DIGITAL KVM OVER IP SWITCH QUICK INSTALL GUIDE

MODELS 503723 & 503730



Shown: 8-Port , Model 503723

INTELLINET
NETWORK SOLUTIONS

INT-503723/503730-QIG-0808-01

INTRODUCTION

Thank you for purchasing the INTELLINET NETWORK SOLUTIONS™ Digital KVM over IP Switch, Model 503723 (8-Port) or Model 503730 (16-Port).

This quick install guide presents the rudimentary steps required to set up and operate this device. For more detailed instructions and specifications, refer to the user manual 1) on the CD enclosed with this product; 2) on the Web site listed below; or 3) in some cases, printed and enclosed with this product. Contact your INTELLINET NETWORK SOLUTIONS dealer with comments or questions, or visit **www.intellinet-network.com** for information on the latest software and firmware updates, related products and additional contact information.

FCC Statement

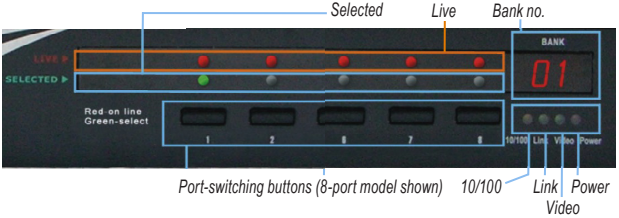
This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case, the user will be required to correct the interference at their own expense.

CE Statement

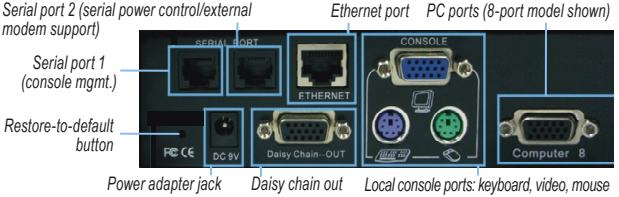
This is a Class B product in a domestic environment. This product may cause radio interference, in which case the user may be required to take adequate measures.

HARDWARE

Front Panel (compressed view)



Rear Panel (compressed view)



INSTALLATION/SETUP

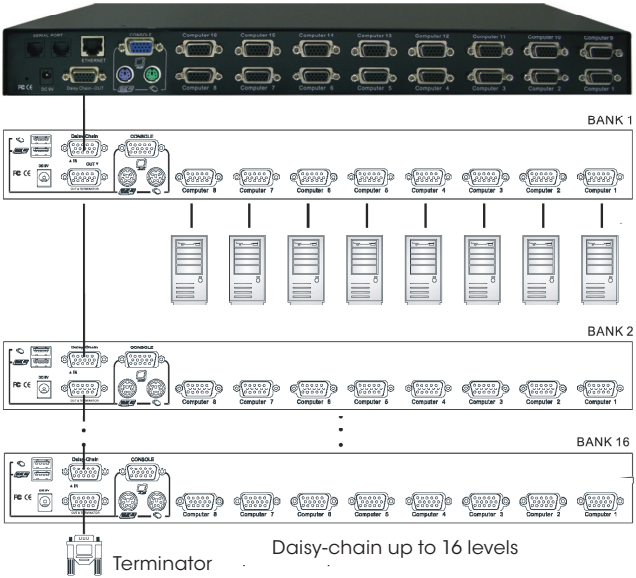
Digital KVM over IP Switch Setup

1. Plug the included power adapter into the switch and an AC source, then turn on the switch.
2. Set up your local console by connecting a keyboard, monitor and mouse to the corresponding Console (keyboard, video and mouse) ports on the switch (see Rear Panel above). Refer to Appendix A in the user manual for an introduction to basic local console operation.
3. Connect to one or more computers/servers as described below. Refer to Appendix B in the user manual for samples of connector cables, including the recommended Combo-Free USB PS/2 KVM Cable. ***NOTE:*** Make sure that any PS/2 computers are turned off before

connecting to the switch: The non-Plug and Play interfaces may not recognize the PS/2 keyboard and mouse later in the installation.

