IPNext280PTT™ Hybrid IP-PBX System

High Performance Hybrid IP-PBX + PTT Server Solution

RTP Proxy Service for Private IP Problem Solving

AddPac Technology

2011, Sales and Marketing

www.addpac.com

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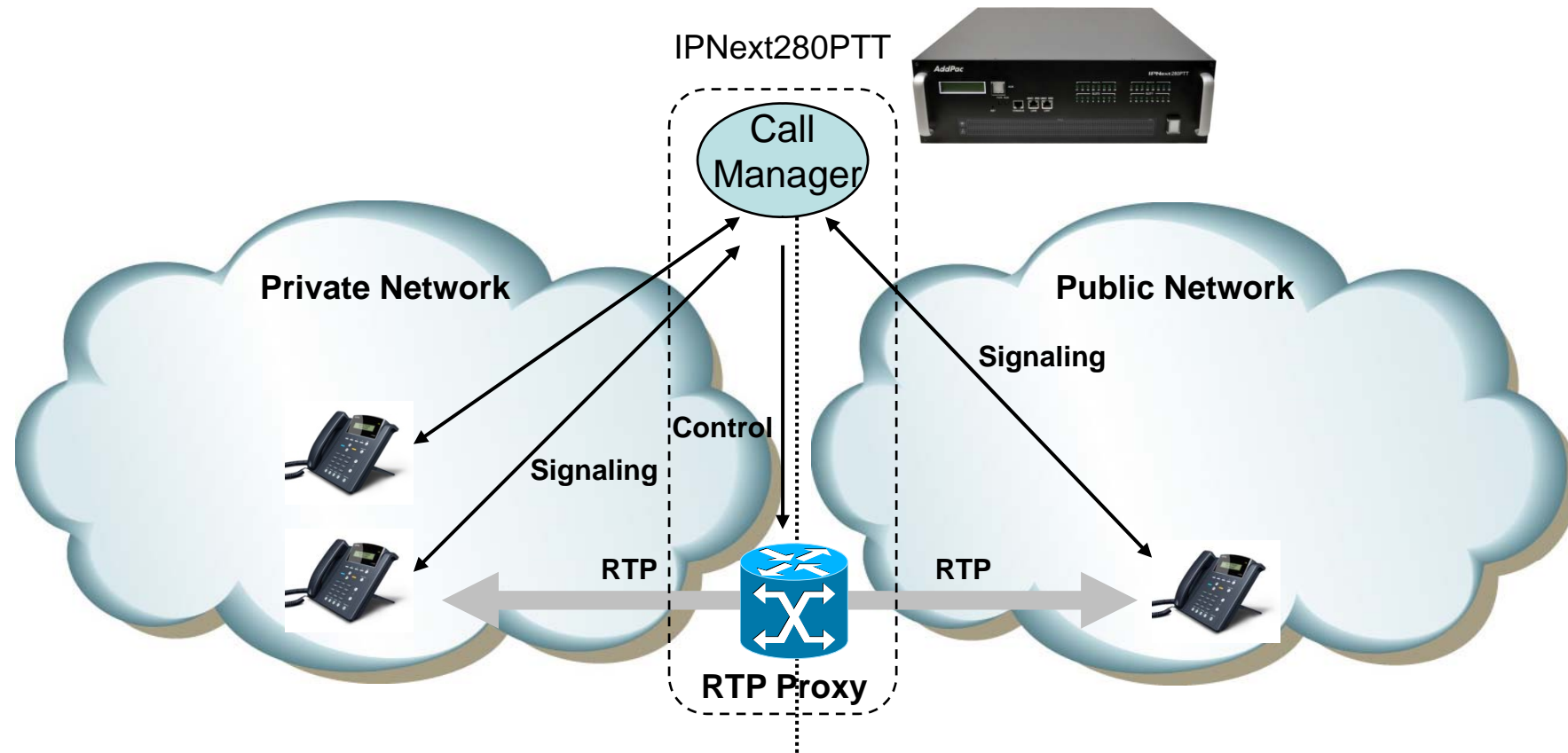
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Service Overview

- Protocol Independence (H.323, SIP, MGCP)
- Support RTP Proxy without NAT
- Support Symmetric / Asymmetric NAT
- Support IPv4/IPv6 RTP Proxy
- Support RTP Broadcast
- Support RTP Conference

