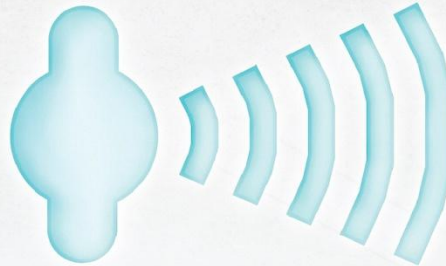




IP AUDIO AND PAGING SYSTEMS

Revolutionary IP audio technology.





2N IP Audio System

What it is?

- Complete public address and voice alarm **over IP**
- In-store Audio **over IP**
- Extension of traditional 100V system **over IP**

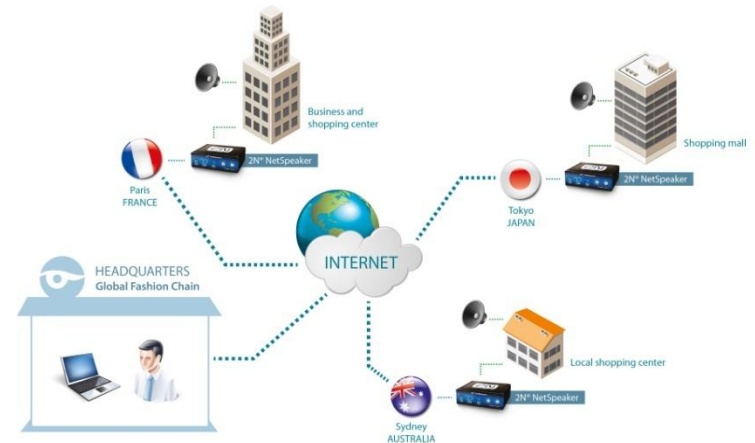




2N IP Audio System

Benefits

- No limits in distance
- Also wireless
- Native integration with traditional telephony systems through VoIP
- Simple integration with 3rd party SW