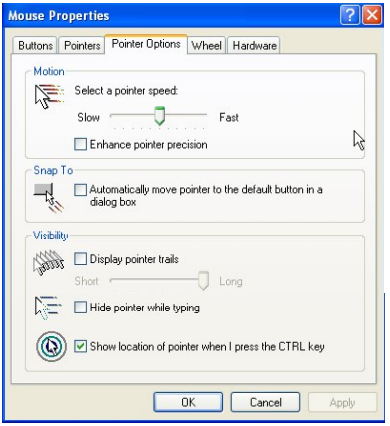
- Single Server Mode: To use just one server or computer, simply connect to a PC port with an appropriate (USB or PS/2) combo cable. ***NOTE:*** Refer to System Architecture in the user manual for examples of various configurations.
  - Multiple Server Mode: To connect to multiple servers/computers, add a conventional KVM switch to the configuration by connecting the Daisy Chain Out port of the Digital KVM over IP Switch to the Daisy Chain In port of the second KVM switch, which is then connected to additional computers/servers as desired.

4. Boot up connected computers (if not yet powered on and verify the connections. ***NOTE:*** Do not use both USB and PS/2 keyboard connectors on a computer simultaneously.



Connected Computer Setup

1. Turn off the mouse acceleration feature and the “Snap to” option on each of the computers/servers included in the network being configured. Mouse synchronization can function properly only when these two options are turned off on all connected computers. For example, in Windows XP/2003, go to Control Panel → Mouse Properties → Pointer Options and, in the Motion panel, set the mouse (pointer) speed at the middle of the bar scale; then uncheck both the “Enhance Pointer Precision” option and, in the Snap To panel, the “Automatically move pointer to the default button in a dialog box” option. (For details, see the Installation / Server Configuration section in the user manual.



2. Check that the settings/modes for display frequency and pixel dimensions are standard, such as 800 x 600 @ 60/72/75 Hz; 1024 x 768 @ 60/70/75 Hz; or 1280 x 1024 @ 60 Hz.
3. Disable the transitional effect function by going to Control Panel → Display → Appearance → Effects and unchecking the option. Doing this will significantly improve the video quality when using Medium or Low as your video filter quality setting.

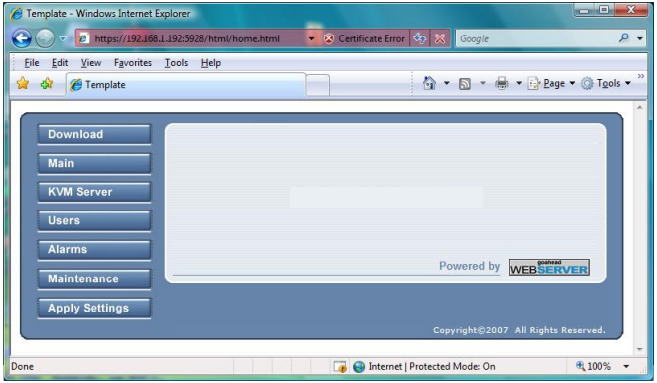
Switch Configuration for LAN Connection

1. Connect the Digital KVM over IP Switch to your LAN by connecting the Ethernet port of the switch to one of the LAN ports on your network switch/hub within your LAN using a Cat5 UTP cable. The Link LED on the front panel of the switch lights to indicate 10 Mbps Ethernet

connectivity; if unlit, the connection isn't ready. When lit, the amber LED indicates 100 Mbps connectivity.

