



## **Radio Relay over IP using Unicast streaming**

**Application Note AN234  
Revision v1.1  
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## AN234 Radio Relay over IP using Unicast streaming

### 1 Overview

This Application Note discusses Unicast streaming only. There is a separate Application Note **AN233 Radio Relay using Multicast** for Multicast streaming.

Vocality Radio over IP functionality now supports Multicast and Unicast RTP streaming without the need for SIP signalling. This allows quicker connections, greater bandwidth efficiency and more flexibility in the connectivity options for Radio Relay.

**Note:**  
It is assumed that your unit has been configured in all other areas required prior to configuring for RTP streaming.

### 2 Outline

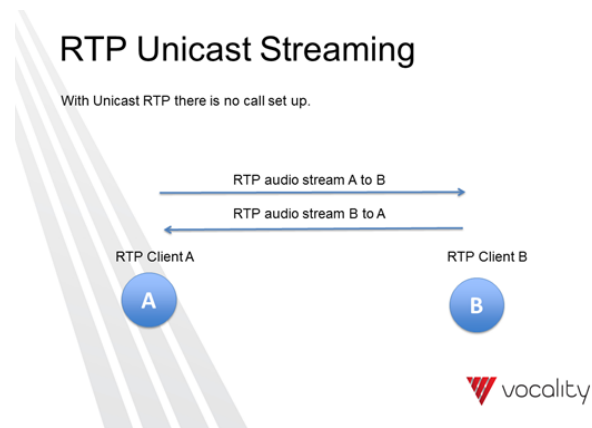


Figure 1 RTP Unicast streaming - no call set up

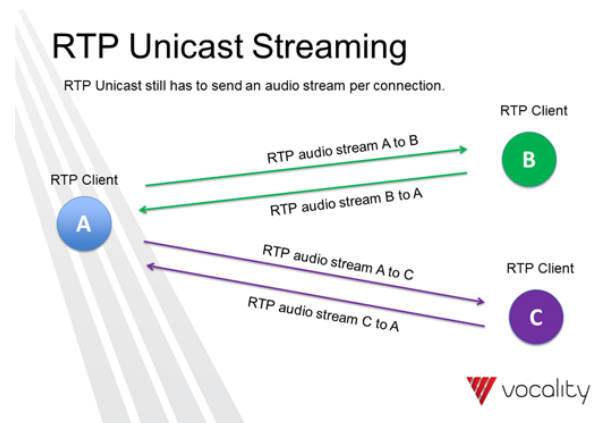


Figure 2 RTP Unicast streaming - audio stream per connection



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Configuration

Figure 3 SIP Gateway > System menu

On the **SIP Gateway > System menu** ensure the Mode is set to 'Gateway', prior to configuring for RTP streaming.

Figure 4 SIP Gateway > Channel Summary > Channel Details menu

RTP Unicast streaming can be configured by changing SIP BYPASS on the **SIP Gateway > Channel Details menu** to 'Enabled'. Then specify RTP TX and RX parameters. For Unicast use a Unicast address.

To transmit a second Unicast stream to another destination use a second SIP Channel.

CHANNEL TO EDIT : select which channel

SIP BYPASS : change to 'Enabled' for RTP streaming

DESTINATION : set as either a voice port or another SIP gateway

RTP TX ADDR : destination address of the Unicast stream

RTP TX REMOTE PORT : destination UDP port number

RTP TX LOCAL PORT : source UDP port from which the traffic will originate on your unit

RTP RX ADDR : Unicast source address



RTP RX LOCAL PORT : destination UDP port number of incoming RTP Unicast stream

**Note: The UDP port numbers you select must be even numbers, because your unit will automatically open each UDP port number +1 as the RTCP port.**  
If you use odd numbers, as in the example RTP TX REMOTE PORT: 6020, RTP TX LOCAL PORT : 6021, RTP RX LOCAL PORT : 6020, you will find port 6021 is also open as the RTCP port for 6020 and problems may arise. (If you use software version VOS08.08.01 onwards this issue will not arise as you will be restricted to select even numbered ports).

#### 4 Analogue Ports settings

Chan	Clk Ref	Op Mode	IF Type	Algorithm	Silence Suppress	Resvd BW	Gain In	Gain Out	Destination
0:1	<input checked="" type="radio"/> GC1 <input type="radio"/> GC2	DTMF	4W	G.729A.8K	<input type="radio"/> OFF <input checked="" type="radio"/> ON	8000	0dB	0dB	1:SG:1
0:2	"	DTMF	4W	G.729A.8K	<input checked="" type="radio"/> OFF <input type="radio"/> ON	8000	0dB	0dB	AUTO
0:3	"	DTMF	4W	G.729A.8K	<input checked="" type="radio"/> OFF <input type="radio"/> ON	8000	0dB	0dB	AUTO
0:4	"	DTMF	4W	G.729A.8K	<input checked="" type="radio"/> OFF <input type="radio"/> ON	8000	0dB	0dB	AUTO

Figure 5 Analogue Voice > Analogue Ports menu

Ensure that the Algorithm chosen here matches the setting on the **SIP Gateway > Channel Details menu** and Destination is pointing to the correct SIP Gateway Channel

#### 5 About Application Notes

Application Notes are intended as a supplement to, rather than a substitute for, your User Manual. Should you have queries which are not answered by our current documentation, your local Vocality support team would be happy to hear from you.  
E-mail [support@vocality.com](mailto:support@vocality.com).