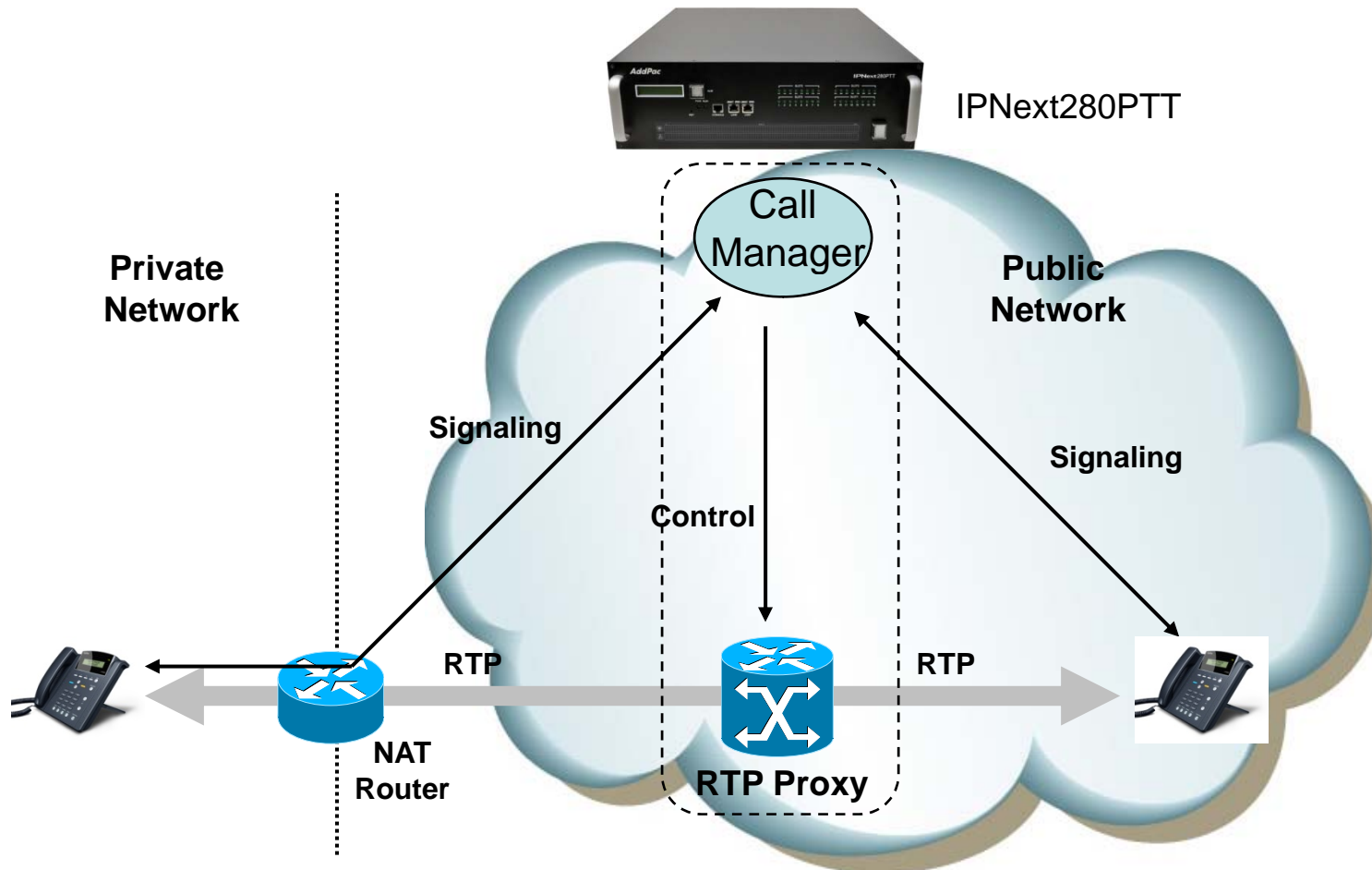**AddPac**

RTP Proxy Configuration
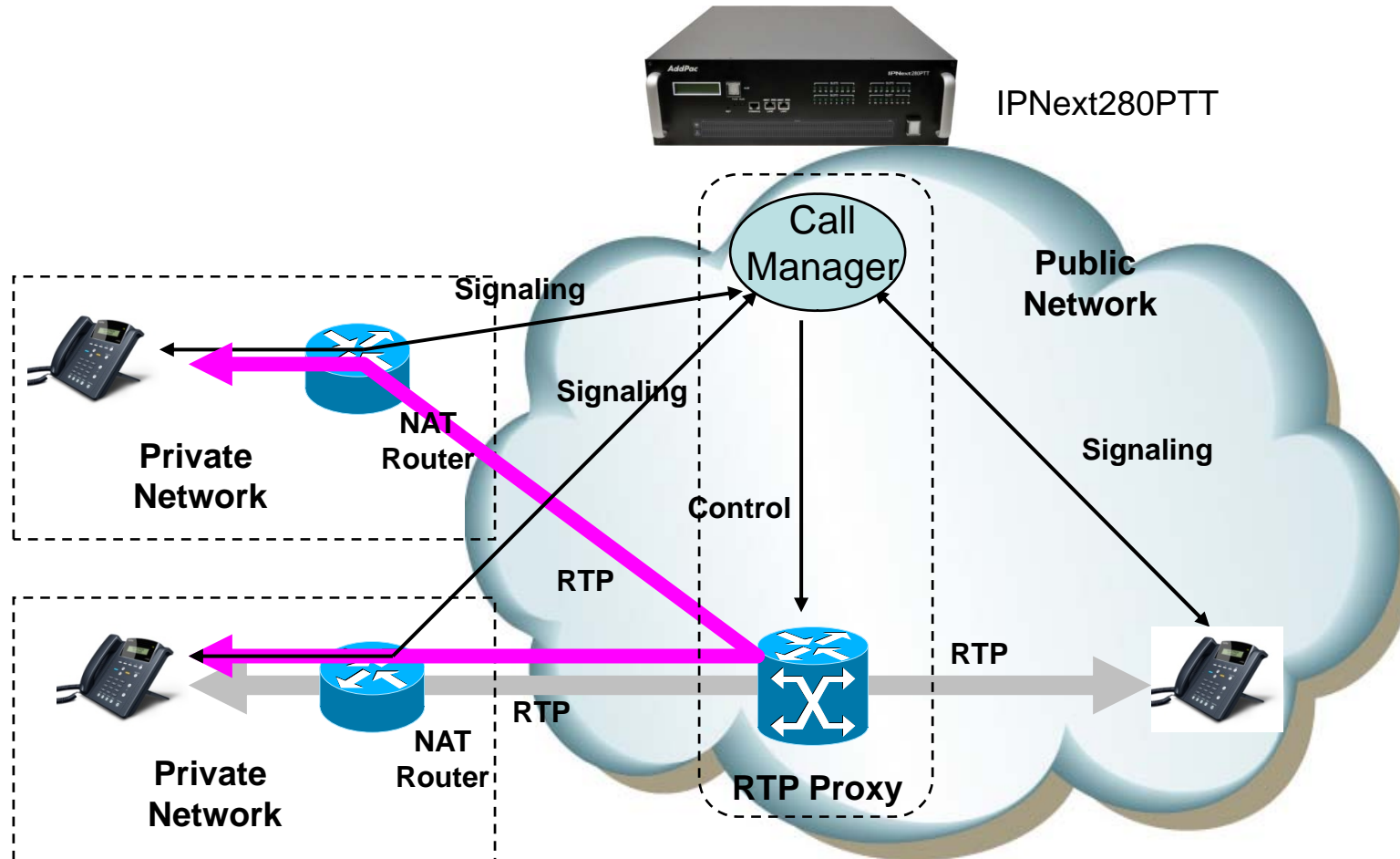
Public/Private RTP Proxy
without NAT Router

- Located between public and private network
- Call manager and RTP proxy has public and private address
- Call manager determine that the call is internal or external

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Asymmetric/Symmetric NAT

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Private Network

Call Manager

Public Network

Signaling

Signaling

Control

RTP

RTP

NAT Router

RTP Proxy

- Located in public network
- RTP Proxy has single public address
- Auto detect for asymmetric NAT via incoming RTP packet

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RTP Proxy Communication between Private IP

