

RTX64 Vision

Best Practices for Using Multiple Cameras

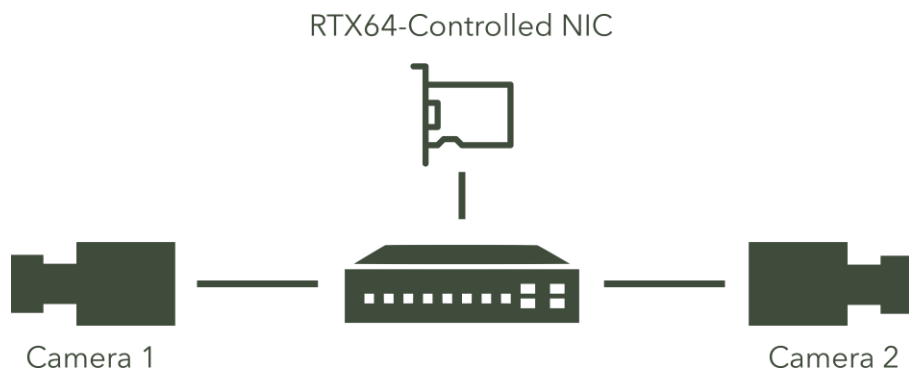
This document recommends best practices for common multi-camera use cases with RTX64 Vision.

Use Case 1: Two Cameras in Triggered Acquisition Mode

In this scenario, two cameras are configured for Triggered Acquisition mode (the camera does not send images until it receives a software or hardware trigger).

Best Practice

1. Configure the trigger so that the two cameras *do not* send images simultaneously.
2. Connect a single RTX64-controlled Network Interface Card (NIC) to both cameras via a switch



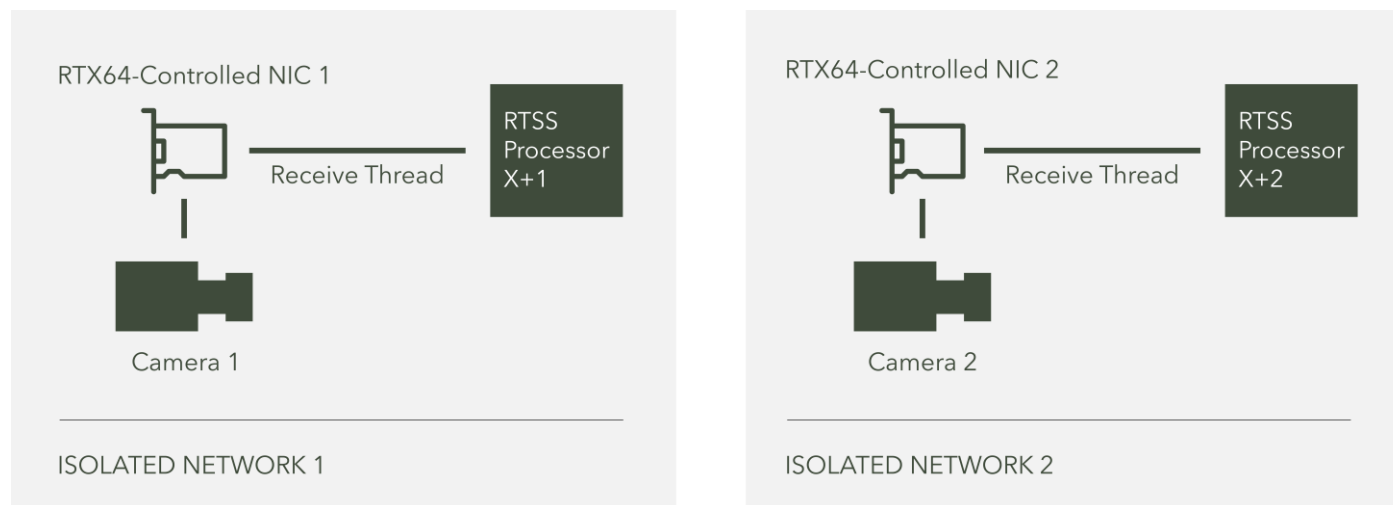
Use Case 2: Two Cameras in Continuous Mode

In this scenario, two cameras are configured for Continuous mode (continuous image acquisition is initiated by functions **RtGVStartCameraStream** or **RtGVStartStream**).

Best Practice

Assuming a low exposure time and reasonably large image sizes, the following configuration settings are recommended for maximum performance:

1. Connect two RTX64-controlled Network Interface Cards (NICs) to their respective cameras over isolated networks
2. Isolate the receive thread for each NIC on a separate CPU core.



Use Case 3: Three or More Cameras in Continuous Mode

In this scenario, three or more cameras are configured for Continuous mode (continuous image acquisition is initiated by functions **RtGVStartCameraStream** or **RtGVStartStream**).

Best Practice

Assuming a low exposure time and reasonably large image sizes, the following configuration settings are recommended for maximum performance:

1. 3+ RTX64-controlled NICs (one per camera)
2. Connect each NIC to a camera over isolated networks.
3. Isolate the receive thread for each NIC on a separate CPU core
4. Increase the Maximum Transmission Unit (MTU) for each NIC.
NOTE: This step may require trial and error to determine the appropriate size.
5. Increase the Packet Size property on each camera.

