



Everest Survival Guide

Everest E5000 Users Manual
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Equipment Check

Welcome to Everest Base Camp

These days operational data could come from a dusty shop floor, or an ambulance screaming down a city street. You might find it bouncing along an interstate in a tractor trailer, on a hot manufacturing floor, or from a forklift in a sub-zero storage freezer. No matter where that data comes from it can help you run leaner, smarter, and safer. So to get you to the mountains of information you need, we bring you the Everest E5000. The E5000 provides flexibility, durability, and computing power, in the environments your operation demands.

“Everest for me and I believe for the world, is the physical and symbolic manifestation of overcoming odds to achieve a dream.”
-Tom Whittaker
First disabled person to summit Mt. Everest

To maximize your Everest experience lets begin by checking your equipment. Use the packing list to ensure your order is complete. Because the Everest E5000 offers wiring and mounting options for every application, please make sure that you have received all the accessories you ordered to meet your unique needs.

What's in the box?

- ✓ Your Everest E5000 industrial computer
- ✓ Operating system-licenses, software keys
- ✓ Power cable or AC adapter
- ✓ Optional mounting hardware shipped separately
- ✓ Optional accessories shipped separately
- ✓ Quick contact 'Getting Started' card

If your equipment list is incomplete or incorrect please contact customer service for assistance. Call 603.882.1560 Extension 217. Email: support@glaciercomputer.com

Acclimating Yourself to Everest



Getting your bearings

The Everest E5000 is designed to perform in the most extreme conditions, with 24/7 mission-critical operation in mind.

Available in 10.4", 12.1," and 15" screens, your Everest E5000 includes an array of processor options, from a 600 MHz Celeron up to a 1.4 GHz Pentium M, with up to 1 GB of DRAM. Your new system can operate using Windows XP Pro, Windows XP Embedded, and Windows Vista.

Front View



Custom On-board features

The Everest E5000 also features a custom onboard diagnostic and configuration utility, and programmable function buttons. The utility provides IT personnel with “flight recorder”-like data, as well as real time access to key statistics such as processor temperature and reboots. The function buttons provide users with the unique ability to program frequently used tools into one-touch availability, thereby extending the life of the touchscreen.

Get powered up

Providing a 10V to 60V isolated internal power supply, the Everest E5000 eliminates the need for external power converters or filters when mounting onto forklifts, carts, and other vehicles. Add an optional AC brick and power up at any accessible 110-220V AC outlet.



Put more in, Get more out

Your Everest E5000 I/O comes standard with two USB 2.0 ports, 2-Serial ports, a pair of audio jacks, VGA video out, PS/2 mouse and keyboard ports, and an RJ45 Ethernet port. Under the top cover you can access 2 PC slots, a Compact flash slot, another USB 2.0 port, and space for an optional Smartbattery. There's also an internal mini-PCI slot for an optional internal radio. Pull off the hard-drive cover on the back of the unit and you can add a spinning IDE drive to your Everest E5000.

You also get integrated Smartbattery technology; the E5000 accepts an optional internal 1 hour Smart UPS battery for continued use wherever or whenever power is interrupted. Smartbattery allows you to view the batteries available power and charging status on the fly, directly from your desktop. Contact your Glacier support specialist to order a Smart UPS battery and add built in back-up power to your investment.



