DECLARATION OF CONFORMITY

GoBook II - IX260 Environmental Test Criteria

Type of Equipment: ***Ruggedized notebook PC with WLAN, WAN, & Bluetooth Radio features.***

Brand Name/Trade Mark: GoBook II **Model:** IX260

Manufacturer: Itronix Corporation, 801 S. Stevens St., Spokane, WA 99204 USA
Telephone: 509-624-6600 FAX: 509-742-1672

Manufacturers authorized representative within the EU/EEA:
Itronix House, Earlplace Business Park, Fletchamstead Highway, Coventry CV4 9UR, UK
Telephone: +44 (0)24 7671 4800 FAX: +44 (0)24 7671 5677

The following standard or technical specifications have been met:

Shock	Standard	Method	Result
Drop	MIL STD 810F *(3' to plywood, 26 times)*	516.5	Exceeds
Vibration			
Random & Sinusoidal	MIL STD 810F	514.5	Pass
Truck Transport	ASTM 4169	11.5.2	Pass
Temperature			
High Temp Storage & Operating	MIL STD 810F	501.4	Exceeds
Low Temp Storage & Operating	MIL STD 810F	502.4	Exceeds
Temperature Shock	MIL STD 810F	503.4	Exceeds
Sealing			
Water Resistance	MIL STD 810F *(10 minutes per axis)*	506.4	Pass
Dust &Water Ingress Protection	IEC 60529	IP-54	Pass
Humidity	MIL STD 810F	507.4	Pass
Low Pressure	MIL STD 810F	500.4	Pass
ESD (Electrostatic Discharge) 15kV	IEC	801-2	Pass

The product complies with the standards listed above. Itronix Corporation has an internal product control system that ensures compliance between the manufactured products and the technical documentation.

Spokane, Washington
(Place of Issue)

April 9, 2004
(Date of issue)

F. Ben Irwin, Vice President Product Development :
(Name & Function)

(Signature)

GOBOOK II ENVIRONMENTAL TEST CRITERIA

TEST	STANDARD	DESCRIPTION
(Drop) Shock	MIL STD 810F, Method 516.5, Procedure IV, *(Modified)*	36" drop to 2" of plywood in the following attitudes at room temp: - 26 drops. One drop to each face, edge and corner. *Modified:* *Only two test units to pass all drops.* *(Mil-Spec reads 5 units can be used to pass all drops)* *Height Modified from 48" to 36"* *Unit is not operating* *External Antenna may Sustain Damage and is User Replaceable.*
MIL-STD Vibration	MIL STD 810F, Method 514.5, Procedure I, Category 24, Fig. 514.5C-17	Fig.17: Power Spectral Density = .04 G^2/Hz @ 20 to 1000 Hz, descending 6 dB/Oct to 2000 Hz. 60 minutes per axis, 3 axis. *Unit is not operating*
	MIL STD 810F, Method 514.5, Procedure I, Category 24, Fig. 514.5C-18	Fig 18: Logarithmic sweeps 5 to 500 Hz Beginning at 0.20 inch [5mm] displacements. 30 minutes per axis, 3 axis. *Unit is not operating*
ASTM Vibration	ASTM 4169-99 Truck Assurance Level II Schedule E	Power Spectral Density ranges 0.00001 to 0.01 G^2/Hz, Frequency range is 1 to 200 Hz. Overall GRMS is 0.52. 90 minutes per axis, 3 axis. Unit is operating and accessing the HDD.
Low Pressure	MIL STD 810F, Method 500.4, Procedure I, Procedure II. *(Modified+)*	Procedure I: Bring unit to PSIG @ *30,000 Ft* [9,144 meters]: Maximum rate of 2000 feet per minute. Vacuum to be held for one hour , @ Room Temp *Unit is not operating.* Procedure II: Bring unit to PSIG @ *10,000 Ft* [3048 meters]: Vacuum to be held for one hour , @ Room Temp Unit is operating and accessing the HDD
Temperature – High – Storage	MIL STD 810F, Method 501.4, Procedure I. *(Modified +) Hot*	Temperature : *75 °C [167 °F] (Mil-Std reads 71 °C [160 °F]),* Seven 24 hour cycles. Unit is not operating.
Temperature – High – Operating	MIL STD 810F, Method 501.4, Procedure II. *(Modified +) Hot*	Temperature : *60 °C [140 °F] (Mil-Std reads 49 °C [120 °F]),* Five 24 hour cycles. Unit is operating, running all tests in AMIDIAG in a continuous loop.
Temperature – Low – Storage	MIL STD 810F, Method 502.4, Procedure I. *(Severe Cold +)*	Temperature : *-55 °C [-67 °F] (Mil-Std reads -51 °C [-60 °F]).* One 24 hour cycle. Unit is not operating.
Temperature – Low – Operating	MIL STD 810F, Method 502.4, Procedure II.	Temperature: -20°C [-4°F] (Mild Cold) One 24 hour cycle. Unit is operating, running all tests in AMIDIAG in a continuous loop.

