

# DOES YOUR MONITOR WALL HAVE A SINGLE POINT OF FAILURE?

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## How many images can you stand to lose?

With the increasing amount of incoming video & audio signals in facilities, more and more monitoring facilities are transitioning from traditional individual CRTs to virtual monitor walls by using large LCDs, plasmas, and front or rear projectors in conjunction with multi-image display processors. The issue of a single point of failure becomes a major concern to many technical managers. Previously when a CRT fails, only one picture was lost, but with virtual monitor walls, more and more images are put in a single box and when that box fails the entire wall will be black. It is easy to plan for redundant routers, servers and even cameras, but what about the virtual monitor wall? It is unreasonable to ask the facility managers to purchase two virtual monitor walls to make sure that they do not have a single point of failure in this critical link of their operational chain. As TV stations and other video distribution and monitoring facilities consider their future migration from individual CRTs to a virtual monitor wall, it is imperative to look for a system that have been designed with redundancy in mind. In order to address this challenge, as part of their Media Command Center (MCC), Avitech has introduced the **Smart Module**.

### The Smart MCC Modules:

Instead of an all-in-one box approach, MCC uses an architectural model that is suited for mission critical and dynamic environments such as broadcast and mission critical surveillance. A variety of smart modules can be mixed and matched to meet the precise requirements of any facility. The smart modules can handle four simultaneous inputs from composite video all the way to HD-SDI, and

its output resolution can range from 800x600 to 1920x1080. Each smart module consists of its own CPU, output card, audio input module, power and fan. When multiple smart modules are cascaded together to form a multiple image display, the level of redundancy is added with each additional module.

Avitech's unique open and distributed modular architecture is specifically designed to have no single point of failure. This means that, if the controller dies, none of the images are affected, not even the audio meters. In the case of any of the modules in the cascade fail, only 4 images will be affected, even if the failed module is the last module in the chain.

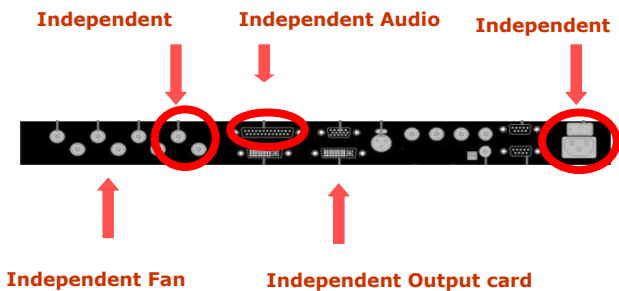


Figure 1. This figure clearly points out all the independent components of the smart module.

### More Redundancy Technology:

Avitech realizes that sometimes losing 4 four critical images can be too many. With the N+N technology, the operator no longer has to hurry and make a router switch, then run back to the equipment rack and figure out which board had failed and hopefully find the spare on the shelf and perform the hot

swap. With the N+N technology that is built into the unique MCC architecture, a system can be configured to have multiple levels of redundancy for the critical images. The unique concept of standby processors allows users to have as many as 60 "standby media windows" and at the same time it provides the fastest recovery time in the industry. Again, these standby modules have independent power and processors, so they still hold true to the rule of "no single point of failure". When a critical image disappears due to an unlikely event of module failure, the operator can simply drag and drop a "standby media window" onto the monitor wall layout. The recovery is as simple as a mouse click away.

**Summary:** Redundancy is a major concern in every facility. In a facility's planning to transition from traditional CRTs to virtual monitor walls, it is imperative to consider not putting all the images in one box. When designing the Media Command Center, the Avitech product management and engineering teams took all of the above important factors into consideration. There is nothing like an insurance policy that is built into the product and as well as being easy to use. As we all know there is no time to look for a spare board during a critical moment in a production.

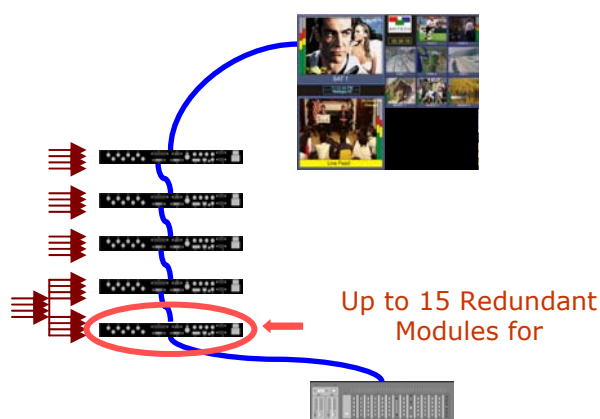


Figure 2. You can see the above design critical images are copied onto two processors. There is can be 14 redundant processors to act as standby modules ready to go in action in the moment of unforeseen failure.

### What about the Display Device?

A lot of the emphasis has been put on the redundancy of the processor as, the actual display device is also a single point of failure. To address this, each smart module has three outputs built in. This allows the facility managers to plan their monitoring facility to have multiple backup displays. Of course a backup does not have to nearly as large as the main display. A couple of inexpensive desktop or wall-mount 17" LCDs can easily serve this purpose.