IPNext280PTT

Call Manager

Public Network

Signaling

Signaling

Signaling

Private Network
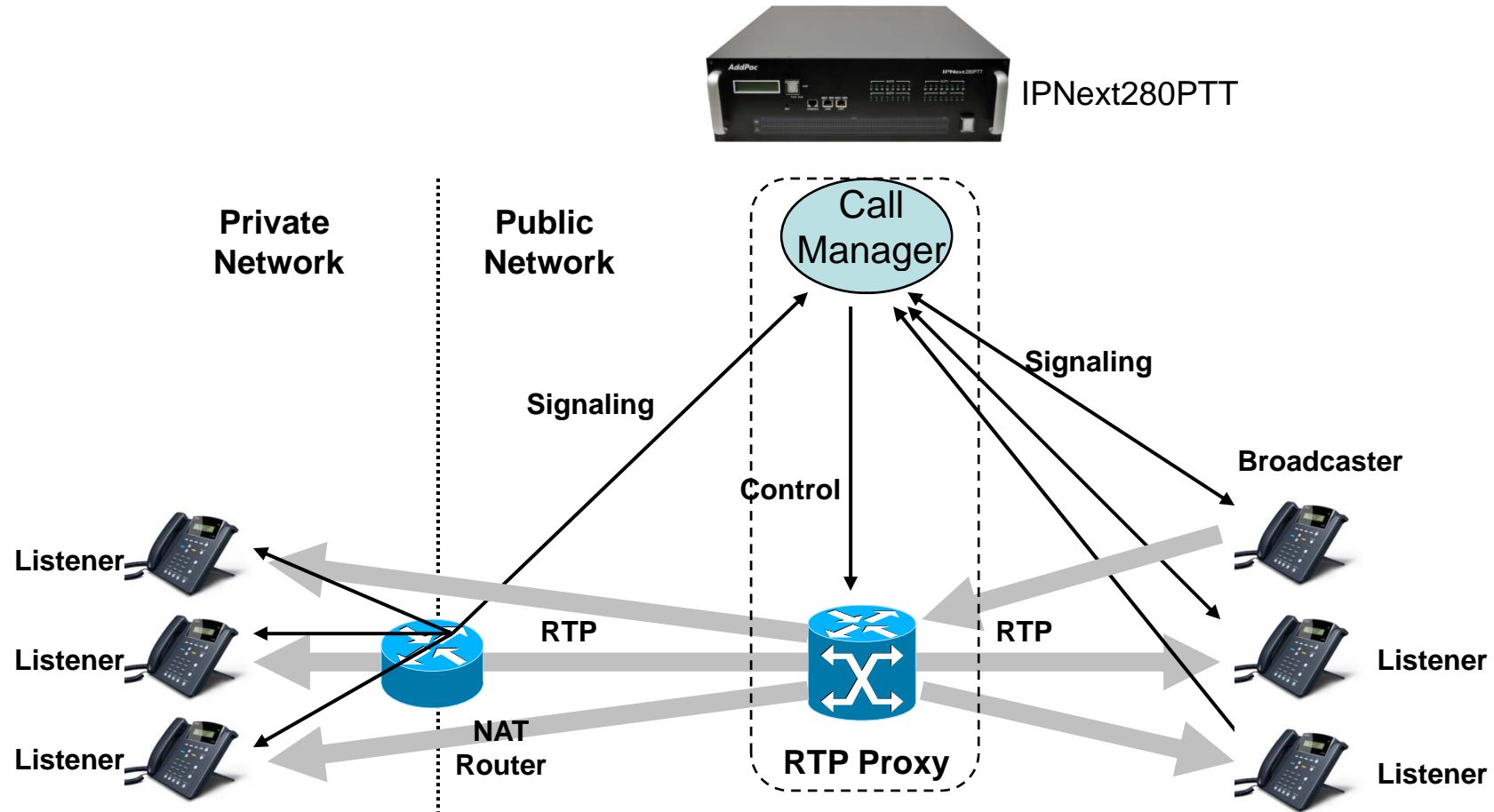
NAT Router

Control

RTP

NAT Router

RTP

RTP