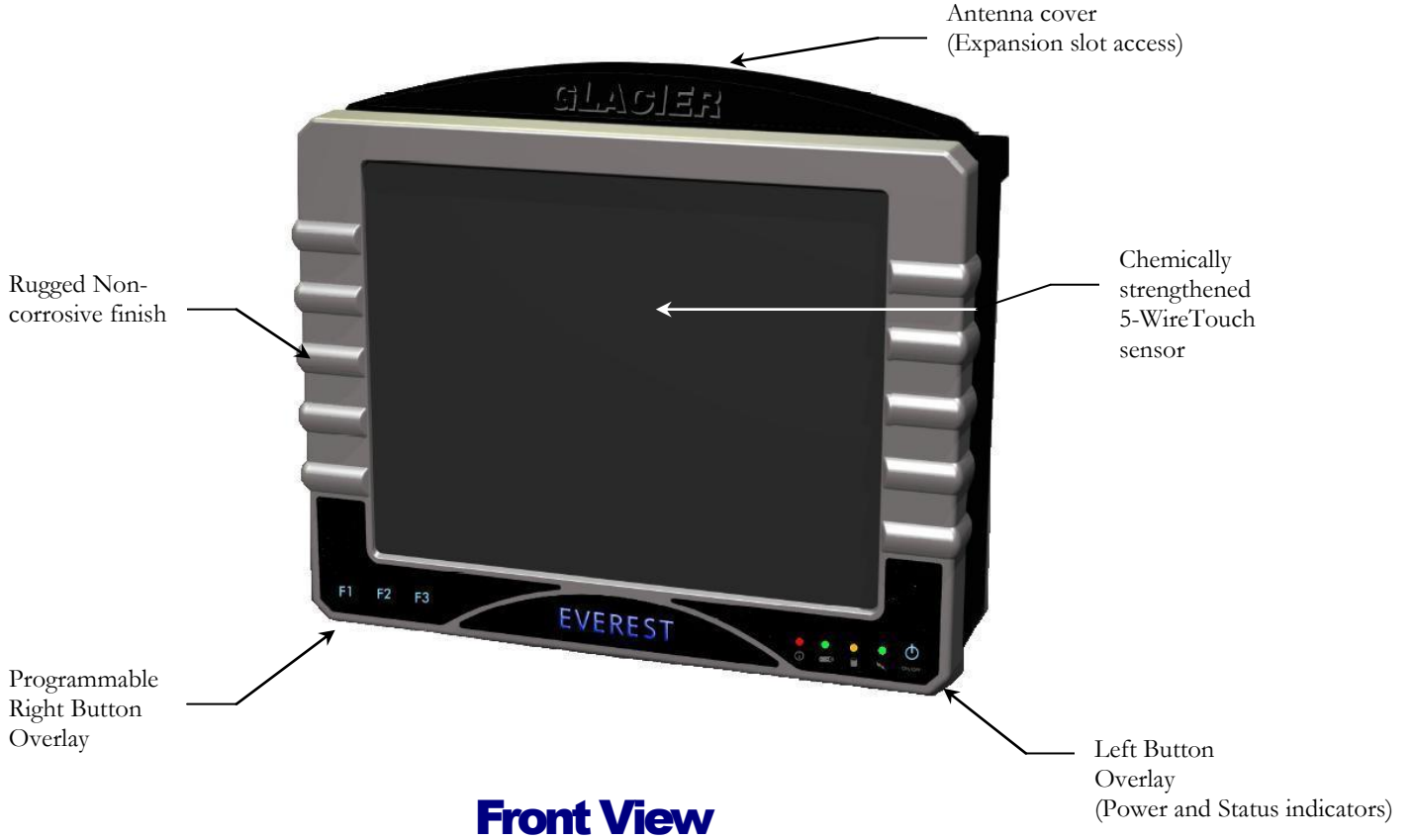
Master your environment

Glacier's Everest series provides peak performance thanks to extensive HALT testing (High Accelerated Life Test) that provides you with hardware that's rugged, and durable. You get an MTBF that exceeds 33,000 hours from a system built to Mil-Spec standards, and designed to an IP 64 environmental rating.

The Everest E5000 thermal mechanics allow for the maximum computing speed and power with the structural profile your operating environment demands. It's engineered to operate at -30°C to 55° C/ -22° F to 132° F with a 5% to 95% RH, (non-condensing) and a vibration rating of 30Grms (no spinning drive).

