

Network Client™

Troubleshooting Guide

The first section of this guide answers some frequently asked questions (FAQs) about the operation of Intellex and the Network Client software. It also addresses common issues when installing Intellex and Network Client on an existing corporate network or on a private network.

The second section provides a troubleshooting guide that helps you identify possible solutions to Network Client problems.

FREQUENTLY ASKED QUESTIONS

How many Intellex units can I attach to a Network Client?

Network Client supports as many Intellex units as you can attach to your network. Adding Intellex and Network Client units may affect general network performance, but not any more than adding other types of computer equipment to the network. Ultimately, performance depends on how much video data you will retrieve over the network. If five or more Network Client units display live video from the same Intellex unit, the performance of the Intellex can degrade. This includes recording rate and search speed.

Can I connect an Intellex unit and a Network Client directly using a CAT 5 crossover cable?

An Intellex unit and Network Client can be connected directly using a crossover cable. However, we recommend using standard network cables and a network hub or switch.

Can I use IPX on my network for Network Client operation?

Intellex and Network Client use TCP/IP to communicate. Therefore, your network must support TCP/IP operation. You must also install the protocol stack.

Can I access the Internet using Network Client?

This version of Network Client supports LAN, WAN, and dial-up network configurations. The Internet may be part of your network topology and you may access Intellex units through the Internet. However, Network Client cannot access other Internet resources such as the World Wide Web.

Can I access an Intellex on my network remotely using a laptop computer with a modem?

Yes. A modem can be used to access a corporate or private network with Intellex units connected or to call an Intellex unit directly if it is equipped with a modem.

Can I view video from one Intellex unit at more than one Network Client workstation?

Yes. Any Network Client can retrieve video and alarm information from any Intellex that it can connect to. Setup, alarm retrieval, and video retrieval is limited to one Network Client at a time.

The Live Remote video capability of Intellex and Network Client supports multiple simultaneous connections. Intellex performance is degraded if 5 or more Network Clients are displaying live video from the same Intellex.

Will sending live video over my network affect network performance?

That depends on how much bandwidth is available on your network and how you use Network Client. Intellex and Network Client use the same protocols for sending digital video data as common office applications. Live video is scaled and compressed before transmission to minimize the network bandwidth requirements.

Bandwidth usage ranges from less than 1000 bytes/sec to about 200,000 bytes/sec but it is typically less than 20,000 bytes/sec, which is a fraction of one percent of a 100BASE-TX network.

The actual data rate is displayed in the upper right corner of the Live Display window. Bandwidth usage can be controlled with the Bandwidth Configuration feature in Network Client.

How much data will you send over my network?

Live Video display uses from 2,000 bytes/sec to 200,000 bytes/sec, depending on the image content and the Network Client Live Camera Settings. If there is not enough bandwidth available, frames will be dropped to accommodate what is available.

Retrieval of recorded video files can use more bandwidth, but only for the duration of the download. The size of the download is displayed before the download begins and the download can be terminated at any time without losing any data that has already been received.

How much bandwidth will Intellex/Network Client use on my network?

On a private 100BASE-TX network with no other traffic, Network Client will use from 6% to a maximum 12% of network bandwidth during download of video clips. Live Display typically uses less than one percent.

On a corporate network, bandwidth is usually allocated by the server or servers, and is affected by network topology and installed equipment. Intellex and Network Client will not monopolize network bandwidth.

How many of my T1 lines are you going to take up with an Intellex/Network Client configuration?

It depends on several factors, including the number of installed Intellex units and Network Clients and how much Intellex data you will retrieve. The network may become saturated only if you retrieve many large files, a situation that will probably not occur.

My network consists of numerous mainframes located worldwide. Can I still install Intellex and Network Client?

Yes. As long as your network supports TCP/IP and any firewalls are configured properly, the Network Client will be able to connect to the Intellex.

Can Intellex and Network Client perform on a Wide Area Network (WAN)?

Yes. As long as the IP address or host name can be resolved and routed the Network Client will be able to connect to the Intellex.

What must my MIS people do to install and configure Intellex and Network Client on my network?

This depends on the network configuration and the location of the Intellex and Network Client units. It may be as simple as providing hook-ups to the network. The MIS staff may have to provide logon capabilities and set up access capabilities between network domains. They may also use subnetting to isolate video traffic from other parts of the network, and if firewalls are used, the port addresses in Intellex, Network Client, and the firewall must be properly configured.

How do Intellex and Network Client establish communications?

Intellex does not send any messages on its own, thereby eliminating redundant broadcast messages from the Intellex units. Instead, the Network Client "pings" the local area network for the Intellex units entered in the Remote Instruments list. It pings each time you start the Network Client or whenever you select the Refresh Instruments option in the Action menu.