NOTE: If your LAN is using a network segment other than 192.168.1.xxx, consider configuring one of the computers with an IP address of 192.168.1.xxx. The factory defaults of the switch are as follows:

Port base:	5900
IP address:	192.168.1.200
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.254
DNS:	192.168.1.1



2. Go to the Web Management interface of the switch by entering https://<IP_address>:<PortBase+8> (e.g., https://192.168.1.200:5908) in the address bar of your browser; then log in (username = superuser; password = superu).
3. Go to the Main: LAN TCP/IP screen to re-configure the factory default settings listed above. If, as an example, you establish these settings:

Port base:	6080
IP:	192.168.1.36
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.11
DNS:	192.168.1.1

it means you'll use 6080 for the viewer port base and 6088 for the SSL browser connection (<PortBase+8>). Thus, you would enter https://192.168.1.36:6088 in the browser address bar to obtain Web Management access, and within the viewer prompt window you would enter 192.168.1.36:6080. ***NOTE:*** The DNS setting is required only when you want to use the mail alert function to notify users of specific server alert events via e-mail.

4. Validate the new settings by clicking "Store Settings" to commit them to the switch's flash memory. Then go to the Apply Settings screen and click "Restart Servers" to make any new settings take effect.
5. Verify the presence of the Digital KVM over IP Switch within your LAN by trying to ping the IP address of the switch from any computer on the LAN. For example, in the DOS box, enter: ping 192.168.1.36 — a reply to the ping indicates that you can now access the switch using any computer within your LAN environment.

Router/Firewall Configuration for Internet Access

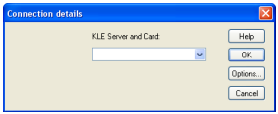
NOTE: These settings are for your router, not the KVM over IP Switch.

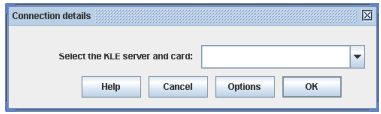
1. Configure a virtual server on your router as mapped to the switch's local IP address.
2. Open a port range (<port_base> — <port_base_+_9>) both inbound and outbound for the virtual server (based on the configuration in previous steps). If, as above, the switch has a port base of 6080, then the port range would be 6080–6089 (<port_base> — <port_base +9>) both for inbound and outbound, in which
   <port_base> = 6080 (viewer connection port)
   <port_base + 8> = 6088 (browser SSL connection port)
   <port_base + 9> = 6089 (for viewer internal communication, etc.)
   NOTE: Once you've changed the port base of the switch, you should also modify the open port range on your router accordingly if you want Internet access to come across.

Testing the Viewer Connection via the LAN/Internet

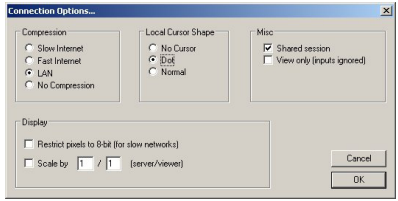
1. Log in to the Web Management interface (using a valid IP address and the username/password as above).

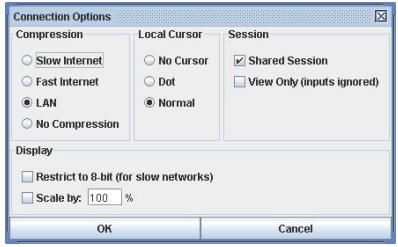
2. Go to the Download screen and download/install the Win32 viewer program. A viewer icon will appear on your desktop. ***NOTE:*** You can download either a Win32 or Java version of the viewer, but the Java viewer requires that Java Runtime Environment 1.5.0 or above be already installed on your computer client. The Java viewer itself won't have an installation process: Just double-click on it to run the program.
3. Run the viewer program by double-clicking the viewer desktop icon to display the Connection Details screen (Win32 below left; Java below right).





4. Click "Options" to display the Connection Options screen (Win32 at right; Java below right).





For viewer connection within a LAN, select "LAN" in the Compression panel. For connection across the Internet, select either "Slow Internet" (poor network bandwidth) or "Fast Internet" (better network bandwidth). ***NOTE:*** "Restrict to 8-bit" (in the Display panel) is an option to consider under limited-bandwidth conditions. Also, to prevent others from sharing viewer access while you're connected through the switch, de-select "Shared Session" (in the Session panel). Once you've selected your preferred options, click "OK."

