RUGGED TABLETS
Feature Checklist

For the Transportation & Distribution Industry

This checklist outlines features of rugged mobile computing devices that commonly come into play in the Transportation and Distribution industries. It is recommended you pay special attention to these points as you research different rugged mobile PC options for your own specific applications.

☑ Advanced communication abilities

Transportation and Distribution requires the coordination of personnel and assets in many different areas. Workers must be able to reliably transmit information and receive instructions in real time, no matter where their work takes them. Aside from Wi-Fi®, Ethernet®, and Bluetooth® to enable local connectivity, workers will require wireless "anywhere connectivity" that utilizes satellites and carrier networks. Therefore, the device should be equipped with either 3G or, ideally, 4G LTE capabilities, for communications on the road. Internal modems such as the tried, tested and industry-known Gobi3000 by Sierra Wireless can aid in such communications.

☑ Mounting and docking

Any vehicle-based work will require specialized mounting and docking options for the rugged tablet. Not only for secure transport and accessibility, but also to enable charging and connection of peripherals. Most workers' workday includes requirements for data entry, such as duty of care forms, inspections, safety checklists, etc. – so enabling the worker to be able to compute on and off the vehicle will improve workflow considerably. Consider the following common aspects
of docking and mounts to make sure you get the right accessories for your forklift, truck, rail or aircraft requirements:

☑ Mobile Docking and Mounts
Will you need to remove the device from its mount frequently to perform work out of the vehicle? If so, choose a mobile docking option that allows workers to quickly undock the device without use of tools.

☑ Fully Rugged Accessories
If you expect a dock or mount to sustain harsh conditions, ensure the accessory is MIL-STD-810G and IP rated for rugged use. A common concern for vehicle mounts is continual heavy vibrations, for example. Make sure that both the dock and Tablet PC are certified to handle those vibrations.

☑ Flexible Vehicle Mounts
If you decide to mount your device in a non-standard area, ensure the device manufacturer offers a variety of mounting options that can adjust to different situations.

☑ Integrated high performance GPS

A reliable, high performance GPS is critical for any industry where route planning, navigation, dispatch, and location logistics are a key concern. Many devices come with an integrated GPS for location-based applications. A good GPS should have a fast acquisition time from boot-up, and it should be highly accurate to ensure correct directions. Accuracy can vary widely in a GPS. Some GPS technology can ensure accuracy up to several meters away from a location. Others can pinpoint a location to within a meter. In addition, the GPS should be reliable in all weather and overhead conditions as well as operating locations where the density of shipping containers or warehouse buildings could challenge signal connectivity. Several Xplore branded products have built-in GPS that work in the absence of 4G/LTE – an always on board cost effective solution.

Sunlight readable display

Transportation and Distribution operations frequently involve outdoor work, whether on a loading dock, in a shipyard, or at a railroad crossing. Personnel need to be able to read data under a variety of lighting conditions. An excellent sunlight readable display with ambient light sensor is crucial to ensure accurate reading of data, even in direct sunlight.

Method of input

A keyboard and mouse option might seem like a good idea for Transportation and Distribution personnel who interact with a lot of logistical information. However, the mobility that is required of Transportation and Distribution work makes a rugged tablet with optional pen input a much more viable option. Improvements in capacitive and resistive (Glove) Touch capabilities and handwriting recognition technologies, as well as an increase in touch-optimized applications, have made it easy to capture accurate data without a keyboard. The handheld nature of a tablet allows for data input without having to set the device down. In addition, tablets feature menu-driven applications, instead of writing-based applications, which are much easier to manipulate when traveling (e.g. while operating a forklift).

It is essential to note that there is a significant difference between a stylus and digitizer pen. Alternative methods of data entry to a keyboard often prove faster than keyboard entry – such as handwriting recognition, but require digitizer technology to provide the accuracy and resolution necessary for fast and efficient data entry.

Barcode & RFID scanning accessories

Logistical and Distribution work requires the frequent scanning inventory and other items. It is critical to choose a rugged tablet that offers barcode scanners, cameras, and RFID scanners. Evaluate other custom accessories that you may require for scanning purposes within your picking, packing, and shipping systems.

And even when considering tethered scanning devices, ensure that the rugged tablet includes the appropriate I/O ports so that the device can be undocked without losing connectivity. Ports such as USB or Serial are often used for these applications.

Rugged rating: MIL-STD-810G, IP, C1D2/C1Z2 and ATEX

Any device used in an industrial setting where it can be dropped, scratched, spilled on, or otherwise damaged, needs to be fully rugged. The best way to protect your data - and your hard work - is by choosing a MIL-STD-810G certified rugged tablet with at least a 4-foot drop rating. A MIL-STD tested rugged tablet will also provide assurances that your device and data are resistant to damage from shocks, vibrations, temperatures, weather, and more. Rugged tablets, and their I/O ports, should offer at least an IP54 rating to prevent water and dust ingress - though an IP65 rating is ideal for maximum protection in outdoor environments prone to rain, snow and blowing dust. The transport of hazardous materials that present explosive risks around electronics may demand the additional safety of C1D2/C1Z2 and ATEX-compliant rugged tablets.

Display size

Since the application will likely be deployed in-vehicle or in high-paced warehouse/distribution center environments, display size should be considered. If maps or route optimization information need to be viewable or applications need to be used while driving, for instance, a larger display is absolutely necessary. Displays larger than 10" are ideal for data-intense workflows in the warehouse as well, such as order fulfillment. Small screens don't allow for full-screen viewing of checklists, customer information, inventory databases and other multi-column documentation. It is recommended to view the software you plan on using on different screens before you buy, and consider a high performance graphics card for more detailed maps and visual data.

High performance data processing

The large amount of logistical data present in Transportation and Distribution operations necessitates a mobile device with a high performance processor. In addition, Solid State Drives (SSDs)-as opposed to Hard Disk Drives--offer more robust data storage, access speeds, and highest reliability. For RAM, at least 4GB is recommended for optimal processing speed, 8GB is even better, without unduly sacrificing battery charge.