TEST	STANDARD	DESCRIPTION
Non-Operating Temperature Shock	MIL STD 810F, Method 503.4, Procedure I *(Severe Cold +)* *(Modified +) Hot*	Low Temperature: *-55°C [-67°F] (Mil-Std reads -51°C [-60°F])* High Temperature : *75°C [167°F] (Mil-Std reads 71°C [160°F])* Four (4) cycles : Begin in low temperature end in low temperature. Four (4) hour minimum temperature stabilization in each temperature. Five (5) minute max exchange time. Unit is not operating.
Cold Boot	*Itronix Developed* Test Basis: Manufacturers Spec. and testing results	0 degree C Hard Disk Drive boot-up test, repeat 5 times Display CCFL to start at 0 degree C, repeat 5 times. Display luminance to meet SQA test plan specifications.
Humidity	MIL STD 810F, Method 507.4	Temperature : Cycles between 30°C [86°F] and 60° [140°F] Humidity : 85% and 95% +/- 10% Ten 24-hour cycles. Unit is operating and accessing the HDD.
Water Resistance	MIL STD 810F, Method 506.4, Procedure II. *(Modified)*	Water pressure of 40 PSIG [275.8 Kpa – Gauge] Minimum of 4 in/hr [100 mm/hr] *10 minutes per axis, 6 axes (Mil-Std reads 40 minutes per axis).* Unit is not operating.
Water Jets	IP X4 IEC 529, (EN 60529), (IEC 60529)	Water volume: Flow rate of 10.0 l/min ± 5% [2.64 gpm], spray nozzle with counterbalance sheild removed Orientation : All practical directions (all external surfaces). Duration : 5 Minutes Unit is not operating
Dust	IP 5X IEC 529, (EN 60529), (IEC 60529)	Particle size : smaller than 75 µm, Dust density : 2 kg/m^3 Duration : 8 hours. Category 2 Failure Criteria : No deposits of dust inside the enclosure.

Mechanical Life Testing	***Itronix developed*** **test** based on : Manufactures Spec. and testing results	Mechanical components such as display hinges and cabling, doors, keyboards, connectors, antenna etc. are cycled the number of times they are expected to perform in the 5 year life of a rugged product: - display hinges: 5,200/year - power: 1,300/year - battery pack: 1,000/year - HDD Connector 750/year - RJ-11: 1,300/year - RJ-45: 1,040/year - "D" connectors: 1,040/year - USB: 1,040/year - keyboard keys: 100,000/year - vehicle cradle: 2,600/year - antenna: 5,200/year - Display harness 5,200/year - CTO Connectors: 2/year - EL Keyboard Panel: Maintain at least 2 nits for 7000 hours of use - Touch screen shall withstand repeated writing of 100,000 characters in a 30mm X 30mm with a load of 250 gf max at 100mm/sec without degradation in linearity (+/- 1.5%) or readability (optical performance). A special stylus will be used and will be replaced every 10,000 characters. The special stylus will be made of polyethylene or HDPE and have a spherical tip of .8mm.

TEST	STANDARD	DESCRIPTION
ESD	IEC 801-2	+/- 4kV[Contact discharge]: No noticeable effect +/- 8kV[Contact discharge]: No data or program loss, reboots, or resets. +/- 15kV [Air discharge] : No component failure (hard error) Test all external contacts, connectors, and screws with five discharges per polarity under the two conditions: Unit is operating, HDD accessing, on battery power. Unit is operating, HDD accessing, on external power.
Bench Handling	 Operating mode Non-Operating mode	The purpose of the test is to investigate the product's capability of surviving typical handling impact. It is performed by placing the product on a typical bench surface and lifting and dropping each of the 4 edges of the bottom of the product to a height of 7cm (unit is operating), 10mm (unit in not operating). Each edge is dropped 25 times, interval time is 10 sec. Each edge is dropped 50 times, interval time is 10 sec.