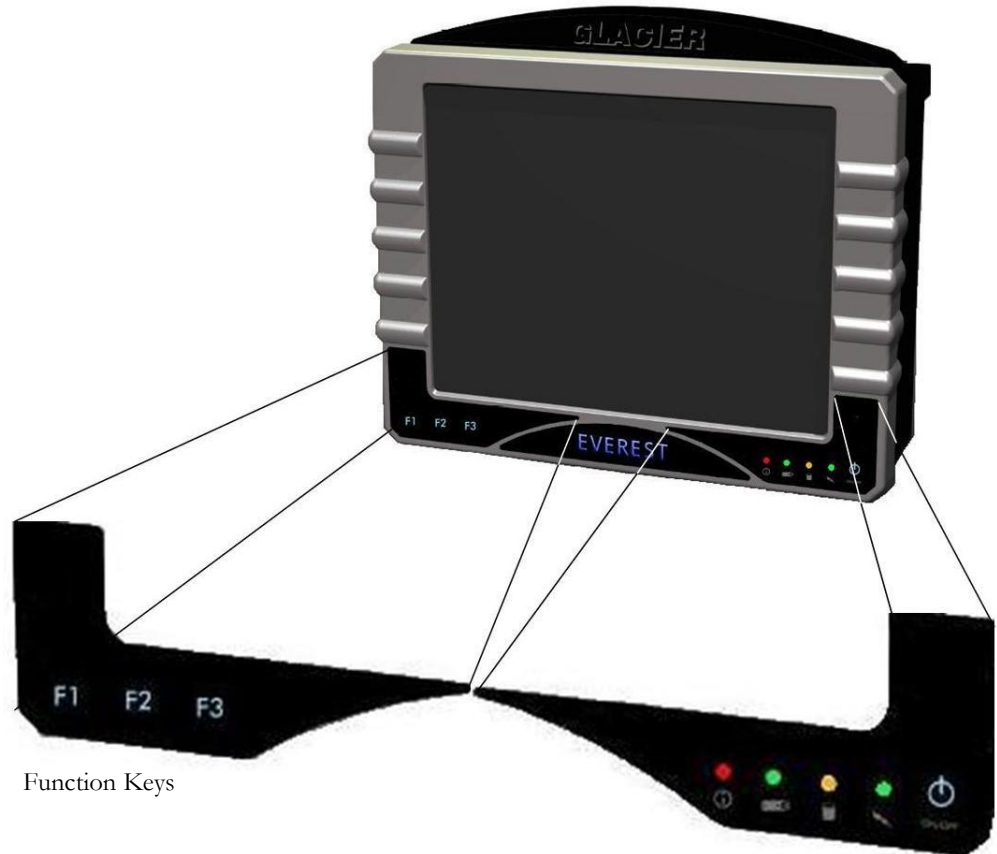
The Face of Everest

Making your approach



Programmable Overlays

Precision at your fingertips



The function keys

Power & Status indicators

The function keys on the left button-overlay can be pre-programmed to perform frequently used operations. This can provide one button access to critical tasks saving time on execution and reducing wear on the touch sensor.

Status indicators

For additional resources on LED functions proceed to page xx.



Power on



Drive activity

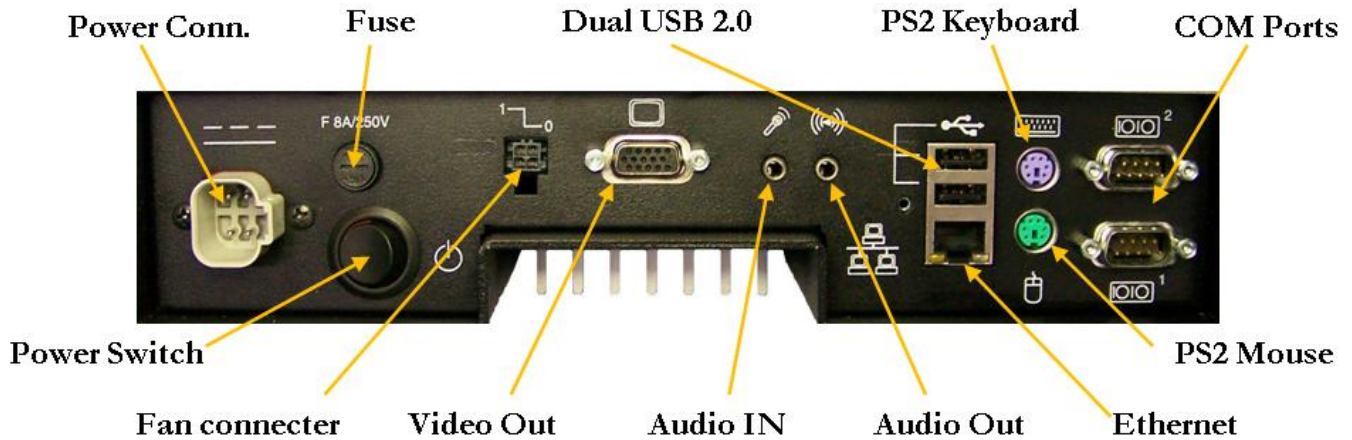


Status of optional Smartbattery



Configurable (Default is lit with the Rocker Switch in the “On” position)

