Summary

When adding a fisheye camera to a NVR/HDVR, the bandwidth calculation is based on the bit rate, like any other IPC.

If there is no local monitor display, the device should NOT have any issue recording/playing/displaying remotely or through the local network, given the network bandwidth is within the limit.

If there is a local display, you may use the device’s decoding capability to determine playback. If all channels have substreams, the live view should have no issue displaying all channels. Playing back multiple channels on the local monitor may cause “no resource” errors since recorded video is based on the main stream.

Decoding Capabilities by NVR/DVR Series

- **DS-7608NI-SE/P** – Local display can decode up to 2 channels of 1080p
- **DS-7604NI-E1/P** – Local display can decode up to 4 channels of 1080p
- **DS-7608NI-E2/P** – Local display can decode up to 6 channels of 1080p
- **DS-9016HF(W)-ST/DS-96xxNI-S(R)(X)T/DS-7716NI-SP (NETRA Series)** – Local display can decode up to 8 channels of 1080p
- **DS-9016HQHI-SH** – Local display can decode up to 5 channels of 1080p
- **DS-96xxNI-I8/DS-7716NI-I4** – Local display can decode up to 16 channels of 1080p

**NOTE:** 1080p resolution is used as the base unit for the decoding capability calculations.

Fisheye Resolution Examples

- 4 @ 4CIF = 1 @ 1080p
- 4 @ 720 x 720 = 1 @ 1080p
- 2 @ 1024 x 768 = 1 @ 1080p
- 1 @ 1280 x 1280 = 1 @ 1080p
- 2 @ 2048 x 1536 = 3 @ 1080p
- 1 @ 2048 x 2048 = 2 @ 1080p
- 1 @ 3072 x 2048 = 3 @ 1080p
Calculation Example

Setup: One DS-2CD6362FWD camera in “Fisheye + Panorama + 3PTZ” mode, connected to a DS-7716NI-SP/16

Action: Add all five channels to the NVR

Calculations:

- Fisheye View – Resolution > 2048 x 2048 (2 of 1080p)
- Panorama View – Resolution > 2048 x 1536 (approximately 1.5 1080p)
- 3 PTZ View (3 CH) – Resolution > 1024 x 768 (approximately 0.5 1080p) x 3 = 1.5 of 1080p

The above example will need five 1080p streams to display all five channels on the NVR. If a second fisheye with all five channels is added, then the 7716 may display “no resource” on certain channels, since the DS-7716NI-SP can decode up to eight streams @ 1080p.