Can I retrieve more than one video segment from an Intellex unit at the same time?

Yes. You can retrieve multiple video segments at a time.

What is the largest video segment that I can retrieve from an Intellex unit?

1GB. This limit prevents network saturation. If you try to retrieve more, an error message appears and video retrieval is cancelled.

Can I run the Network Client from a server on my corporate network?

No. The Network Client software, and its license key, must be installed on each computer that will use it. The license key is based on the unique MAC address of the computer on which the Network Client software is installed. You must register your software to obtain the license key.

What are the system requirements for Network Client operation?

Refer to Minimum System Requirements in the Network Client Installation and Operating Instructions.

Can I assign IP addresses using DHCP?

Yes. As long as the name resolution services of the network are properly configured the Intellex units can be found by host name.

The Intellex unit or the Network Client unit does not appear on the Windows Network Neighborhood screen. Is this a problem?

The Intellex and Network Client units do not have to appear on this screen because they communicate at a different level than other computers on your network. To verify that the units can communicate, use the Ping network program from your computer's MS-DOS Prompt. Example:

```
C:\WINDOWS>ping nnn.nnn.nn.nn
```

Where "nnn.nnn.nn.nn" is the IP address of the Intellex. You may also use the unit's ID name with Ping to verify communication.

How much space is required by the Network Client software?

The software itself, with help files, requires less than 10MB of hard disk space. However, you should have at least 2GB available to store the video segments retrieved from the Intellex units.

Can I retrieve sound with the video?

Yes. Network Client allows retrieval of recorded audio input associated with recorded video at the remote Intellex unit. The Network Client computer must be equipped with a 16-bit (SoundBlaster 16 equivalent) sound card or higher to make the best use of this feature. DirectSound (part of the DirectX package from Microsoft) must be installed on the computer.

NOTE: Remote live audio is not currently supported by Network Client.

How can I get more technical information about Intellex and Network Client?

If you are a certified dealer, you already have access to a library of technical information.

If you are a user, contact your certified dealer, or contact Technical Support at 800-507-6268.

I am currently using Network Client 1.0. Is my video database compatible with Network Client 3.0?

Your Network Client 1.0 database must be converted to the Network Client 3.0 format. Run the conversion utility by selecting Start, Programs, Network Client, Convert Database.

I cannot connect to my Intellex 1.6 units on my network. What's wrong?

Network Client 3.0 is only compatible with Intellex 2.2 or later software. If you have an Intellex 2.0 unit it should be upgraded to version 2.4 software. Intellex 1.6 units are not compatible with Network Client 3.0 and cannot be upgraded.

I cannot see any live video on my Network Client system.

The default display protocol for Network Client is DirectDraw. However, some combinations of graphics card and operating system do not support DirectDraw. You can change the display protocol to bit map by turning off DirectDraw in Setup, Display Configuration in Network Client.

How long does it take to retrieve video clips?

A 5 minute video clip recorded at 30 images per second can contain 20MB to 40MB of data. To download this much data, it would take:

- 1-2 minutes on 100BASE-TX or lightly loaded 10BASE-T or
- 5-10 minutes on a busy 10BASE-T or
- 1-3 hours over dial-up.

What kind of refresh rate can be expected for live video over dial-up?

Depending on the image content, the line quality, and the Network Client settings, two images per second to several seconds per image is possible.

IN CASE OF TROUBLE

If a problem occurs, review the manual section covering the activity associated with the problem. If necessary, consult the *Troubleshooting Guide* on the following pages.

If the problem cannot be solved, you may have to contact your dealer or the factory. When you call for support, the representative will ask you to provide specific information about the installation. To save time, spend a few minutes getting organized.

Before calling Technical Support, write down the following information:

- The serial number of your Network Client software.
- The software version as shown on the **About** screen.
- The make and model of each piece of hardware connected to the Intellex and the Network Client computer.
- Approximate date of purchase and of installation.
- The exact text of the error message (if any).
- The symptoms you have observed.

NOTE: Please do not return any product to the factory without obtaining a Return Authorization (RA) number. Failure to do so can result in a significant delay in processing your repair. To obtain an authorization number, contact Technical Support.

Troubleshooting Guide		
Problem	Possible Causes	Suggested Action
Problems Connecting		
Intermittent connection between Network Client and an Intellex.	The name resolution services of the network are slow or not configured properly.	Use the IP address of the Intellex instead of the unit name.
Intellex and Network Client will not connect.	There is a problem with the Intellex.	Access the status screen on the Intellex unit. If Unavailable appears next to Network, refer to the <i>Intellex Troubleshooting Guide</i> .
	There is a problem with the network hardware or configuration.	Use the Ping network program to check if the hardware is working correctly. If this works, contact your MIS department for assistance.
	An incompatible version of the Intellex software is installed on the Intellex unit.	Check the software version on the Intellex unit (see <i>Intellex Operating Instructions</i>). If it is not v2.1 or higher, upgrade the software.
	A login ID is required on some networks.	Contact your MIS department to configure this on your Network Client computer.
	You may have installed the network card driver twice, even though only one network card is present.	Delete both drivers and re-install the correct driver just once.

