



Consumer Displays versus Professional Displays.

What are the differences and should the corporate buyer take advantage of the lower prices for High Street technology?

The answer is.....possibly writes Paul Spencer, Founder of i-Klarity Video Solutions. The old adage “you get what you pay for” certainly applies in this case, but that doesn’t mean that the high street is totally off-limits for all corporate buyers.

The market for consumer displays has grown enormously over the past 5 years and shows no sign of slowing down. These days most homes are adorned with at least one large flat panel display showing high definition images in brilliant colour, maybe even in 3D! In that 5 years many if not most businesses can demonstrate "similar" flat panel displays around their premises, showing anything from simple tv to complex digital signage multi messages to their employees and clients alike. Display manufacturers are only too happy to make a consumer product sale through a corporate channel - this is a highly competitive market. Responsibility for choosing the right grade of product is often left with the AV integrator (if there is one) or the client themselves. A case of *caveat emptor* - let the buyer beware!

When asked by clients why they should buy the higher priced commercial panel instead of the model on sale at the local high street retailer, most advisors merely quote the different warranties available for the different grade of product. Whilst this may be a serious consideration there are many more differences to take into account before making that purchase. The key consideration is to buy the product for the application for which it was designed. You must expect trouble if you buy a budget display, install it in a shop window and run it for 24 hours a day. Consumer displays are designed for between 4 and 8 hours use per day in a home environment without wide temperature fluctuations. Their components are not designed to withstand the constant use that can occur in corporate environments. So, when can the buyer take advantage of high street offers in the corporate market?

Let's examine the differences.

Warranties

It's not unreasonable for a consumer grade product to have a 12 month warranty. However, it is likely that the warranty will be a return to base type and not an on-site swap out. This would involve the corporate client in the disruption of removing the display from its location, re-packing and sending back to the manufacturer for repair. How long this takes will depend upon the complexity of the fault but be prepared for questions when staff and maybe clients query the "empty space" on the wall where the display used to be. The reason manufacturers are able to offer the additional warranty is because of the quality of the electronics, sub-assemblies used in the professional models. The fact that components vary greatly in their specification will affect their reliability and longevity. Generally, professional quality displays will have at least two year on-site swap-out warranties and some have three extendable to five. Care is advised as there have been cases where warranties for consumer displays have been judged invalid altogether as the display has been used in a commercial environment.

Performance

The biggest problem with consumer displays is that they aren't built to handle the heavy duty cycles commercial applications often demand. Consumer TVs are built to run for four to eight hours a day in controlled temperature environments whilst commercial grade products are designed to be used for 15 or 16 hours a day, and some run 24/7.

The main issue is cooling. The longer a consumer display runs, the hotter it gets, which increases its likelihood of failure. Many professional displays have heat dissipation plates, dust inflow filters, cooling fans, and electronics that adjust the monitor's brightness settings depending on the amount of ambient light, further reducing heat output.

Image sticking¹ can also be a problem when using consumer displays in professional environments. Many commercial units are manufactured with completely different display panels than consumer units. As your digital signage display switches from one message to the next, the consumer unit may suffer from image sticking.

¹*Image sticking is a ghosting effect where the previous message can still be seen as part of the current message for a period of time.*

Design

Consumer goods have other limitations. Many consumer panels won't operate in both portrait and landscape modes which can be important for digital signage applications, or they may not support all necessary PC screen resolutions. Cheaper LCDs and plasmas may have more issues with image retention and burn-in than their commercial counterparts. Industrial panels tend to have more robust power supplies and ruggedized housing.

Consumer market displays are designed for home use video from cable converters and dish receivers. Professional displays may offer protection from electro-magnetic interference (EMI) from other sources such as cell phones or computers that may disrupt the units operation. Commercial market displays are designed for compatibility with a wide range of PC screen resolutions.

The processor on most professional displays produces a full grayscale with linear color tracking of all signals from black to white to ensure the color and brightness is adjustable across a wider range. Consumer models are designed for home-use integration with cable TV and over-the-air signals.

Functionality

Consumer units may lack necessary inputs and be limited to composite, VGA and HDMI ports. The Polycom flagship HDX room video conferencing system still uses component video output to connect to the display. In many consumer models inputs are taken out of the design to reduce cost for the mass market as the market shifts to the increasingly popular HDMI standard. Whilst component to HDMI switchers are available to save the day, why introduce yet another piece of equipment into our equation - assuming we even have the space to install them. RS232 ports that allow the panel to be controlled by an AMX or Crestron system can be a luxury for the consumer display. Professional units are often controlled remotely and they often ship without accessible menu buttons, making it harder for end-users to "tamper" with their settings.

Conclusion

There is no conspiracy in place that shames the corporate buyer into paying premium rates for professional displays when a much cheaper consumer model from the High Street outlet will do the trick.



The key “take-away” is to match the grade of product with the application and then match that with the budget available. Be realistic about pushing equipment to the limits and be prepared to replace if necessary. “Buy cheap buy twice” may be a realistic option for the right occasion but for those client-facing, heavy duty critical applications the investment in a high quality professional series display will certainly pay-off.

About i-Klarity

We provide the latest High Definition (HD) video conferencing and audio visual products and services from the major manufacturers. We will consult, design, implement and manage the latest personal, room and telepresence services at your offices around the world. We will also manage and support your legacy systems from multiple vendors and ensure interoperability until such time as you are ready to upgrade to later technology.

For more information please visit www.i-klarity.co.uk or contact us by emailing enquiries@i-klarity.co.uk

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