I/O Panel View

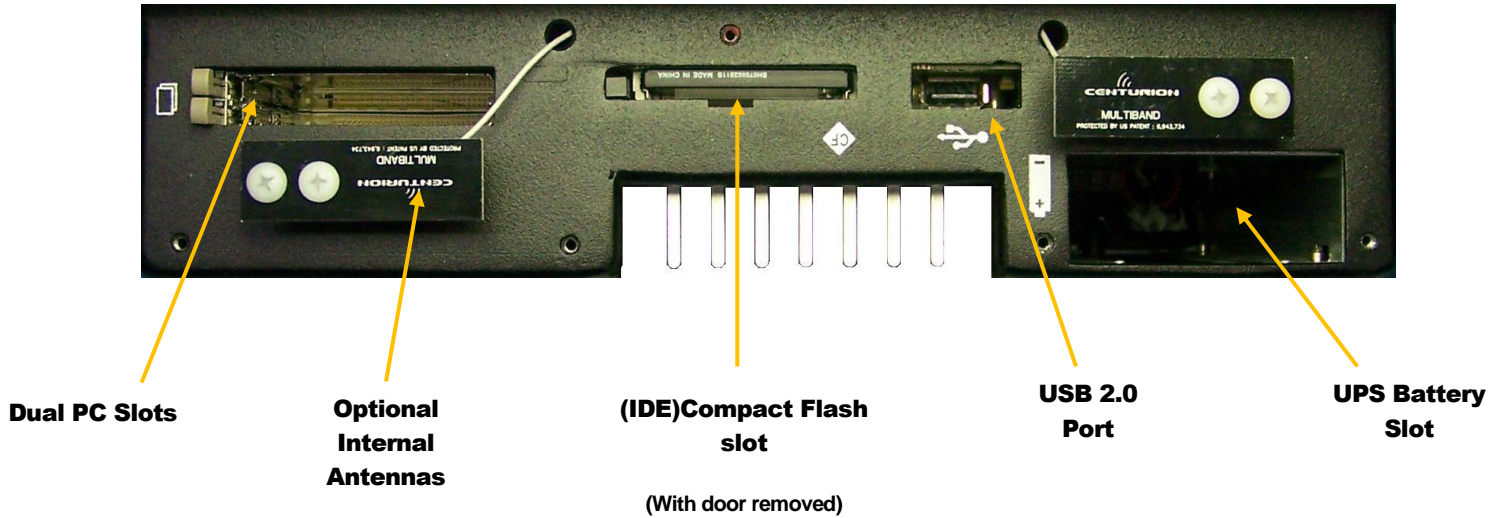


Fuse	Accepts a standard 10 Amp fuse
Power Connector:	Supports 10 to 60 Volt DC input or 110-220 v AC
Power Switch:	In the 'On' position, brings power to the unit and charges the internal battery (if equipped.) In the 'Off' position, disconnects all external power into the unit.
Video Out:	Allows for an additional monitor; this port is multiple-monitor capable
Fan Connector:	Connection for an optional external fan
Audio In:	Supports a microphone or other audio input
Audio Out:	Supports speakers or other audio outputs
USB 2.0:	Two USB 2.0 ports standard, 500ma*
Ethernet:	RJ45, 100Base T
PS2 Mouse:	PS/2 mouse port++
PS2 Keyboard:	PS/2 keyboard port ++
COM Ports:	2 COM ports: Jumper selectable, 5V or 12V, on pin 9

*Optional locking-clamp available for USB Ports.

++ PS/2 ports support locking KYCON connectors.

Expansion Slot Layout



Dual PC Card Slots: 32 bit slot that will host a variety of PC Cards.

Antennas: Dual diversity antennas for integrated 802.11x radios.
(If equipped)

Compact Flash: Supports an optional IDE Flash drive.

USB: USB 2.0 slots can be used for a Bluetooth adapter, USB radio, etc.

UPS Battery Optional back-up battery for 1+ hours of operation, when primary power is interrupted. This slot employs Smartbattery Forum technology which allows the battery to communicate power level and charging status directly to your desktop.

Before you climb



Test your footing



In the following sections we will review the most common wiring and mounting applications. Please remember that all computer equipment must be installed in a safe and secure manner. Do not power up or use the unit until you have read any necessary precautions. If you have requested a custom installation the Glacier technician will review this information with you in detail.

If you are performing a multiple unit install we recommend that you set up an area to power up and test each unit before installation. You should verify your drive image, add any custom software, test your wireless connectivity, and test any local network connections. If the mounting and wiring requirements for your operating environment are unique you can evaluate and resolve any cabling issues as well.

