

Panomera® - Network Requirements

Basic information for planning network environments for safe and reliable operation of Panomera® Multifocal Sensor Systems



Bandwidth

Panomera® multifocal sensor systems consist of multiple sensors and therefore require a higher bandwidth than traditional cameras. The bandwidth required in each case is determined by the bit rate. This in turn results from the desired frame rate, resolution and image quality as well as from image complexity and captured motion. For the proper operation of a Panomera® multifocal sensor system, a gigabit connection is always required.

Performance Switches

A switch has to be able to simultaneously manage the full network bandwidth on all connections. The decisive factor for this is the "internal" bandwidth of the switch (also known as wire / line / backplane speed). The "internal" bandwidth has to be 1 Gbit/s (duplex) for each port.



Note the white papers Switch Basics and Switch Whitelist.

Uplink Switches

Switches are interconnected via uplinks. An uplink should be utilized with max. 50 % in regular operation. The remaining bandwidth has to be available for the compensation of network load peaks.

Functions Switches

All switches in a network for Panomera® Multifocal Sensor Systems must support full configuration (manageable), multicast operation and IGMP V2 snooping.



Note the Switch Basics whitepaper regarding network topology and the location of the IGMP Querier.

General Requirements

- **Short transmission paths**
(Recording close to the source in order to avoid the utilization of network components)
- **Dedicated network**
(Prevention of adverse effects by competing applications such as VOIP, video streaming, etc.)
- **Consistent bandwidth**
(Prevention of adverse effects caused by media bridges such as a GBit/s - 100 MBit/s - GBit/s switch)
- **Low latency**
(Avoiding routes through WAN, WLAN, routers or firewalls. For a good representation at the workstation, all streams of a Panomera® multifocal sensor system have to arrive simultaneously.)

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