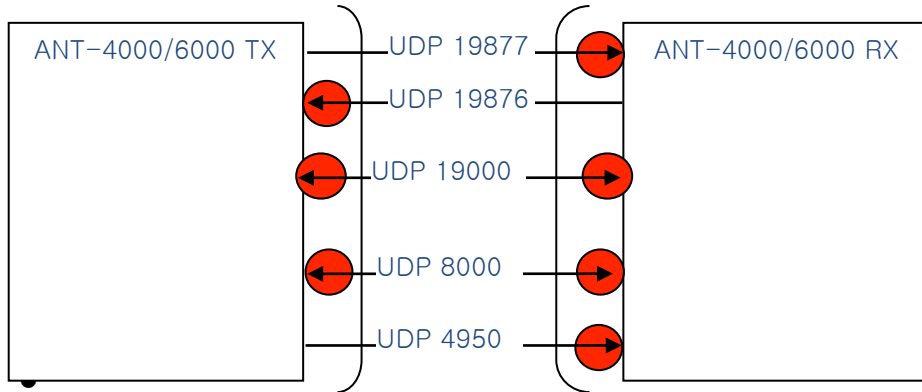# Port Usage of ANT-4000/6000

1. Port usage between ANT-4000/6000 TX and RX of P2P mode

When ANT-4000/6000 TX is in a NAT and you want this TX to communicate with RX outside the NAT,

   You should configure port forwarding of UDP 19876, 19000 and 8000 to ANT-4000/6000 TX in the TX side NAT.
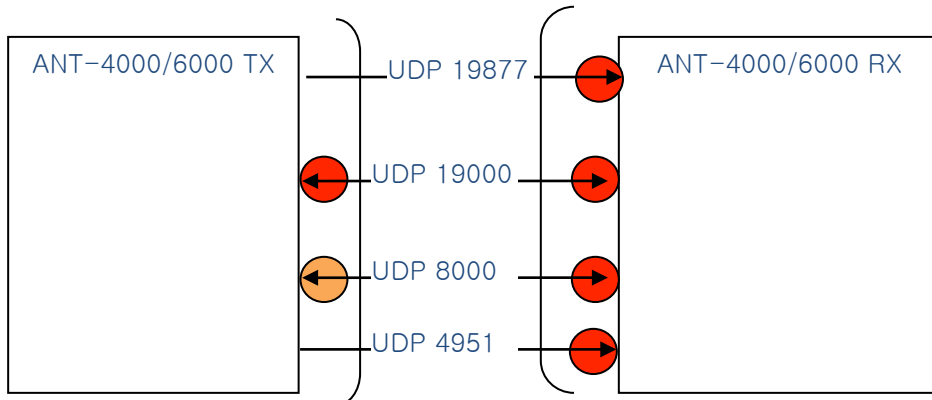
● When ANT-4000/6000 RX is in a NAT and you want this RX to communicate with TX outside the NAT,

   You should configure port forwarding of UDP 19877, 19000, 8000 and 4950 to ANT-4000/6000 RX should in the RX side NAT.

2. Port usage between ANT-4000/6000 TX and RX of Multicast mode

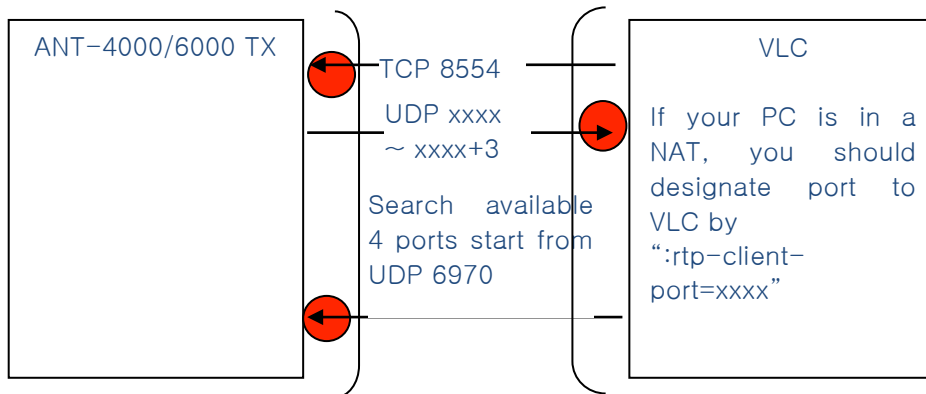When ANT-4000/6000 TX is in a NAT and you want this TX to communicate with RX outside the NAT,

You should check the NAT supports egress multicast forwarding.

You should configure port forwarding of UDP 19000 to ANT-4000/6000 TX in the TX side NAT.

