



Video Conferencing Products Technical Bulletin 70-2005-002R

DATE: July 11, 2005



SUBJECT: UPnP SUPPORT

MODEL: PCS-1
PCS-11

SERIAL NO: ALL

DESCRIPTION

Home gateway/routers with firewall and NAT capabilities may cause issues with videoconference devices, including the Sony PCS-1 and PCS-11. When a PCS-1/11 unit is connected to broadband using a "home" gateway/router (such as those made by D-Link, Netgear, Cisco/Linksys), the following issues may occur:

- Calls cannot be established.
- Far end audio/video on outgoing calls may not operate correctly.

There are two root causes:

- First, firewalls may not be able to dynamically open and close the required signaling ports.
- Second, NAT devices prevent two-way communication because the private IP addresses and ports are not routable in public networks; therefore, incoming calls are not possible with firewalls/NATs.

UPnP technology addresses these issues and is designed to allow simple configuration of small networks by persons not familiar with network technology. UPnP client support is available in PCS-1/11 video communication systems. The issues above may be resolved when a UPnP-enabled gateway/router is used with PCS-1/11.

REQUIREMENTS

- PCS-1/11 software must be version 3.11 or higher to support UPnP configuration of supported gateway/routers.

NOTE: For the latest software updates, check the following URL:

<http://bssc.sel.sony.com/BroadcastandBusiness/markets/10010/upgrade.shtml>

- The router used must support UPnP.

NOTE: See "[SUPPORTED UPnP ROUTERS/GATEWAYS](#)" on page 3 of this bulletin.

TYPICAL NETWORK

Figure 1 shows a typical network environment where PCS-1/11 is used with a UPnP-enabled gateway/router.

EM05-1003_US

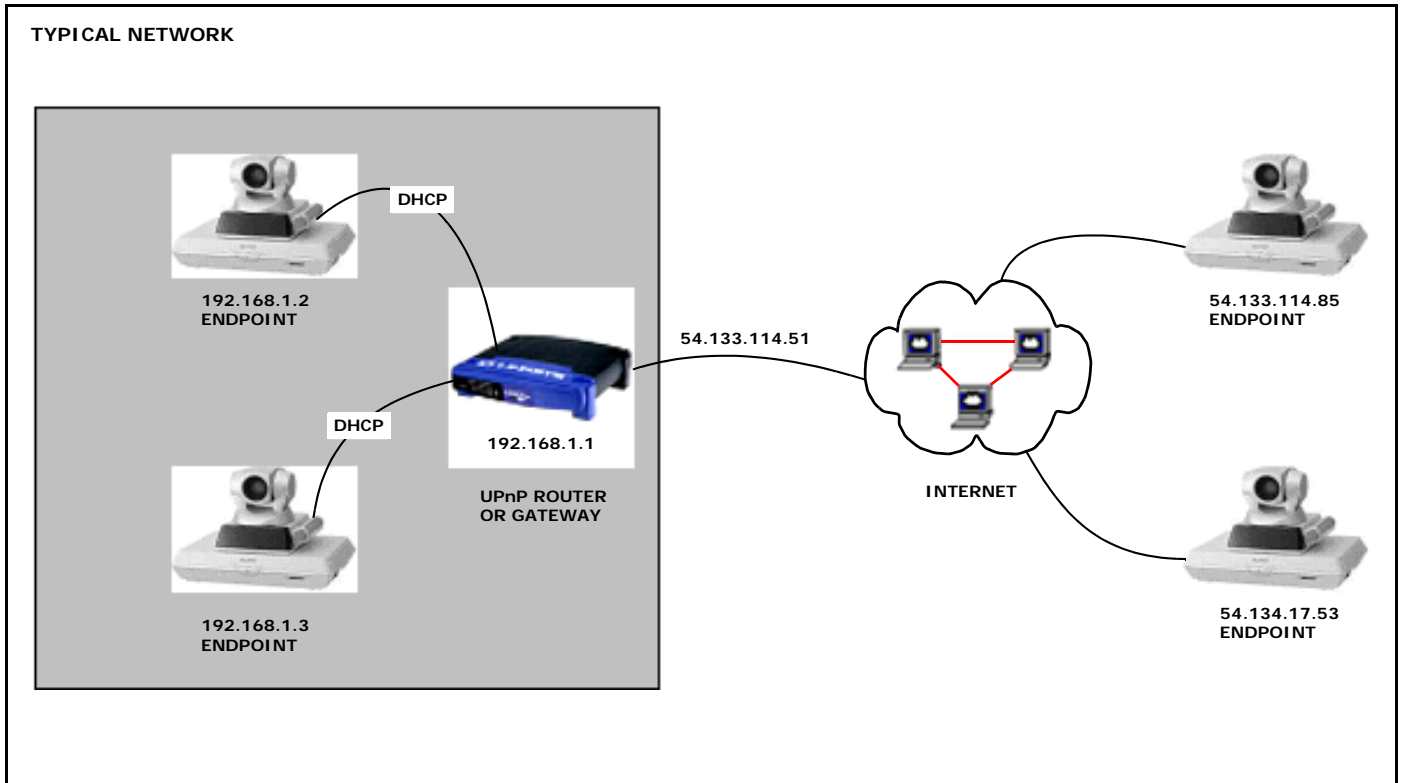


Figure 1



HOW TO ENABLE UPnP

To enable UPnP:

1. From the PCS Web Control page, choose Setup > LAN Setup.
2. Change NAT Mode to Auto. (See Figure 2.)

The PCS unit automatically finds the UPnP router and configures it with the necessary information.