A brief pre-trip checklist

- **Power up the unit (Page 9 &10 cover basic connections)**
- **Check installed RAM and storage media during BOOT**
- **Verify the operating system**
- **Test you user interface devices (Touchscreen, Keyboard, scanner)**
- **Check any custom software or drive image**
- **Verify a connection to your wireless networking environment**
- **Check RFID or Bluetooth applications (if applicable)**
- **Confirm all necessary mounting equipment and hardware is at hand.**

Connecting with the elements

Getting a line on Everest



The Everest E5000 industrial computer supports DC input from vehicles running anywhere between 12 and 48 volts, and can tolerate the electrical noise common across these platforms. Or power up your fixed mount solution with the optional AC adapter from any accessible 110-220 volt outlet. Your particular needs will determine how you get connected but the most common wiring solutions are reviewed here

Wiring basics

The Unit can be powered with a 2-wire or 4-wire cable. The 4 conductor cable is available for customers who require the screen blanking option; most applications will use the 2 wire conductor. The cable you received with the unit was provided based on your particular needs.

Two wire connections to a vehicle battery



When powering the Everest E5000 from a vehicle battery you can make your connection directly to the battery. Connect the red wire (positive) to the positive terminal of your battery and the black wire (negative) to the negative terminal.

Please consider the following precautions before you make this connection.

Use the same precautions as with any live battery connection.

Mount the unit so that you can determine how to run the cable. When you have identified the safest route for the power cable, check your fuse(s) and fuse holder(s) and run your cable.

Make sure the Everest unit is powered down and the computers power switch is in the 'OFF' position.

Wire the cable to your battery, red wire to the positive battery terminal, black wire to the negative terminal. Secure any slack along the cable so it will not be damaged or impair vehicle operation. Feel free to power up the unit before you secure the cable, but once you have tested the connection do not operate any vehicle without first securing the cable.

Four wire connections to a vehicle battery

The green and white wires on the four-conductor cable enable the screen blanking option on your Everest E5000. These wires are connected to a voltage source on the vehicle that will “switch” based on vehicle motion.



The accelerator switch is the best example of this. The switch (or Relay) is typically located just under the accelerator pedal and activates when the pedal is pressed or released. Connecting the green and white wires to the appropriate locations on the switch or relay will enable the screen blanking function on your Everest E5000. The backlight in the computer display will respond to the voltage as the accelerator pedal is ‘switched’ blanking the screen when the vehicle is in motion, and lighting the screen when no motion is detected. This function will enable across a wide range of switching voltages, from 5v-50v DC.

Software in the Everest E5000 allows you to customize how the backlight responds. (See below)

The battery connections on the four wire cable are the same as for the two wire application. The red wire goes to the positive terminal and the black wire connects to the negative terminal.

Secure your cables.

The Glacier Commander and “Screen blanking”

The Glacier Commander System management software allows you customize how your Everest E5000 responds to almost anything. You can control how the screen blanking option responds to an open or closed relay, and even adjust the delay time between pedal and screen response. This can be used to account for things like coasting time of the vehicle, when the backlight is powered up but the accelerator may not be engaged. (For more on the Glacier Commander flip to page 14)

AC power adaptor

Units powered by AC ‘bricks’ can be plugged into any standard 110-220 AC outlet. Please secure the unit, and the cable to prevent damage.

Special applications

If you have unique power-up requirements call your Glacier service or support specialist to discuss all the solutions that are available for your specific needs.

Standard Mounting options

Putting Everest in its place



Mounting options overview

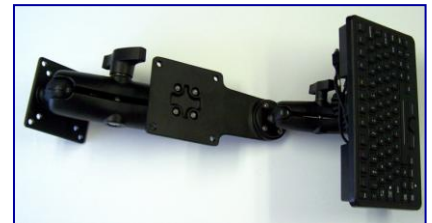
Glacier Computer can provide you with the mounting solution that puts your Everest E5000 where it needs to be. Here are just a few of the options available

The classic forklift mount includes a 4" clamp which mounts to the vehicle, an adjustable double-socket arm (available in four inch, seven inch, and eleven inch lengths) and the Ball-mount that attaches to the back of the unit.



The wall-mount assembly (pictured here with the 7" arm) allows you to mount your Everest E5000 to any flat surface. The double-socket arm allows you to reposition the viewing angle of the unit as needed.