Private Network

RTP Proxy
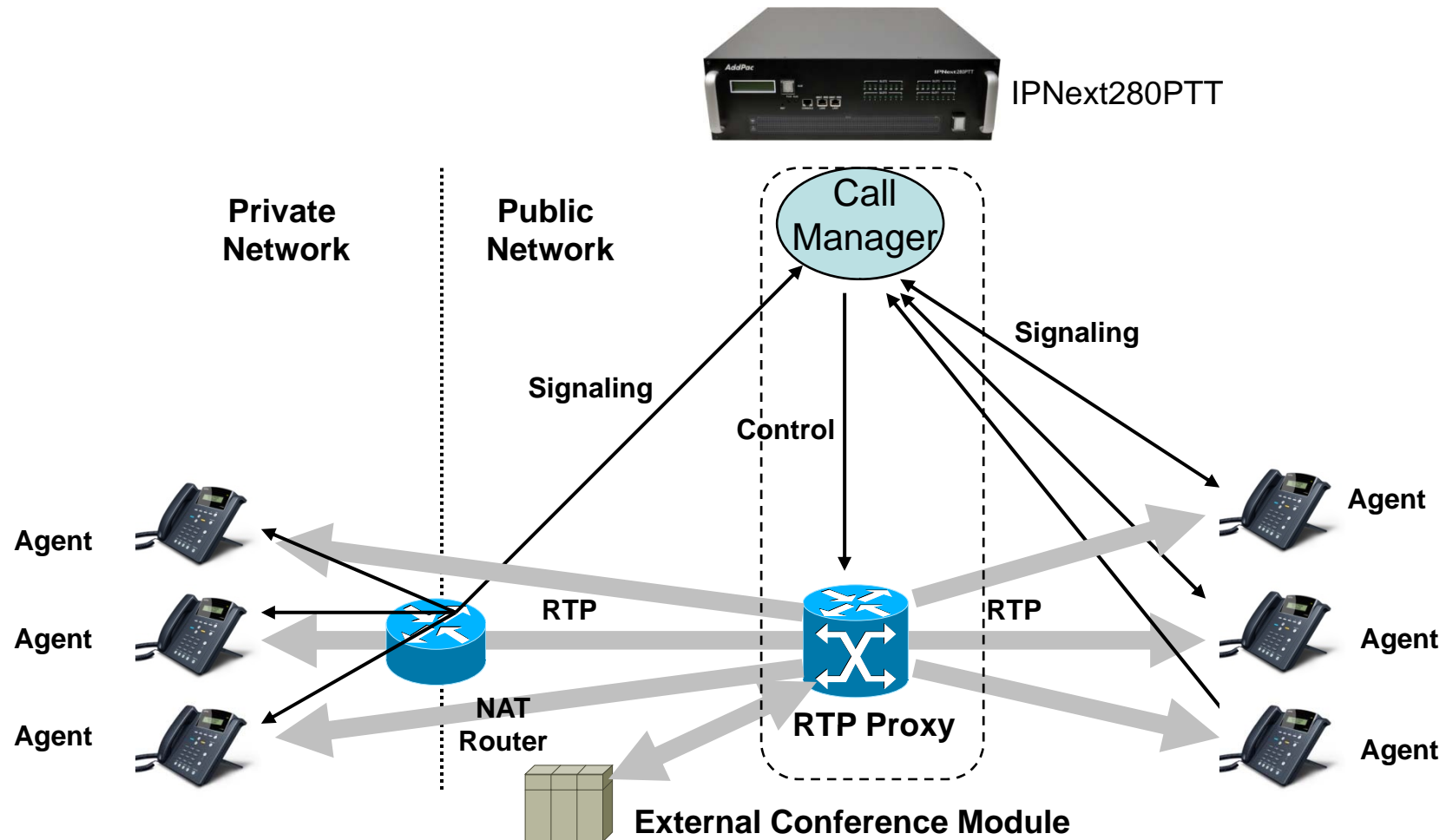
- Located in public network
- RTP Proxy has single public address
- Auto detect for asymmetric NAT via incoming RTP packet

