Christie **Terra Bites**:
Bite-size info to whet your SDVoE appetite

SDVoE: Simple & powerful AV system design for the modern age

flexibility

No matter the size or complexity of an AV system, a common set of signal management and system processing requirements are encountered across projects. Whether it's a basic digital signage display or a robust multi-room, multi-screen networked environment, all AV system designs share similar requirements, including:

- Support for a broad range of digital video formats, audio and control signals
- Extension and switching
- Support for HDCP-encrypted signals and efficient EDID management
- One or more video processing functions such as: multi-view, image compositing or video walls
- Keyboard, Video and Mouse (KVM) control, a requirement that appears more and more frequently

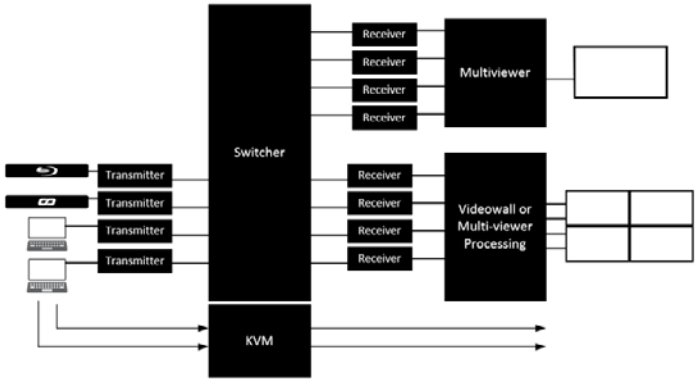
What's more, the transition to digital signals has introduced a new set of challenges for AV systems and the professionals responsible for their design and integration. The bandwidth required to support 4K@60Hz, latency-free video has exceeded the capabilities that traditional methods can affordably support. Even monolithic, proprietary matrix switches, such as HDBaseT™, have reached the upper limits of what they can support.

A new solution is needed. A solution that requires fewer devices, costs less, and most importantly, meets the performance and bandwidth requirements of today, and into the future. Fortunately, that solution exists. It is, Software Defined Video over Ethernet (SDVoE).

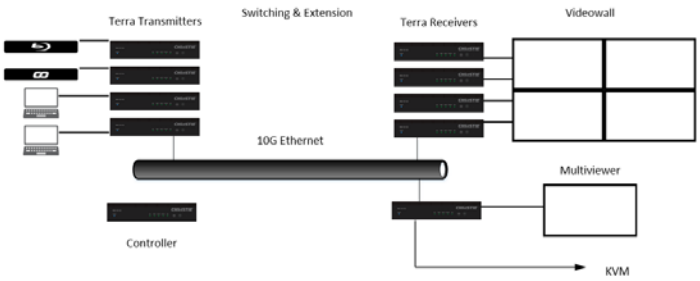
System comparison: SDVoE vs. traditional system design

These two diagrams compare a traditional matrix switch-based design with a Christie® Terra SDVoE system. Both systems are designed to meet the same requirements: switching of multiple inputs, extension, a 2x2 videowall, one multi-view display and KVM control over sources. The Terra system design is very flat and streamlined, requiring only half the number of devices as a traditional approach.

Traditional approach



SDVoE design



This table illustrates how SDVoE can simplify and streamline AV system design:

System comparison point	Traditional approach	**Christie Terra SDVoE**
Types of devices that interface AV signals	6	**2**
Different types of devices	8	**4**
Total number of devices	19	**10**
Handoffs in signal transmission path	6	**4**
4K@60Hz signal support	??	**Yes**
System cost	$$$$	**$$**

This dramatic simplication of system design is one of the major advantages of SDVoE. Not only do SDVoE systems employ fewer devices, but because they use off-the-shelf 10G network components, they will frequently result in lower cost designs, especially as system requirements scale-up in size.

Because SDVoE leverages standard Ethernet technology, systems can scale-up in size very efficiently as needs evolve. Add to this the performance advantages of the SDVoE system compared to traditional matrix-switching approaches and it's clear that a software defined Ethernet architecture, such as that used in Christie Terra, is the platform to take AV systems beyond current capabilities and into the future.

This case illustrates the flexibility of an SDVoE system. Often, an SDVoE system design results in a system budget cost savings of 30% - 50%. Every project and application will be different, so it's important to take the time to learn how SDVoE systems can fulfill your customer's projects more efficiently and help you succeed with more projects.

Hungry for more?

Visit the following sites for more information on SDVoE:

SDVoE Technology.com – *Learn about Christie® and the SDVoE Alliance – a partnership with the full AV-over-IP ecosystem in mind*

Christie Terra: An SDVoE technology solution – *Find out about Christie's solution enabling the transport, processing and control of uncompromised AV content.*

For the most current specification information, please visit christieemea.com