

Mount Everest Mountaineering Expedition

Altitude Junkies Operates a General Dynamics Itronix GoBook® MR-1 at the Top of the World



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– Phil Crampton, director, Altitude Junkies

Product

General Dynamics Itronix GoBook® MR-1

Application

Mountaineering Expedition

Solution

Fully-rugged, ultra-mobile General Dynamics Itronix GoBook MR-1 survives extreme altitude and severe environmental conditions

General Dynamics Itronix rugged ultra-mobile PC survives extreme conditions and becomes the first known laptop computer to send an email from the summit of Mount Everest.



Photo courtesy of Altitude Junkies.

Overview

When it comes to climbing the world's highest mountains, Altitude Junkies is the expert. The company organizes professional mountaineering expeditions to 7,000-meter and 8,000-meter peaks in Nepal, Tibet, Pakistan and China. They are specialists for Everest, Cho Oyu and Shishapangma and have organized multiple expeditions and guided many western climbers to their summits.

Each year Altitude Junkies runs an expedition to the summit of Mount Everest, the world's highest mountain, making it an ideal opportunity for General Dynamics Itronix to test its rugged GoBook MR-1 in a true field environment with exceptional temperatures and altitudes. Altitude Junkies Director Phil Crampton is one of the few climbers to have summated Mount Everest from both the Nepalese (south) and Tibetan (north) sides of the mountain. It was Crampton who carried and tested the General Dynamics Itronix MR-1 rugged notebook computer throughout the expedition and to the mountain's peak, making it the first known laptop computer to be carried to and operated on the summit of Everest.

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Problem

Rough handling, intense altitudes and extreme temperatures make mountaineering expeditions treacherous for notebook computers

Computers that are used for planning and communications on high altitude mountaineering expeditions rarely survive the duration of the expedition. Rugged handling throughout the climb can tax the reliability of the system's design. Extreme altitudes often create hard drive failures. Even more, broad temperature ranges, from 90 degrees Fahrenheit to minus 40 degrees Fahrenheit, can dramatically impact system speed, battery life and overall performance. For a notebook to survive a trip to the highest point on earth and to operate in that environment, it would need to be extremely durable and reliable, and come in a lightweight, portable form factor that can be easily carried.

"Altitude performance has always been the deciding factor on what computer an expedition should choose," said Crampton. "In addition, size really does matter. The ease of transporting a notebook computer and its weight are very important. But for many years, the options in rugged notebooks have been very limited."

Solution

The GoBook MR-1's superior portability, durability, temperature and altitude performance score high marks

When asked to put the GoBook MR-1 through the ultimate mountaineering expedition test, Crampton was skeptical that the ultra-mobile notebook would perform any differently than other rugged notebooks they had used in the past. The expedition used two other rugged computers at the 17,500-foot-altitude base camp. Within two weeks, both of those notebooks experienced hard drive failures and ceased to operate. The GoBook MR-1, however, survived throughout the duration of the expedition.

"The GoBook MR-1 was dropped, buried in snow, frozen into ice and generally manhandled by every expedition member at some point," said Crampton. "The screen had all kinds of food and other items, such as sunblock, smeared over it during the expedition. This was easily cleaned with coarse snow and the screen still has no visible scratch marks. Even after accidentally being dropped from about 3 feet onto rock talus, the GoBook MR-1 started up fine."

"Durability was tested to the max, how-

ever, when the MR-1 was used at camp three at 23,625 feet and placed on the floor of a warm tent that was heated by the powerful afternoon sun," added Crampton. "Come morning, the corner of the tent had a large frozen puddle with the GoBook encased in ice. After chipping out the GoBook MR-1 with an ice axe and drying it off, the computer was switched on. Immediately it started up and operated as normal. The expedition had dry bags and Pelican cases for transporting the GoBook MR-1 to base camp, but obviously these were not needed higher up on the mountain as none of the Altitude Junkies could break it, and some tried hard."

Results

GoBook MR-1 delivers peak performance on the summit of Everest

The GoBook MR-1 scored high marks throughout the expedition for its sleek design, portability, durability, temperature and altitude performance. It was tested repeatedly at camp one (19,685 feet), camp two (21,000 feet), camp three (23,625 feet) and camp four (26,085 feet). The expedition noticed no difference in operational speed or performance between altitudes or in different temperatures.

"We had a lot of hurdles to overcome before we even started the approach to the mountain, including waiting for the Olympic torch relay to finish," said Crampton. "The computer was more reliable though from the start and performed without fail throughout the entire expedition."

On May 21, 2008, the ultra-mobile, rugged GoBook MR-1 made history when it sent an email from the 29,035 foot summit of Mount Everest to the United States on the success of the climb. "I proceeded to connect the notebook to a Thuraya satellite phone and sent an email to the United States notifying them of the summit success. If only all computers were that rugged."



Photo courtesy of Altitude Junkies.

Expedition members on Mount Everest. Phil Crampton, left, holding the GoBook MR-1.

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