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RTP Broadcast

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Call Manager

Private Network

Public Network

Signaling

Signaling

Broadcaster

Control

Listener

Listener

Listener

RTP

RTP

Listener

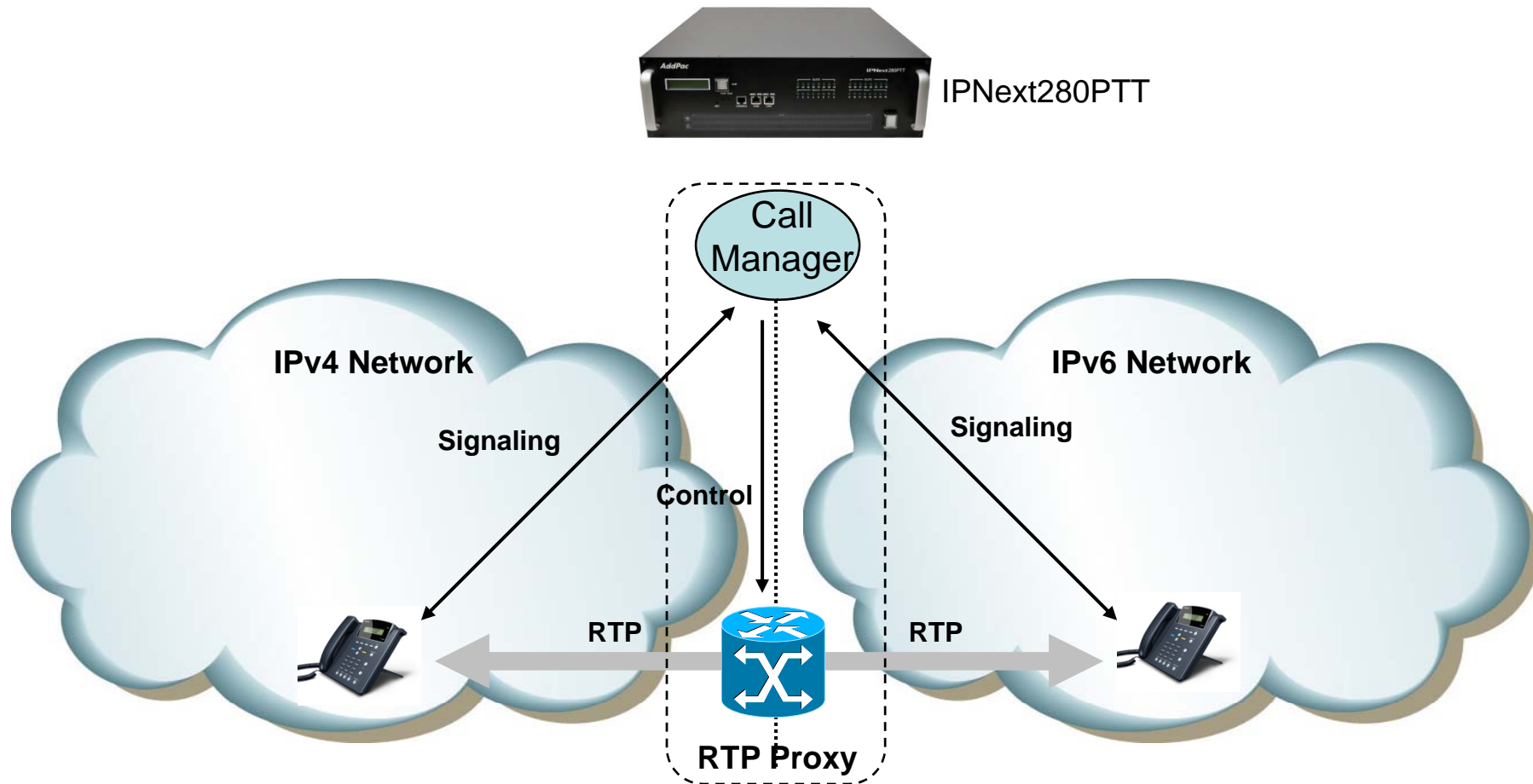**NAT Router**

RTP Proxy

Listener

- Call Manager set the broadcaster and listener via control message
- One broadcaster and multiple listener
- RTP proxy relay for broadcaster RTP traffic
- RTP proxy never relay for listener traffic

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RTP Conference

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- Private Network
- Public Network

Call Manager

Signaling

Signaling

Control

Agent

Agent

RTP

RTP

Agent

Agent

NAT Router

RTP Proxy

Agent

Agent

External Conference Module

- RTP Proxy communicate with external/internal conference module (mixer)
- Conference support for private address, asymmetric NAT