5. With the Connection Details screen displayed again (see Step 3 images), enter the access IP and viewer port number in the “Server and Card” field:
   - Within a LAN: <Prima IP_local_IP>:<port_base> (e.g., 192.168.1.36:6080)
   - From across the Internet through a firewall/router: <router_Public_IP>:<port_base> (e.g., 61.232.134.120:6080)

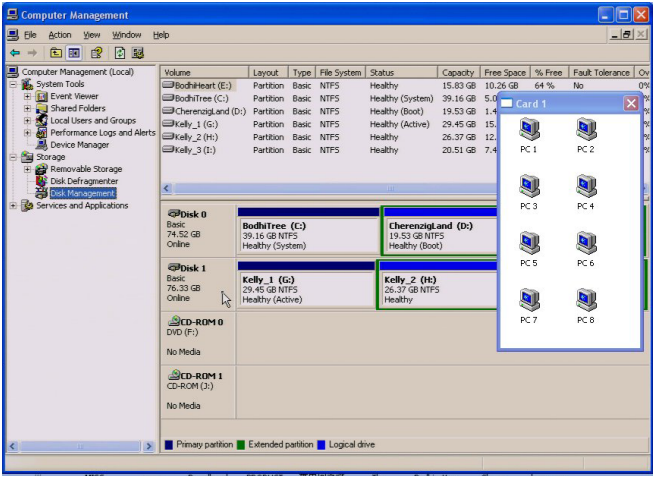
   Click “OK.”

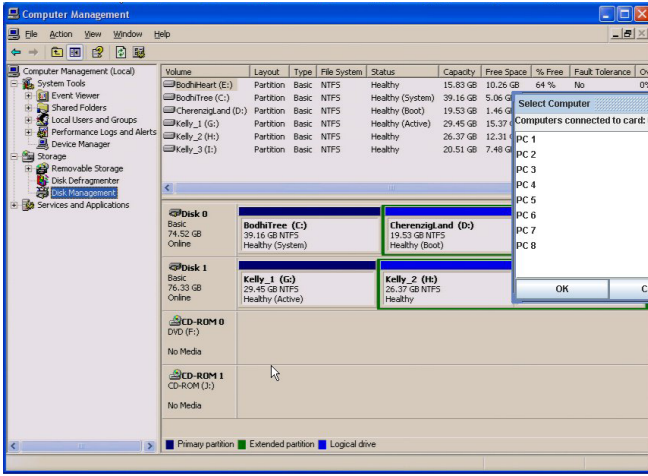
At this point, your first viewer connection has been made! Notice that there’s also a Select Computer box overlaying the viewer window — the Win32 viewer is shown below; the Java viewer is on the next page — with computer icons (PC 1, PC 2, etc.). Later, you can configure the icon names as your real computer names.

Also, at times you may find that the local mouse cursor and the remote mouse cursor are out of sync. You can use the following mouse synchronization hotkey to bring them into sync:

[Right_Ctrl] – [Right_Ctrl] – [Home]

Use only the right control key, and not the left.





Switch Display Optimization

1. Open a viewer connection (see previous section).
2. Check for video quality and proper screen centering on the viewer screen. If a screen is not properly centered it will have a black strip (offset) on edge of the screen. To make any adjustments, go to the viewer's Quick Menu (by clicking the title bar icon of the viewer window) and select Adjust Screen. For details about these settings, refer to the several Viewer Connection sections in the user manual.

Configuring Computer Names

1. Go to the KVM Server/Computers screen of the Web Management interface and configure the computer names as desired. Remember to click "Store Settings" to ensure any modifications are saved in the switch's database before continuing to the next computer.
2. Once all the connected computers have been renamed, go to the

Apply Settings screen and click “Restart Servers” to make the name modifications effective. For details, refer to KVM Server: Computers in the user manual.