2N IP Audio System

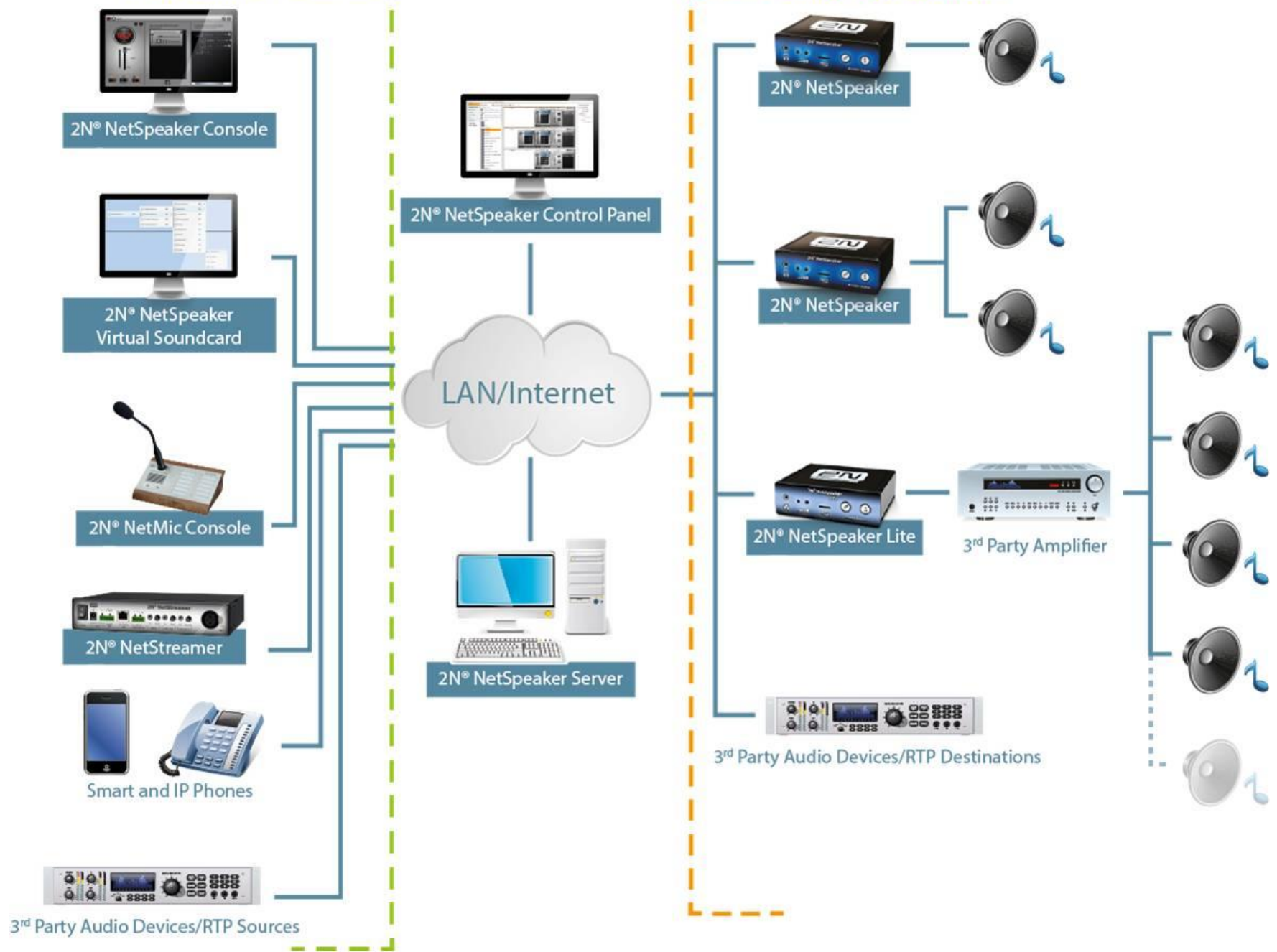
Other benefits

- Event Scheduler
- Micro SD card
- Third party devices
 - **RTP multicast stream**
 - source or destination
 - Cisco phones, Barix
 - Helios IP family, SipSpeaker

The screenshot displays the 2N IP Audio System interface. On the left, there is a calendar for February 2013 with a date selector set to 2/7/2013. Below the calendar, there is a section for 'New event (2)'. On the right, there is a 'Graphics view' showing a timeline from 15:00 to 21:00. The timeline includes two sessions: 'New session (1)' with '[Port] 192.168.1.152_5061' and '[Playlist] Anna K', and 'New session (2)' with '[Playlist] Gong' and '[Playlist] Led Zeppelin'. Below the timeline, there are controls for 'Play', 'Stop', 'Pause', 'Next', 'Previous', 'Volume', 'Balance', 'Activate session', and 'Deactivate session'. At the bottom, there is a 'Properties' section with 'Event properties' (How to schedule: Daily, Start time: 14:16, End time, Next run, Daily schedule: Each 1 day) and 'List of sessions' (New session (1), New session (2)).

Audio Sources

Audio Destinations





Audio stream (NsP server – NsP unit)

- **MPEG-1 Layer II**
(32-320kbit)
- **Unicast audio**
(in LAN or Internet)
- **Multicast audio**
(only in LAN)

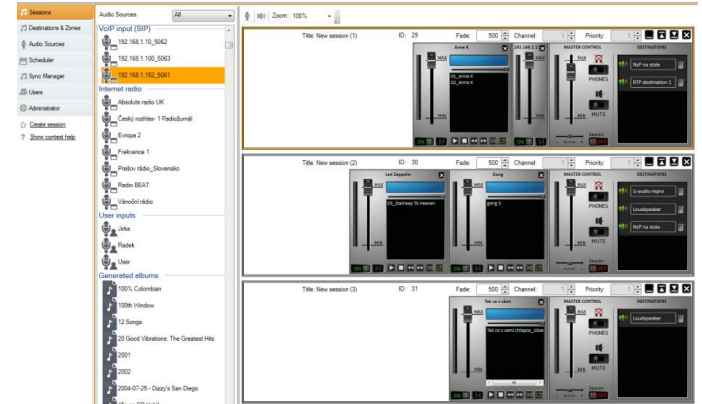




2N NetSpeaker sw & hw parts

Software parts

- 2N NetSpeaker **Server**
- 2N NetSpeaker **Control Panel**
- 2N NetSpeaker **Console**
- 2N NetSpeaker **Virtual Sound Card**
- 2N NetSpeaker **IP audio remote control** (iOS & Android Apps)



