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Local Mode Overview

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What Local Mode Does

Local Mode allows the operator workstation to establish a direct peer-to-peer (P2P) connection to the NVR or device, bypassing the central GCXONE cloud streaming gateway for high-bandwidth functions.

Why It Matters

Cloud streaming works well for remote access, but on-site operators benefit from a faster, more direct connection. Local Mode eliminates the cloud relay for supported functions, giving operators lower latency, higher quality video, and access to features that are only available through a direct device connection.

How It Works

When Local Mode is active, the operator workstation connects directly to the NVR or device on the local network using the device's native SDK. If local access fails, the video viewer automatically switches to cloud streaming — allowing operators to continue monitoring without manual intervention during local network interruptions.

Key Capabilities

When fully supported by a device, Local Mode enables the following features directly on the operator workstation:

- P2P Streaming — Fast, direct video streaming access with minimal latency
- Live Video — Real-time video monitoring over the local network
- Playback — Review of archived footage directly from the device

- Local SDK Audio — Two-way audio and audio announcements through the device SDK
- Encrypted Streams — Handling of encrypted communication streams from the device
- Local PTZ — Pan-Tilt-Zoom control directly over the local connection
- Local IO — Input/Output operations locally
- Timeline — Chronological navigation and viewing of recorded events

Cloud-only devices stay on the cloud streaming path instead of attempting local streaming controls. IO controls reset when switching between devices. Local IO controls appear only when the selected device is eligible for local IO.

Devices Where Local Mode Is Not Applicable

Local Mode is not supported or required for the following device types:

- Hanwha — All features are not supported in Local Mode
- Genesis Audio (SIP/Twilio) — Not required; designed for cloud integration
- Senstar — Local Mode operations are not supported

Real-World Use Cases

- An on-site operator switches to Local Mode — video latency drops immediately and two-way audio quality improves without any cloud relay.
- A remote workstation loses local network access — GCXONE automatically falls back to cloud streaming without any operator intervention.
- An operator needs to review archived footage directly from the NVR — Local Mode enables Playback without routing through the cloud.

Best Practices

- Install Local Mode on every operator workstation at the start of deployment — do not wait until it is needed during an active incident.
- Always use v.2.8.2 or later of the Genesis Installer to ensure full feature compatibility.
- Use Local Mode for on-site workstations whenever possible — lower latency and better audio quality improve operator response time.
- Do not attempt to configure Local Mode for Hanwha, Genesis Audio, or Senstar devices — these are not supported.

Additional Details

Installation Steps

Local Mode components must be installed on every operator workstation:

1. Download the Genesis Installer (v.2.8.2 or later)
2. Right-click Genesis-Installer.exe and select Run as Administrator
3. Follow the on-screen instructions to complete the installation