NOTE: This setting can also be changed via the on-screen Setup menu under LAN.

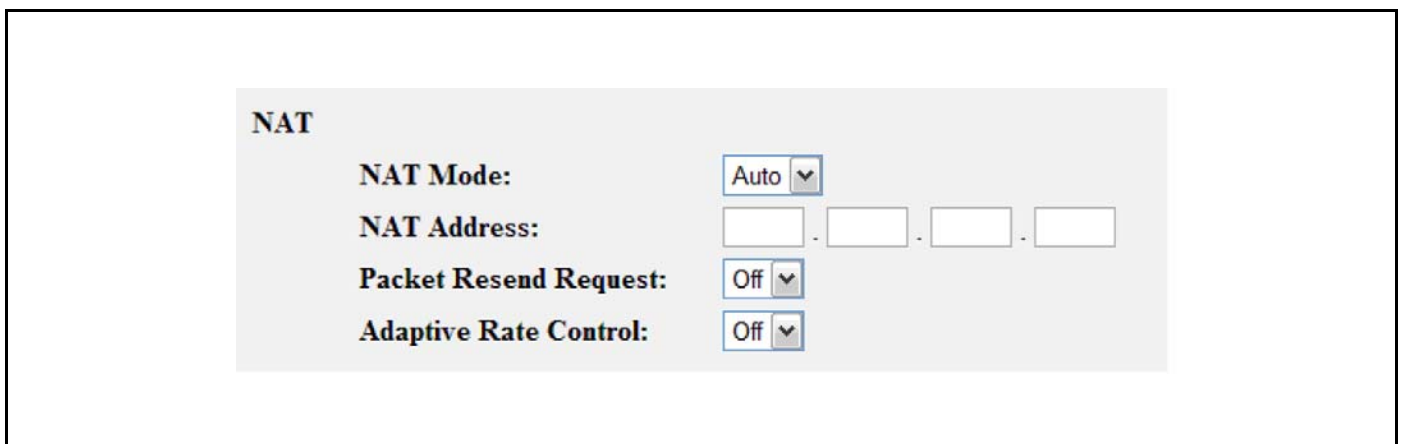


Figure 2



SUPPORTED UPnP ROUTERS/GATEWAYS

The UPnP routers in Table 1 have been verified in the United States.

Table 1. Supported UPnP Routers/Gateways

MFG	Model	HW Version	Firmware	Out Call	H.239 OUT	IN	In Call	H.239 IN	OUT
Netgear	WGR614	V4	V5.0_07	OK	OK	OK	OK	OK	OK
Netgear	RP614	V3	V.60	OK	OK	OK	OK	OK	OK
Dlink	DI524	C1	3.02	OK	OK	OK	FAIL	—	—
Dlink	DI624	C3	2.5	FAIL	OK	FAIL	FAIL	—	—
Belkin	F5D7230-4	2000	4.05.03	OK	OK	OK	FAIL	—	—
Buffalo	WBR2-G45S	None	2.3	OK	OK	OK	OK	OK	OK
Linksys	WRT54G	V2.2	3.03.6	OK	OK	OK	OK	OK	OK
USR	USR8054	None	V1.67b44	OK	OK	OK	OK	OK	OK
SMC	7994VWBR	None	V1.00.014	OK	OK	OK	FAIL	—	—

The following UPnP routers have been verified in Japan:

- I/O Data NP-BBRM
- NTT West Web Caster 710
- Yamaha RT57

NOTE: A comprehensive list of UPnP routers is not possible because of the numerous manufacturers, models, firmware, and hardware variations.

KNOWN ISSUES

The known issues in Table 2 are usually related to the router implementation of UPnP or to the specific firewall/NAT behavior of that router.

Table 2. Known Issues

MFG Model	Issue
Dlink DI524	Cannot complete connection: LAN connection time out.
Dlink DI624	<ul style="list-style-type: none"> • No far end video on PCS-1 side. • Cannot complete connection: LAN connection time out.
Belkin F5D7230-4	<ul style="list-style-type: none"> • Unable to call in. Incoming call packets are not getting through the router. • Gatekeeper messages blocked by router. The messages are reported as DOS attacks in the router firewall log.
Linksys WRT54G	<ul style="list-style-type: none"> • No far end video on PCS-1 unit behind router (intermittent). • Intermittent call connections. • Router seems to be inconsistent.
USR USR8054	UPnP setup during call takes approximately 15 seconds.
SMC 7994VWBR	System connects to system other than video conference.

GENERAL NOTES

- The first call on a new router always fails with the following error message:
“System connects to system other than video conference”
The second call attempt succeeds.
- The second attempt to send H.239 fails. Which side you send from does not matter; the sending side displays the H.239 icon, but the receiving side does not display the icon or the H.239 data.
- Testing was for connectivity only. Other issues may exist.