Whatever the application, or combination of accessories, there is a mounting solution available to meet your need.



For a more comprehensive list of options contact a Glacier Sales Representative.

Email: support@glaciercomputer.com

Interacting with Everest

Peripherals and Touch based applications



The screen on your Everest E5000 computer is designed and configured for touch-based applications where the video screen displays graphical icons whose corresponding function is activated when touched by a user.

For GUI applications, a “mouse-like” touch driver is installed allowing standard applications to be executed. For optimum ease of use however, applications should...

- ✓ Provide visual feedback to confirm a touch
- ✓ Avoid double-clicks whenever possible
- ✓ Keep touch-targets large. Scroll bars, as an example, are difficult to use with gloved hands

With these provisions custom applications can be developed using standard tools and practices, with any programming package currently available. So your custom in-house intranet or HTML software, for example, can benefit from a touch based interface.

To enable a ‘right-click,’ click on the mouse-icon in the system tray near the time display. Some applications will allow a right click by simply keeping your finger (stylus, pointer) against the screen for several seconds.



Other interface accessories

On-screen keyboard, scanners, or external keyboards.

My-T-Touch Virtual Keyboard

*88-Key Industrial Keyboard
(Small Footprint)*



*84-Key with Integrated
Hula-point device*

Contact your Glacier representative for the all of the most current options and accessories available.



Glacier Scanner

Knee deep in powder

Set Up, Software, Features, Diagnostics, and more



Embedded XP thumb drive recovery system

Glacier is pleased to announce the release of our custom, Linux-based Thumb Drive Image Recovery system. Our thumb drive solution allows customers with embedded XP images to re-image a computer in eight minutes without having to remove the device from the forklift, dock door, or shop floor location. In addition, images can be copied and moved by authorized IT personnel, within the organization, greatly reducing implementation time of new devices. Glacier developed the Linux-based image and the recovery process which has been field tested at several customer locations.

Smart Battery LED indicators



If your Everest is equipped with the optional internal Smartbattery, the battery LED on the front of your Everest provides the current the charging status of your UPS.

Solid Green - Fully Charged

Blinking Green- Charging

Blinking Red- Discharging

More to come...

Email: support@glaciercomputer.com

Glacier Commander

Features Overview



The Glacier Commander is a customized, integrated, software utility that allows you to monitor system activity, program function buttons, set optional Screen-blanking parameters, and view detailed reporting on current and past temperature and voltage readings.

From the Start menu navigate to Start/Glacier Computer/Inwoods Consulting LLC. This will open the main window. There are 7 tabs available.

Info- Identifies the Firmware name and version, the Unit serial number and if appropriate, the Warranty expiration date

Configuration- Factory set and password protected

Log- Allows you check critical status on the backlight, hard drive, touch heater or hard drive heater, as well as system crashes—where the unit was not shut down properly. System temperatures and voltages are also available.

Status- Access the current system temperatures and voltages of your Everest

Buttons- View or change the current assignments for the function buttons on the front button overlay

Debug- Not used at this time

Battery- Not used at this time

The Info tab allows you the additional option of changing your default COM setting for the serial port or to define the polling period. You can also start or stop the data capture function.

From the **Info** tab select settings and choose...

Connect Using... to change the COM port. The default is COM3.

Polling period to modify the polling cycle; the default is 1 second.

Capture if you elect to start or stop data capture

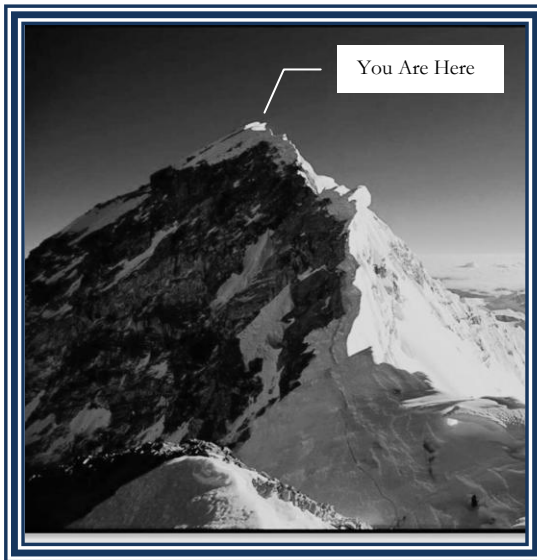
Advanced these are factory set and not user accessible

Summit

A view from the top



The following sections provide the additional information one expects to find in the back of a users manual. Please consult these pages as needed.