Troubleshooting Guide		
Problem	Possible Causes	Suggested Action
Problems Connecting		
Intellex and Network Client will not connect.	A power surge may have affected network operation.	Connect your Network Client and the Intellex unit as a private network. If this works, contact your MIS department to reset your network accordingly.
	Network maintenance may have affected network operation.	Connect your Network Client and the Intellex unit as a private network. If this works, contact your MIS department to reset your network accordingly.
The Intellex unit does not reconnect after you disconnect and try to connect to the Network Client.	You are using the DHCP to assign the IP address to the Network Client computer.	Contact your MIS department to assign permanent IP addresses to all Intellex units and Network Client computers.
After installing new hardware, the Network Client computer does not function correctly.	The new hardware was installed or configured incorrectly.	Reconfigure the hardware and its driver. Reinstall hardware.
	The hardware installation corrupted one or more Windows files.	Reinstall Windows NT Service Pack 4, Windows 98, or Windows 2000.
Cannot see live video or Network Client crashes when Live Display selected.	Graphics card or driver not compatible with DirectDraw.	Check Settings tab in Display Properties for True Color (32-bit).
		Disable DirectDraw on the Display configuration menu.

Troubleshooting Guide		
Problem	Possible Causes	Suggested Action
Problems Connecting		
Cannot connect to Intellex through dial-up.	The dial-up settings are not configured properly for the operating system of the Network Client host.	Refer to the Dial-up Networking settings for your operating system in <i>Appendix A of the Network Client Installation and Operating Instructions</i> .
		Check that the Server type is set to Default, and that the “Enable software compression” box has been checked and the “Require Encrypted Password” has been cleared.
Problems With Dome Camera Control		
Video OK; no camera control	Dome camera not equipped with control functions	Install a control-capable dome camera
	Dome PTZ control not operational	Check dome PTZ power.
	Camera not configured for PTZ dome camera control	Set Camera Control Type to Dome using the Intellex Camera Setup dialog
	Camera not correctly connected to Touch Tracker	Review camera connection at Touch Tracker
Video poor; camera control poor or intermittent	Incorrect camera termination	Set correct Termination using the Intellex Camera Setup dialog

Troubleshooting Guide		
Problems	Possible Causes	Suggested Action
Problems With Dome Camera Control		
Video poor; camera control poor or intermittent	Faulty camera sync or video output	Exchange affected camera with known good camera
	Ground loop (improper ground)	Check camera ground connections
Check AC wiring with appropriate AC line diagnostic tool		
Video OK; camera control poor or intermittent	Electrical interference	Check for noise sources at Touch Tracker and camera connections
		Check AC wiring with appropriate AC line diagnostic tool
Problems with Intellex or Network Client Camera Control		
Video OK; no camera control	Touch Tracker faulty or incorrectly installed	Check all Touch Tracker connections
		Check that the Intellex and the Touch Tracker are connected correctly
	Incorrect wiring to camera control system	Check power to camera control system
		Check wiring from Intellex to camera control system
	Incorrect information entered during setup	Check for correct Camera Control Type in the Intellex Camera Setup dialog
		Check for correct Controller Number, Camera Number and other information in the Configure Dome dialog

Troubleshooting Guide		
Problems	Possible Causes	Suggested Action
Problems with Intellex or Network Client Camera Control		
Video OK; no camera control	Incorrect information entered during setup	Verify that the Terminator letter is lowercase
Video OK; no camera control	Camera Control software component missing or corrupted	Reinstall the Camera Control software component
No video signal; no camera control	Camera power is missing or faulty video connections	Check camera power and video connections
No video signal; camera control OK	Faulty video connections	Check video connections
	Lens iris completely closed	Open iris using the Camera Control function
	Incorrect information entered during setup	Check for correct Camera Control Type in the Transmitter Cameras dialog
No preset operation	Presets not supported by camera control system	Replace camera control system
	Presets not enabled during setup	Enable presets in the Transmitter Cameras dialog
No autoscan operation	Incorrect information entered during setup	Check for correct Camera Control Type in the Transmitter Cameras dialog
	Autoscan not supported by camera control system	Replace camera control system
Windows™ system fault dialog appears	Unknown	List contents of the dialog; try to reproduce the problem; note exact sequence of events leading up to system fault; then contact Factory Technical Support

NOTE:

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