26 drops – 60in height on to 2in plywood – non operating • All drops performed on the same unit that was also subjected to all 48in drops	Pass
Shock: Transit-Drop 72-inch	MIL-STD-810G, Method 516.6, Procedure IV • 26 drops – 72in height on to 2in plywood – non operating • All drops performed on the same unit that was also subjected to all 48in and all 60in drops	Pass
Freeze / Thaw	MIL-STD-810G, Method 524, Procedure III (Rapid Temperature Change) • Test effects include condensation	Pass
Vehicle Vibration	ASTM D4169-04 (99) Schedule E, Truck Assurance Level II, Operating	Pass

* *Full details will be provided in [redacted] Report Number 18.04481.16.100.FR1*