Page 16 Service and Support

Page 17 Warranty Options

Page 18 Moving Everest

Page 19 Product Return Policy

Page 20 Regulatory Requirements

Service for your Everest

Keeping you on the summit



The Everest line is designed for industrial use in extreme environments, but if you ever feel the need to have the unit serviced or upgraded we will promptly process your request. Call 603.882.1560 Extension 217.

You can also email: support@glaciercomputer.com or chat with tech-support online at www.glaciercomputer.com

To assist us, please provide the following information.

1. Your company name
2. Where you want us to return your equipment to. (site or location address)
3. The model and or reference number of the equipment being returned.
4. The serial number(s)
5. The reason for the return. (please be as specific as possible)
6. Who you spoke with at Glacier (if applicable) prior to requesting a return authorization.

What's next

We will promptly forward a confirmation via email and an RMA number, along with some basic shipping instructions. Please check the “Moving Everest” section on page 18 for some additional considerations when returning products to Glacier.

Your Everest Warranty

Some of your warranty options



Standard One Year Warranty

Your purchase comes with a standard one year warranty on parts and workmanship. Repairs for damage caused by wear outside of normal use will be charged at Glacier's current rates for service and materials.

During this period Glacier will pay for standard ground shipping charges to return the unit.

The unit will be serviced and returned to you within 10 business days of receipt at our repair facility.

Expedited or premium shipping services will be honored upon request, but all shipping expenses beyond the cost of standard ground service will be billed to the customer.

Returns will not be accepted without a Return Material Authorization (RMA) Please contact Customer Support before returning any material to Glacier Computer.

Call 603.882.1560 Extension 217.

Email: support@glaciercomputer.com

Extended Warranty Option

The same considerations apply to extended warranty as to the standard warranty. Please contact your Sales representative for information about purchasing an extended warranty from Glacier Computer. The cost is based on an annual commitment, paid in advance, and is available to Glacier customers or their designated representatives.

Custom Extended Warranty and Service programs

Some operating environments may place unusual demands on your Everest. Custom extended warranty options may be available to you to meet these unique needs. Please contact your Glacier sales or service representative for more information.

One Year Non-Warranty Service.

Any repair not covered by the standard warranty or extended warranty will be charged at Glacier Computer's current rates for time and material.

Moving Everest

Some suggestions on relocating your computer and peripherals



You may find it necessary to send your Everest to another location. While rugged computers are designed to withstand the kind of treatment that would destroy most PCs, shipping can present some unique challenges, even for ruggedized units.

1. Whenever possible, use the carton and padded-ears the unit was originally shipped in. If you do not have the original box, or the carton is damaged, please use a sturdy carton that will allow for adequate packing material to secure the contents
2. The touch sensors and displays are ruggedized for use in an industrial environment, but you need to protect them when shipping. Do not place anything other than packing material on or near them in the shipping carton.
3. Avoid packaging the unit with anything still attached. (Rear ball-mounts can be left on the unit). Remove protruding objects that could puncture the carton or become damaged in transit. If additional items need to travel with the unit wrap them separately and bag small parts whenever possible. If one carton will not accommodate the extra items safely, please use additional boxes. If you cannot detach peripherals from the unit secure the entire assembly in a larger carton with adequate packing material.
4. We do not recommend packing more than one unit in the same box. It significantly increases the risk of damage to the touch sensors and displays.
5. Ensure all contents are secured. The packing material should limit or eliminate movement inside the carton without over-stuffing. Overstuffed cartons may burst in transit. In the absence of the original padded-ears we recommend any combination of bubble-wrap, foam padding, or packing peanuts. Loose or shredded paper is not recommended as a packing material for most Glacier products.
6. Please put some kind of packing list in the carton indicating the contents and your company address. If the shipping label comes off the carton or the carton bursts open during shipping your product is less likely to get lost or delayed.

Not sure how to proceed?

Call 603.882.1560 Extension 217. Email: support@glaciercomputer.com

Product Return Policy



No product will be accepted for return without prior authorization from Glacier via an RMA. Please Contact Glacier customer service at (603) 882-1560 before returning any product for any reason.

All RMA requests for return to stock MUST be made within 30 days of Glacier's original ship date!

