Constant Technologies, Inc.

Commercial Grade vs. Consumer Grade Displays

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Introduction

Based purely on outward appearances, it may not seem like there's much difference between a consumer grade television screen and a commercial grade large format display. When it comes to creating a video wall, however, their functionality has huge differences.

Here are some of the ways that commercial grade display panels differ from consumer grade:

Resolution

A television is a consumer grade product that typically supports a limited amount of standard video resolutions (SD, HD and UHD). On the other hand, a professional grade display supports a broader range of video resolutions. This greater range of supported resolutions also means that professional displays can support a wider variety of inputs such as PCs, video conferencing hardware, television tuners, surveillance systems, and more.

Brightness

Operators in an operations center must be able to view the video wall display under all kinds of lighting conditions, including brightly lit rooms. Consumer grade televisions have much lower brightness output in comparison to commercial grade displays. Commercial displays have a brightness output that means the data being displayed is easily readable regardless of light conditions.

Reflection

In addition to having sufficient brightness to view the data on an operations center video wall, it's also important to have sufficient reduction of surface reflection. Commercial grade displays use anti-reflection surface treatments so that the data displayed will be visible in a wide variety of ambient lighting levels.

Color Accuracy

Commercial grade displays have pre-calibrated factory settings that guarantee color accuracy. By contrast, consumer grade displays do not have the same level of pre-calibration, and colors may be less accurate.

Heat Protection

The displays in an operations center need to be able to run 24 hours a day without losing image quality or causing damage to the components. This calls for more advanced heat protection than what can be found with consumer grade displays.

Electronic Components

Professional grade products offer options for off board electronics, meaning the display video processing systems and power supplies are located in a nearby equipment room. This minimizes the amount of electrical infrastructure needed at the display location.

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Long-term Operation and Display Lifetime

High quality components and technologies ensure that professional grade displays can withstand being used 24 hours a day, seven days a week for a long period of time. Consumer grade displays are created to decrease cost, meaning that they lack critical components that would allow for round-the-clock, continuous use. When sourcing for a video wall, it's vital to choose display technology that is rugged enough to endure the constant use required in mission critical.

Connection and Control Capabilities

In an operations center environment, analysts need to be able to display numerous sources at the same time and have simple control over everything that's displayed. The connectivity options for professional large format displays are much greater, including more than just standard consumer input signals like HDMI and USB. In addition, the sources displayed on a professional display at any point can be simply controlled via a user-friendly control system.

Difference in Standard Means a More Secure Investment

Put simply, commercial grade large format displays are produced at a much higher

standard of quality than a display made for average consumption. That means less time — and money– spent on repairing and replacing the technology in your operations center.

About Constant

Constant Technologies, Inc. is a premier mission critical systems integrator providing customized audiovisual integration of large scale operations center video walls and control center console furniture worldwide. With over three decades of experience, Constant's team has the knowledge and clearance to work with sensitive environments in both the public and private sectors and has implemented turnkey solutions all over the world. Constant designs, installs and services projects of all scopes and sizes to create solutions with the highest levels of security, aesthetics and functionality in mind. Some of Constant's installations include: EOC builds, Network Operations Center design, Fusion Centers, Security Operations Centers, Control Room Design, Social Media Command Centers, and other command and control environments.

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