It is recommended to configure port forwarding of UDP 8000 to ANT-4000/6000 TX in the TX side NAT. This port is used for S/W upgrade in multicast mode.
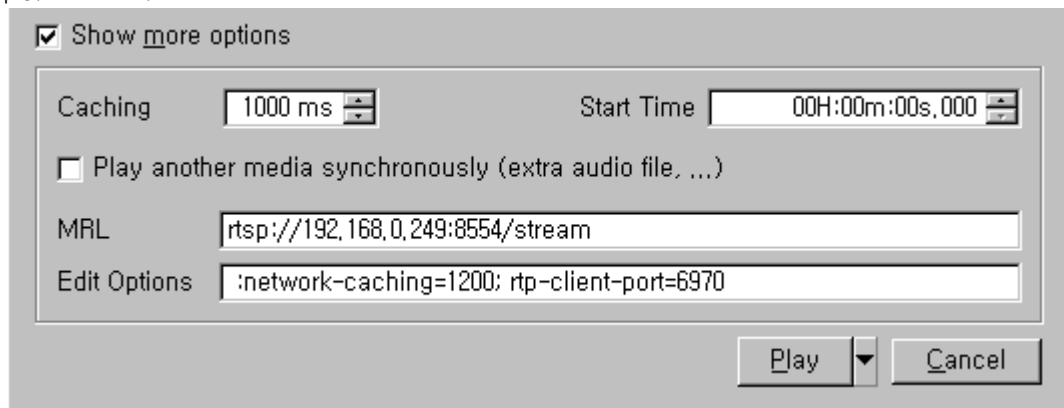
● When ANT-4000/6000 RX is in a NAT and you want this RX to communicate with TX outside the NAT,

You don't need to configure any port forwarding in the RX side NAT but you should check the NAT supports ingress multicast forwarding.

3. Port usage between ANT-4000/6000 TX of P2P mode and VLC (see separate App Note)

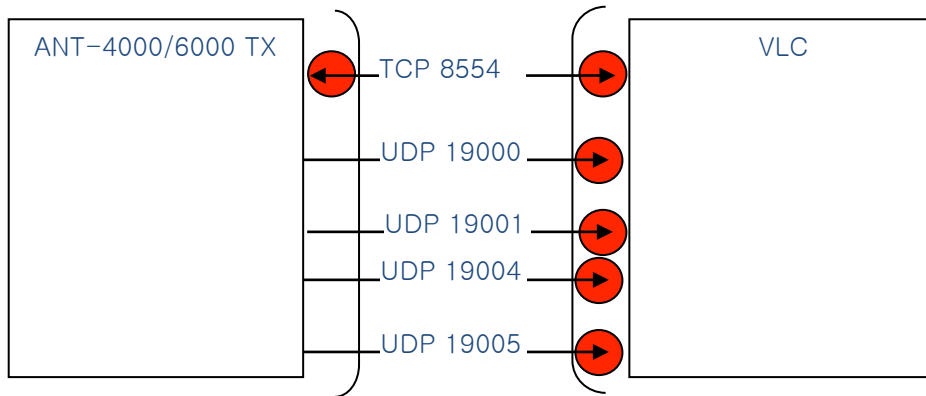| ANT-4000/6000 TX		VLC
	TCP 8554	
	UDP xxxx ~ xxxx+3	If your PC is in a NAT, you should designate port to VLC by ":rtp-client-port=xxxx"
	Search available 4 ports start from UDP 6970	

When ANT-4000/6000 TX is in a NAT and you want this TX to serve VLC outside the NAT,
- Decide how many clients you allow to connect to this TX .
- Configure port forwarding of TCP 8554
- Configure port forwarding of all UDP ports from 6970 to 6970+4xN to ANT-4000/6000 TX in the TX side NAT. N is number of clients that you decided to connected to this TX at a time.

- When your PC is in a NAT and you want to get A/V from TX outside the NAT,
  - Pick a number from after 6970 (normally 6970). 4 UDP ports that start the number you pick will be used to transfer A/V and its controls.
    The 4 ports that you pick cannot be possible for you if somebody is already using them.
  - Add a VLC's option string to designate the 4 UDP ports like as "rtp-client-port=6970".

  - Configure port forwarding of the 4 UDP ports to your PC in the PC side NAT.

4. Port usage between ANT-4000/6000 TX of Multicast mode and VLC

ANT-4000/6000 TX		VLC
	TCP 8554	
	UDP 19000	
	UDP 19001	
	UDP 19004	
	UDP 19005	

When ANT-4000/6000 TX is in a NAT and you want this TX to serve VLC outside the NAT,
You should check the NAT supports egress multicast forwarding.
You should configure port forwarding of TCP 8554 in the TX side NAT.

- When your PC is in a NAT and you want to get A/V from TX outside the NAT,
You don't need to configure any port forwarding in the NAT but you should check the NAT supports ingress multicast forwarding.