Glacier Computer will issue an RMA for products returned under the following conditions with cause:

- ✓ Products received and confirmed as defective upon receipt.
- ✓ Products shipped incorrectly due to Glacier's error.

Under the above conditions, Glacier will process and RMA without any restocking fees or additional shipping costs. Glacier may, at its discretion, authorize return under circumstances other than those listed above.

Restocking Fee:

The minimum fee is 15% or \$50, whichever is higher. A fee of up to 25% will be charged for products returned as defective that have no problems. A 10% re-box fee will be charged on any box not returned in resalable condition. The customer will be charged for any missing items. For customers on credit terms, credit will be applied to their account after the authorized return has been received and inspected by Glacier. For customers on C.O.D. or credit card status, a replacement product will be sent upon receipt of returned product at Glacier. *If desired, Glacier will send replacement product at your normal C.O.D./credit card status and refund/credit your card when the returned product is received by Glacier.* Over night shipping costs are the responsibility of the customer. RMA numbers are valid for 30 days only. Product received without a valid RMA number will be returned unopened.

To avoid restocking fees

- ✓ The original manufacturer's packaging must be used, both inside and out.
- ✓ If the product was double-boxed, it must be returned double-boxed.
- ✓ All returns must be complete, including all manuals, cables, warranty cards, static bags, etc.—just as they were originally received.
- ✓ Product must be clean with no sign of wear and tear or usage, and no writing on the box. The customer is responsible for all freight costs when returning product
- ✓ The restocking fee may vary based on the condition of the returned product.
- ✓ Media returns will not be accepted for any custom sized or preprinted labels.

Regulatory requirements

FCC, RoHS, and ...



Radio Frequency Interference Requirements

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulations. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct interferences at their expense.

However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off an on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ✓ Re-orient or relocate the receiving antenna.
- ✓ Increase the separation between the equipment and receiver.
- ✓ Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- ✓ Consult the dealer or an experienced Radio/TV technician for help.

Radio Frequency Interference Requirements – Canada

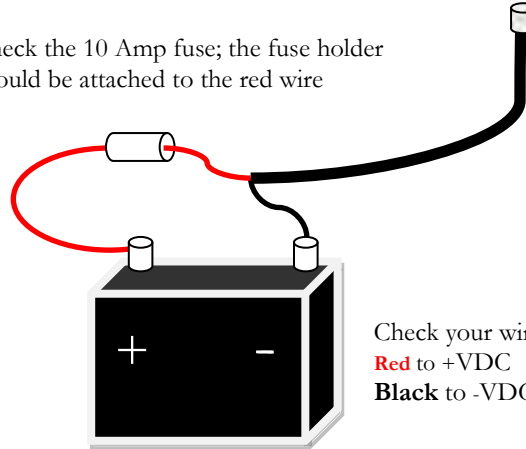
This Class A digital apparatus meets the requirements of the Canadian Interference-Causing-Equipment Requirements.

Wiring Diagram

Everest mobile mount



Check the 10 Amp fuse; the fuse holder should be attached to the red wire



Run you cable, securing the cable within the vehicle, and away from moving parts

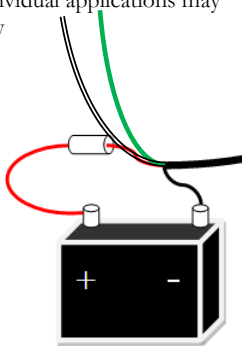
Check your wiring configuration

Red to +VDC

Black to -VDC

In the 4-wire application the white and green wires are connected across the accelerator relay or a similar voltage source that switches based on vehicle motion

Individual applications may vary



1. The computer is powered down and the rocker switch is in the off position.
2. Check the condition of the cable before you run it, and confirm there is a good 10amp fuse(s) in the fuse-holder(s). Connect the power cable to your computer.
3. Run the cable, keeping it away from moving parts, or intense heat.
4. Connect the fused **RED** lead to the positive terminal of your battery.
5. Connect the **Black** lead the negative terminal of your battery.
6. If you have a 4-wire cable and are not using 'Screen-Blanking' disregard the white and green wires.
7. Test the system; turn on the power and Boot your computer.
8. Power down the computer, and then secure your cable. **DO NOT** operate the vehicle without first securing the cable.

NOTE: Maximum power is 78 watts

*Failing to use approved power components and mounts can void your warranty
Contact your Glacier representative for information on these and other accessories*