XPLORE™

RUGGED TABLETS
Feature Checklist
for the Oil & Gas Industry

This checklist outlines rugged mobile computing features commonly required by the Oil & Gas Industry for both onshore and offshore operations. Evaluating the necessity of each capability for your organization's workflows and your workers' daily flow is a critical first step as you research different rugged tablet PC options for your specific mobility requirements.

☑ Device and Data Protection in Hazardous Locations

It is absolutely critical that mobile computing devices are ATEX or C1D2/C1Z2 compliant if used in explosion prone areas (such as refineries or oil rigs) or areas where natural gas may be present. Worker safety is mandatory in Hazardous Locations (HazLoc), and these compliance standards ensure that mobile PCs (such as rugged tablets) don't cause a spark when they come into contact with flammable materials.

☑ Field Certified Rugged for Oilfield, Offshore, and All Weather Conditions

If a rugged tablet – or any mobile computing device – is going to withstand oilfield, offshore, and other oil and gas conditions, it will need to be sealed against the elements and protected against frequent drops, shocks, and vibrations. Though the level of ruggedness required will vary depending on its specific application in the field, vehicle, or at the office, any rugged mobile PC intended for Oil & Gas operations must have at least a 4' drop rating and be MIL-STD-810G certified. Look specifically for rugged tablets with genuine MIL-STD-810G coverage against salt fog (to avoid corrosion in offshore conditions), as well as field-proven resistance to blowing sand and rain, crash shocks and the heavy vibration that accompanies device usage on heavy machinery and in vehicles. The device – and its I/O ports – should also be sealed against liquid ingress and dust, which mandates a minimum IP65 rating.

☑ Temperature Tolerance

Any computers – mobile or not – can significantly slow down or even cease working in extreme cold and heat. If a worksite is located in the Arctic, or requires leaving a device in a sunny area or around high-heat machinery for prolonged periods, you need to choose a rugged tablet PC with a large operating temperature range.

☑ Sunlight Readable Display for All Conditions

Many workers in the Oil & Gas industry are frequently outside and 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 information, even in direct sunlight. A large display size and robust graphics card is also useful for viewing maps, charts, and other detailed visual data.

XPLORE™

Glove Touch

Be aware that not all mobile devices with "touch" screens will work while a user is wearing gloves. That is not practical considering many Oil & Gas professionals wear gloves daily due to the presence of chemicals or gases. Choose a rugged tablet that utilizes "resistive touch," which measures input based on pressure and allows for unhindered glove touch capabilities. Alternatively, a rugged tablet that utilizes a digitizer pen is also an option, as is a regular mouse and keyboard (although a keyboard can be difficult to use if gloves are heavy).

High Performance Data Processing and Graphic Display

Data is a central part of petroleum operations. A significant amount of data must be collected from work sites, assets, and sensors to ensure operations run safely and efficiently. This necessitates a rugged tablet with a high performance processor, graphics card, and full document display capability. Those in geophysics, or who frequently utilize applications that require the viewing of maps or other detailed visual information, also benefit from such features. No matter the task, though, SSD drives (as opposed to HDDs) improve storage capabilities and data performance, resulting in faster speeds.

Continuous Wired and Wireless Connectivity

With many work sites located in remote areas, or spread across large spaces of land, an advanced communication system with "anywhere connectivity" is necessary for keeping information updated in real time. Aside from Wi-Fi® and Ethernet capabilities to enable local connectivity, Oil & Gas personnel also require highly reliable wireless "anywhere connectivity" that enables uninterrupted data and voice communications from any location. Rugged tablets that can easily transition between 3G and 4G LTE networks are best.

XPLORE™

☑ Integrated GPS for GIS, Geotagging

Geospatial information systems (GIS) are crucial to the mapping and management of widely dispersed Oil & Gas assets. Personnel frequently utilize geotagging to confirm task completion and benefit from the real-time accuracy of location-based software. Ensure your rugged tablet selection includes a reliable and integrated GPS solution that delivers a fast acquisition time from boot-up. The GPS should also be highly accurate, even in adverse conditions like dense urban areas or under thick cloud cover.

☑ Mobile Data and Mobile Device Security

Due to massive amounts of sensitive data in Oil & Gas, several internal and external security measures are often necessary. Rugged tablets offer both standard and optional features that support pre-boot fingerprint authentication, VPN access, multi-layer authentication, and TPM 1.2. Other features like Absolute DDS and Intel Anti-Theft allow stolen computers to be found quickly, and wiped from a remote area if necessary, while Kensington physical lock slots will keep rugged tablets and accessories securely in place.

☑ Long-Term Software Compatibility

Oil & Gas operations need mobile-focused software, and contextual apps require an enriched end-user experience that rugged tablets are specifically designed to deliver. Capacitive and resistive (glove) touch screens, expansive storage capacity, and flexibility in RAM and I/O configurations are critical. So is the availability of both Windows® and Android™ OS rugged tablets with otherwise identical feature sets capable of supporting immediate and future software upgrades.

☑ Secure Mobile Docking with the Right I/O

Vehicles and heavy machinery maintain a central role in Oil & Gas operations, and the practicality of a rugged tablet doesn't stop at the PC. Choose a solution that comes with highly customizable, non-fixed vehicle docking options. Personnel should be able to undock the devices easily with one hand for use in the field. The docks should also extend the connectivity of a device with multiple I/O options so it can interface with peripheral equipment.