

BRIGHT HORIZONS FROM AQUAVISION

Qualtron partners with Aquavision in a very challenging project. CEO **Torsten Steinbrecher** explains how innovative technology delivered the best solution



It was a warm summer day in July 2021 when we were approached by one of our partners asking for a purpose designed 100 inch outdoor TV. What did they want?

A giant 100" television folding out from the deck, bright enough to handle the brightest of bright mid-day sun, but also perfectly viewable during the evening hours without burning your eyes. It is near silent in operation with complete bi-directional IP control giving a response to each command received by the television – and full thermal management, providing real time data of all internal temperatures, heaters, humidity, and cooling status, and obviously with an incredible 4K picture mounted in an IP66 rated enclosure and suitable for use in the marine environment!

No small ask for this project given the constraint that the client asked for delivery in two months. My initial reaction was, leave it with me, we have the right partner to work with. I called Alastair Benn, owner and Managing Director of Aquavision with whom we have realised several other projects. He said, "no problem" and after an ample discussion with him and his team, lots of technical calculations and drawings later, we received a tangible proposal.

But let me pass the word to Alastair now to provide some background information of this interesting and challenging project.

"At Aquavision we already manufacture a 100" outdoor television to a similar specification, so we were straight onto '2nd base'. The design of the main project was standard, so we focused on the job specific items. Our normal screen was 2000 cd/m² (standard screens for home use are 200-500 cd/m², and some supposedly high bright screens are only 800 cd/m²) so as this was to be right in the middle of the sun deck, we suggested increasing this to 3000 cd/m². As all "standard" LCD panels

pixels invert (go black) when the internal screen temperature reaches 55°C, we had to use a specialist panel capable of handling internal temperatures of up to 110°C. Again, this is no problem for Aquavision as we only ever use these types of panels in our high bright screens, whereas many outdoor TV's can only be used in the shade!

A 3000 cd/m² panel is not a standard product, so we had one made through one of our screen partners, built to our exacting specification. This then obviously increased the size of the power supplies that were needed. All good power supplies need thermal cooling, so on a job like this, it was agreed that all power supplies had to be remote mounted so any noise from the fans, and hot air, was ducted away to a different area. Again, no problem as we manufacture everything ourselves in our UK factory.

We then needed to look at the application in more detail.

Most manufacturers of outdoor televisions supply their 'standard' products into a marine application. At Aquavision we certainly don't do this! Standard products are built of mild steel, sometimes Zintec or Galvanised, certainly not capable of handling the salty environment of a marine superyacht.

Aquavision are the only company known to offer a 'marine specification'. This replaces

all steel components, fixings etc with 316L grade stainless steel ones. All areas where different metals touch is coated in Tef-Gel, the enclosure is then zinc plated, and has two layers of specialist marine grade powder coating applied to it for extra protection.

Extra fixings are then added to the chassis and VESA mounts to enable the television to cope with the constant pounding of the boat on the waves.

None of the connectors and sockets are standard. We use IP66 rated connectors. We offer this facility as standard specification on all our outdoor televisions.

This particular television needed an even stronger chassis as it would hinge up/down and then travel face down when not in use. This is not how a standard television could be stored if you wanted it to last more than a few months, so further strengthening of the enclosure and chassis were specified.

Regarding the auto brightness and full IP controlled thermal management that was requested, this is all standard with Aquavision Horizon outdoor televisions. So, wherever you are in the world (subject to internet access and permissions etc), your engineers can examine each television remotely, check all the ambient temperatures, adjust any settings they need to, all while the client is blissfully unaware and sunbathing in front of it."

A big thank you to Alastair Benn for explaining the finer detail. So, however challenging your design specification, we offer the right solution for the right environment.

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