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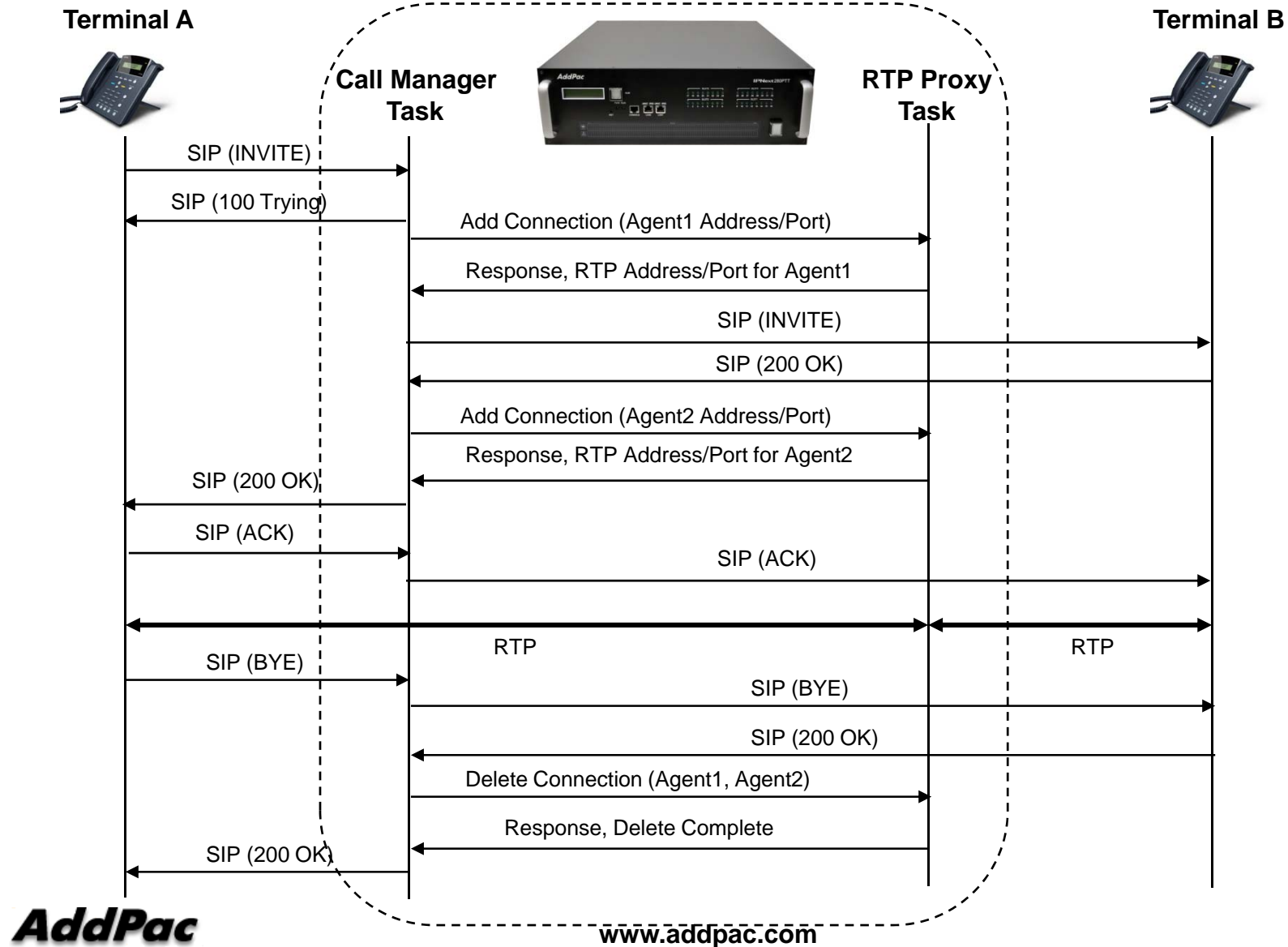# IPv4/IPv6 RTP Proxy

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Call Manager

IPv4 Network

IPv6 Network

Signaling

Signaling

Control

RTP

RTP

RTP Proxy

• Call manager and RTP proxy has IPv4 and IPv6 address
• Support RTP broadcasting

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Signal Flow Diagram

Signal Flow Diagram
(Ex: SIP)

Terminal A   **Call Manager Task**   **RTP Proxy Task**   **Terminal B**

SIP (INVITE)