3. Establish a new viewer connection and you’ll see the Select Computer box now displays the newly specified computer names.

Adding, Editing or Deleting User Accounts

Three types of user accounts are available with different privileges for accessing the switch’s Web management features: SUPERADMIN, with access to all management features; ADMIN, with partial access to management features; and USER, with minimal access to features. For details, refer to Users: Local Database in the user manual.

1. Go to the Users: Local Database screen in the switch’s Web Management interface.
2. Add, edit or delete the user accounts and assign access privileges. There are three default user accounts, identified below by username/password:
   - superuser/superu provides SUPERADMIN privileges
   - admin/123456 provides ADMIN privileges
   - user/123456 provides USER privileges

It’s recommended that you add your own user accounts and delete (or at least modify) the passwords of the existing default accounts for the sake of security. You should retain at least one account with SUPERADMIN privileges. In fact, the switch won’t even allow you to delete the last SUPERADMIN account so that you won’t accidentally lock yourself out by deleting all SUPERADMIN accounts.

Installing Certificates

The certificates are only needed when you want to implement Level 3 Security (SSL data encryption plus full PKI authentication) over the viewer connection. Refer to Installation: Installation of Certificates in the user manual for details.

Changing the Viewer Security Level

Three viewer connection security levels are available:

- Level 1 — No SSL encryption, no SSL authentication
- Level 2 — 256-bit encryption, server authentication by client
- Level 3 — 256-bit encryption, full authentication (requires the installation of certificates)

By factory default, the security level is set at Level 2.

1. Go to the Main: Security screen on the switch's Web Management interface.
2. Choose the desired viewer connection security level. If you select Level 1 or Level 2, just select it and click "Store Settings" and "Apply Settings"/"Restart Servers." However, if you intend to implement Level 3 security, you should first upload the certificates to the switch and also import certificates to the viewer on your client computer. For details, please refer to Main: Security in the user manual.
3. Validate your settings by clicking "Restart Servers" on the Apply Settings screen.

Changing the Password Policy

Three viewer password control policies are available:

- No Password — No password is required for connection
- Global Password — A global password is required for all users
- User Password — Each user has a specific password, and each user account and its password are valid for use only when the switch is adopting the user password policy.

The password policy does not affect browser access, which is only granted using user-specific accounts and passwords. For details, refer to Main: Security in the user manual.

1. Go to the Main: Security screen on the switch's Web Management interface.
2. Select a password policy and click "Store Settings."
3. Validate your settings by clicking "Restart Servers" on the Apply Settings screen.

NOTE: By default, the user policy is User Password, which is a more

secure policy than either No Password or Global Password. If you select Global Password, you will need to enter a global password to be used by all users for viewer access to the switch.

Other Settings

Power Control, RADIUS Accounting and Remote Authentication are disabled by factory default. If you are not going to use these features, there is no need to enable them; otherwise they'd take up switch resources during booting time. For details on implementing any of these features, refer to the appropriate section in the user manual. The user manual also includes an introduction to local console operation (Appendix A), a section detailing user groups, and a quick reference chart of hotkey commands and their OSD counterparts.

Restoring Factory Defaults

The switch is now ready for connection, and the accounts, passwords and connection information can be distributed to all users. If, however, you've forgotten the access IP address, you can restore the factory defaults (settings listed below).
Using a small pointed object like a pin or needle, push the recessed button (see Hardware in the user manual) on the rear panel of the switch and hold it in for 5 seconds or more. (The switch should be connected to a power source.) The switch will restart with the factory default TCP/IP and username/password settings.

- Port base: 5900
- IP address: 192.168.1.200
- Subnet mask: 255.255.255.0
- Default gateway: 192.168.1.254
- DNS: 192.168.1.1
- SUPERADMIN: superuser/superu
- ADMIN: admin/123456
- USER: user/123456
- Browser access: https://192.168.1.200:5908
- Viewer access: 192.168.1.200:5900



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