

Hotwire

By Jeff Cote

Say Cheese: Onboard Cameras

A

A popular trend in the recreational boating market is integrating onboard cameras with modern chartplotters. In the past, it was quite common to view camera feeds aboard, however, in this traditional configuration, the camera feeds only in one location where it was easily available. For example, you could see camera feeds at the lower helm but not the upper. With modern chartplotters, it is now straightforward to interconnect both analog and Internet Protocol (IP) cameras to be viewed in multiple locations.

The advantage with IP cameras is that, in many cases, you only need to run one ethernet cable per camera location for the video feed and the power (called Power Ever Ethernet or POE). Originally installed onboard for security, cameras are now providing an extra set of eyes for cruisers, night vision for inclement conditions, and a way to monitor remote vessels.

To get a good idea of all the different options onboard cameras can provide, we are going to look at a recent installation for a boater who wanted the ability to see around and inside the boat from the flybridge, which had limited visibility. We installed a total of five different cameras but because the multifunction display (MFD) only had two camera inputs, we added a video switcher that allows him to choose which view he would like on either MFD.



Tip: If you aren't ready to permanently install a camera on your boat but would like to enjoy some action footage of your adventures, you could try the Garmin VIRB Ultra 30 or VIRB 360 Action cameras. They are waterproof, ultra-high quality 4K, live streaming, and compact.

His main goal was to feel comfortable taking the boat out by himself. We installed two Iris cameras aft, looking down at the port and starboard stern of the boat, allowing for close quarter docking when single-handing, or a view of the crew as he approached the dock. Being able to view the crew getting off or on the boat makes docking safer.

We used the same camera in the salon so he could see what his young grandkids were up to as well as one in the engine room to quickly glance at the engine compartment in the case of an alarm. This is a great camera for the engine room because it has good visibility in low light.

We also installed a wide-view, aft-looking camera (commonly called a fisheye), on top of the anchor light looking aft at the horizon to give a better perspective of the boats following him or so he could check on his tender in tow.

Many power boaters have limited visibility aft of their boats from the pilothouse and installing a reverse-image, fish-eye camera reduces the blind spot.

The client also chose to integrate a FLIR thermal night vision camera. On a few occasions, he found himself arriving at his destination later than anticipated and wanted to reduce the associated risks of low-light or night navigation. We choose a FLIR model that allows for full pan, tilt, and zoom capabilities. The thermal imaging can be directly displayed on the MFD.

Last year, Raymarine announced their ClearCruise Augmented Reality technology which uses a camera to overlay high definition video directly on the Raymarine Axiom MFDs. AIS-equipped vessels and charted navigation aids are clearly identified with rich graphics on a live, dynamic video image. It combines all the traditional aids to navigation over a real-world image directly on the MFD.

Another easy way to get onboard monitoring if you already have Wi-Fi onboard is to simply install a Nest or Arlo camera system that allows remote monitoring. The camera can be directed towards the DC panel to view the shore power or battery status and can be displayed directly on your smart phone.

With modern chartplotters easily displaying video images, more boaters are taking advantage of installing cameras. The safety features and peace of mind provided by onboard cameras can be well worth the investment.

NWY



Jeff Cote is a systems design engineer and owner of Pacific Yacht Systems—a full-service shop delivering marine electrical and navigation solutions for recreational and commercial boats. Visit their website and blog for info and articles on marine electrical systems, projects, and more at pysystems.ca.