

SGM VPL NETWORK SPECIFICATION

A. General

1. The control network for the direct view lighting shall be primarily based on IP and UDP network layer communications protocols.
2. The control network shall be designed to work in a virtual LAN with individual IP addresses based on product's MAC address.
3. Transport layer protocols shall be ANSI E1.31 – 2016 sACN, and Art-Net3 for communication of the USITT DMX-512A data protocol.
4. Whenever possible, the direct view lighting network should be a separate, isolated LAN when installed in a project with other networks.
5. The control network shall be isolated from internet access.
6. No Network Access Control (NAC) or credential-based security should be used.
7. There should not be any limitation on active MAC address count for any ports.

B. Physical / Data Link Layer

1. The physical layer shall be IEEE 802.3 wired Ethernet for a local area network (LAN).
2. The network shall be physically linked by Cat5e or higher specification cable.
3. The network shall be designed to support 100BASE-T transmission.
4. VLANs shall be supported.
 - a. All VLAN multicast traffic should be available to all hardwired ports contingent on IGMP responses.
 - b.

C. Network Layer

1. IPv4 only shall be used.
2. IP flow control features must be available.
3. Addresses in the 2.x.x.x range shall be supported.
4. IGMP version 3 must be enabled.
5. Multicast traffic shall not be restricted or blocked.

D. Transport Layer

1. Universal Datagram Packet (UDP)

E. Application Layer

1. sACN (ANSI E1.31 – 2016)
2. Art-Net3 from Artistic License
 - a. It is recommended to limit broadcast configuration to smaller systems which are separate from other LANs.

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