

Marine Panel PCs: Applications & Essential Features



The category “Marine Electronics” covers an extremely wide selection of equipment. Depending on the craft’s size, intended purpose, the local waters, and the desires of the owner, a watercraft may need any of the following; Radar, Bottom-View-Sonar, Side-View-Sonar, Fish finders, Transducers, Wind Transducers & Weather Vanes, GPS Equipment, Mapping Software & Chart plotters, Cameras & Thermal Cameras, Entertainment Systems, Advanced Engine Instrumentation, and more. This equipment may be sourced from a single supplier, or often from a variety of manufacturers across the industry space. Watercraft, especially larger vessels, often see lifetimes better measured in decades than years, and electronic equipment installed when a boat was constructed ends up obsolete far before the boat is retired, leading to a hodgepodge of manufacturers and product lines found in various equipment.

In the past, all this equipment came paired with independent controls and instrumentation, where one might monitor the windspeed on one device, the water depth on another, and man the radio from a third. This led to very expensive equipment that was so time consuming to manage, boat captains found it hard to find time to enjoy their craft. Today, most devices common on watercraft work together through networking systems, and can be monitored and controlled from one or more multi-purpose stations. These stations are usually equipped with a panel or tablet PC that may have a touchscreen, pushbuttons, or a combination of these. Though the systems are varied according to the watercraft’s intended purpose, most feature some common elements.

The Control Center

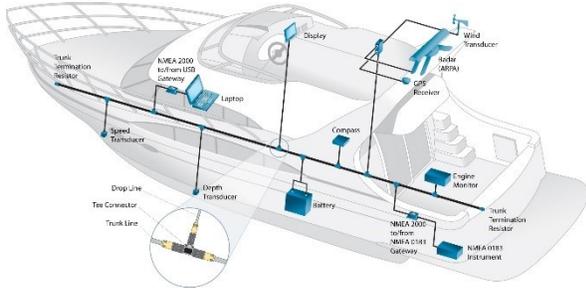
In a modern craft, no matter how many peripherals there are, it’s common to find a primary control center where everything on the boat can be managed. Often, this is located on the captain’s console, with the steering, throttle controls, and other instrumentation. Though in some craft, steering, throttle, and instrumentation are also integrated into the control center computer. These devices may be flush mounted into the craft, or “bail” mounted on a stand so that they can be rotated and tilted according to operator needs.



Quality control center PCs need to meet some common requirements. First and foremost, they must feature a high level of waterproofing, so that they will survive inclement weather, waves, wake spray, and other water hazards. This is usually measured with the IPXX rating system, where the latter X defines the level of waterproofing. Quality PCs will feature an IPX6 or IPX7 level waterproofing, protecting the system from everything but direct immersion and high-pressure sprays. Estone Tech systems not only resist water, but also remain usable when wet, a situation where many touchscreens fail. This ensures a user won't end up stranded because they got caught in the rain.

A control center PC also needs to be easily operable on the water, where intense sunlight with no shade is common. While a bail mounting may provide some relief from direct sunlight, quality systems will feature display brightness in excess of 1000 CD/M (candelas per square meter), so that it can be easily read and used in full, direct sun. Estone Tech displays also offer special coatings and films to reduce glare and reflectivity.

Watercraft Systems Networking

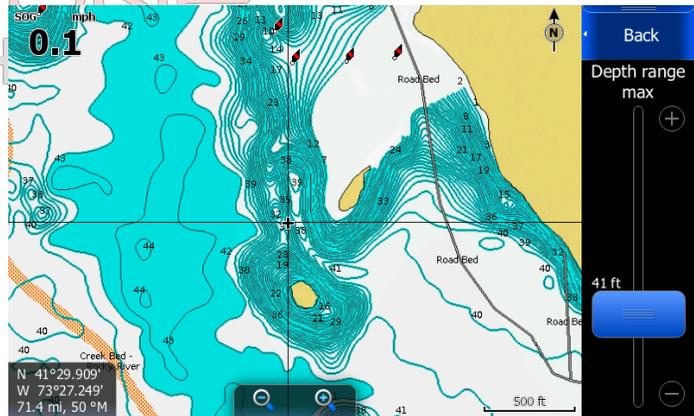


Watercraft can avoid the need for large instrument clusters and multiple displays and readouts by connecting systems as diverse as tachometers, fuel & oil sensors, satellite radios, and wind transducers to the marine panel pc. Via a networking protocol called NMEA 2000 or NMEA 0183, watercraft electronics can communicate with each other seamlessly, and a single display panel can provide all of the needed information to the boat's captain & guests, with the press of a few buttons or swipe of a few fingers.

Because devices that operate on the NMEA protocol work seamlessly, owners won't find themselves struggling to integrate new and replacement electronics with an older craft's other systems.

GPS, Sonar, and Depth Finder Systems

To operate a boat safely, a captain needs to know where the craft is, and where it's heading, at all times. The captain needs to be aware of the waters he or she is traversing, and what dangers lurk beneath. And of course, a good lookout is critical for identifying new or temporary hazards in the water. But since most pleasure craft operators don't plot compass courses, and regularly head to unfamiliar waters, these may be difficult to accomplish.



A quality marine panel PC brings these elements together easily for any boat operator. With an either internal or external GPS unit, a robust nautical map library, and a clear, crisp display, any operator, from an experienced captain to a novice pleasure cruiser, can navigate new waterways and plot courses that their craft can safely traverse. No worrying about bottoming out on an unseen sandbar, or having to reverse out of a narrow curve on an unfamiliar river.

A quality touchscreen panel PC even offers a boater more chances to explore, because it becomes easy to search and navigate a library of interesting travel points, like historical markers, picturesque parks, and dockside restaurants.

Fish Finders and Other Specialty Equipment

While some boats are pleasure craft, many serve a specific need or interest for the owner, such as fishing, sailing, crabbing, scuba diving, and more. Most water hobbies feature specialized boat equipment, like fish-finder transducers, wind & weather transducers, live wells, or pot storage. The proper use of these instruments helps ensure a pleasurable, successful hobby experience, and keeping the instruments up to date can make all the difference in the world.



By connecting together a marine panel PC, quality electronic hardware, and the latest, updated software, any user can ensure a fun, successful day out. Some of these systems even work together with cell phones or wearable technology to alert a user, no matter where they are on the craft. Imagine scuba diving, and getting an emergency alert about inclement weather on a diving smartwatch, relayed there by an Estone Tech marine panel PC.

Taken together, a quality marine panel PC provides everything needed to turn your boating day into a truly safe, enjoyable experience.