SIP (100 Trying)

Add Connection (Agent1 Address/Port)

Response, RTP Address/Port for Agent1

SIP (INVITE)

SIP (200 OK)

Add Connection (Agent2 Address/Port)

Response, RTP Address/Port for Agent2

SIP (200 OK)

SIP (ACK)

SIP (ACK)

RTP   RTP

SIP (BYE)

SIP (BYE)

SIP (200 OK)

Delete Connection (Agent1, Agent2)

Response, Delete Complete

SIP (200 OK)

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RTP Proxy Control Message

Call Manager Task   **RTP Proxy Task**

Add Request (call-id = N, Agent1 Address/RTP Port)

Response (call-id = N, Proxy Address/RTP Port)

Add Request (call-id = N, Agent2 Address/RTP Port)

Response (call-id = N,Proxy Address/RTP Port)

RTP Packet Relay

Delete Request (call-id = N)

Response (call-id = N)
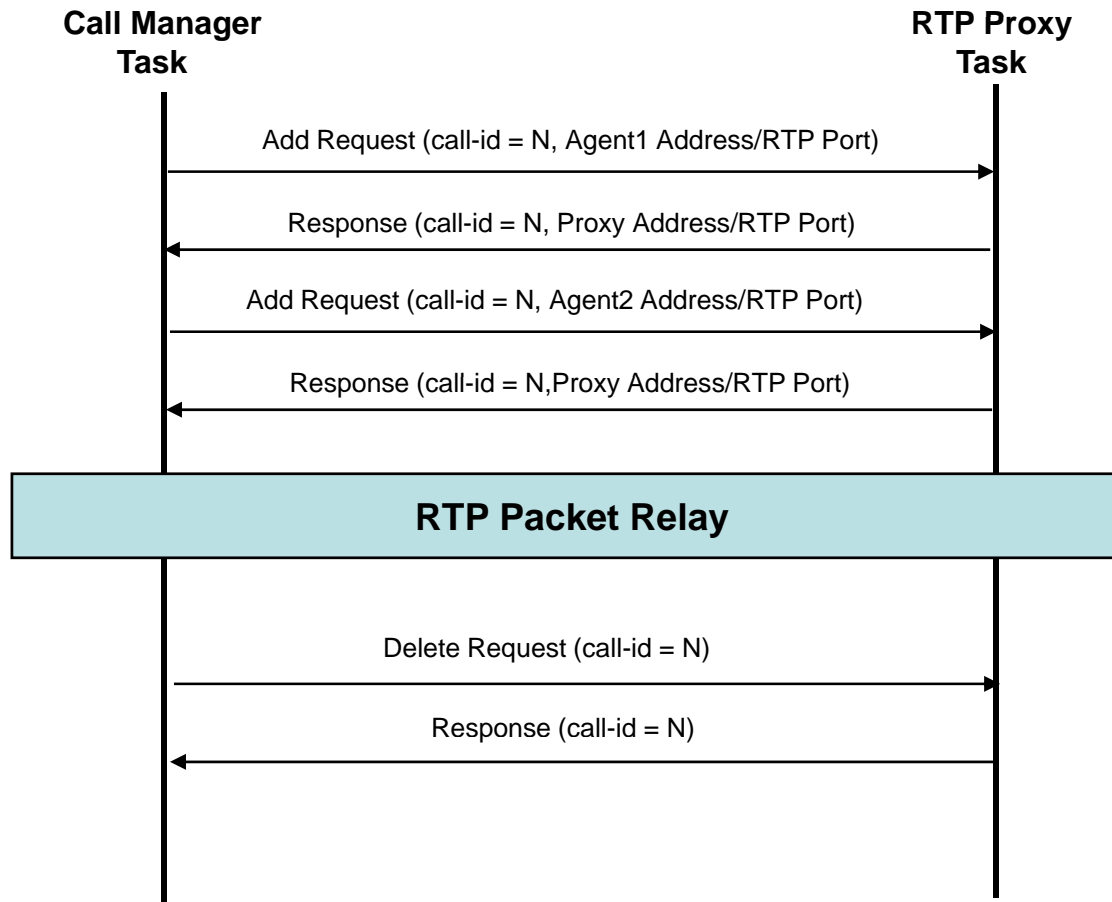
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Thank you!

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