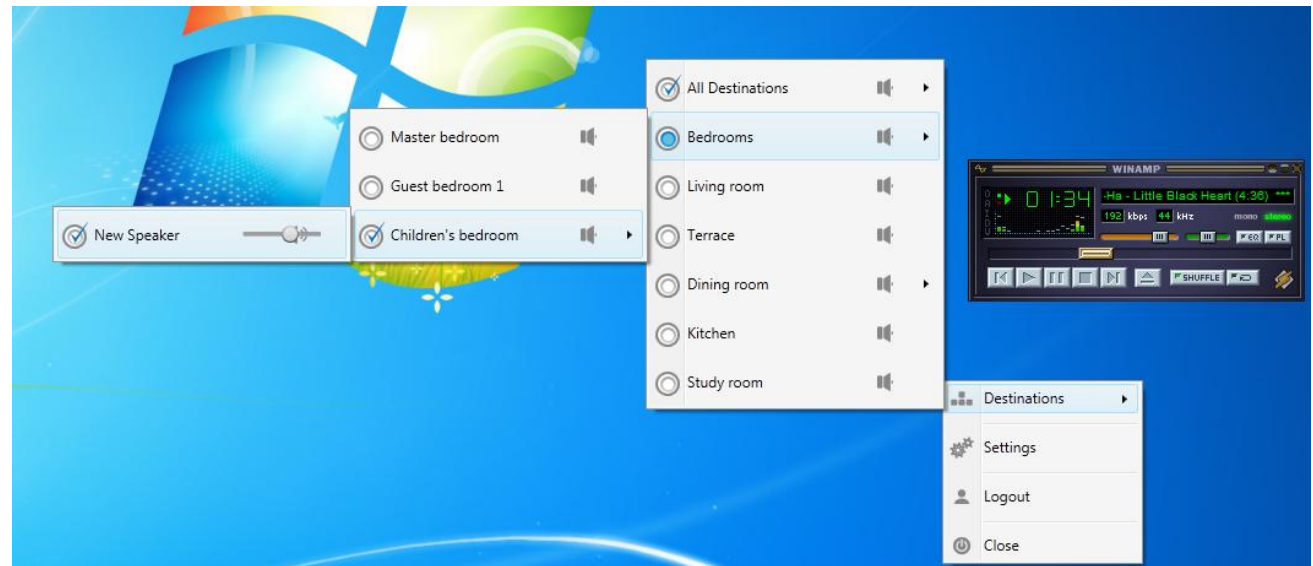
Hardware parts

- 2N NetSpeaker unit & speakers
- PC with SW applications
- LAN network



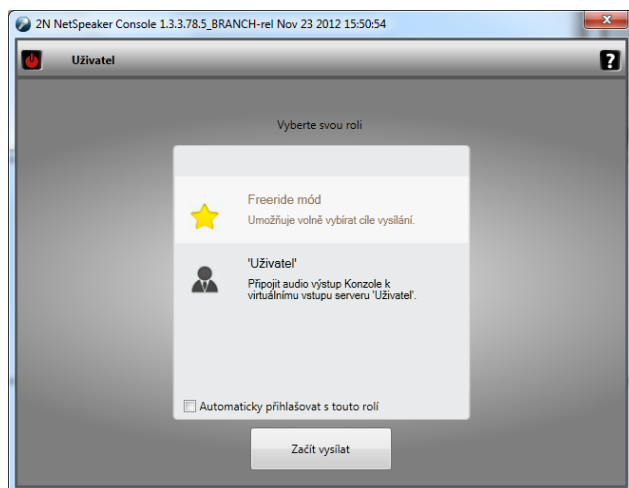
SW application – Virtual Sound Card

- Ideal application for small installations
- Audio streaming from any multimedia player
 - **iTunes, Winamp, Windows media player**
- Zones selection
- Easy to use





SW application - Console

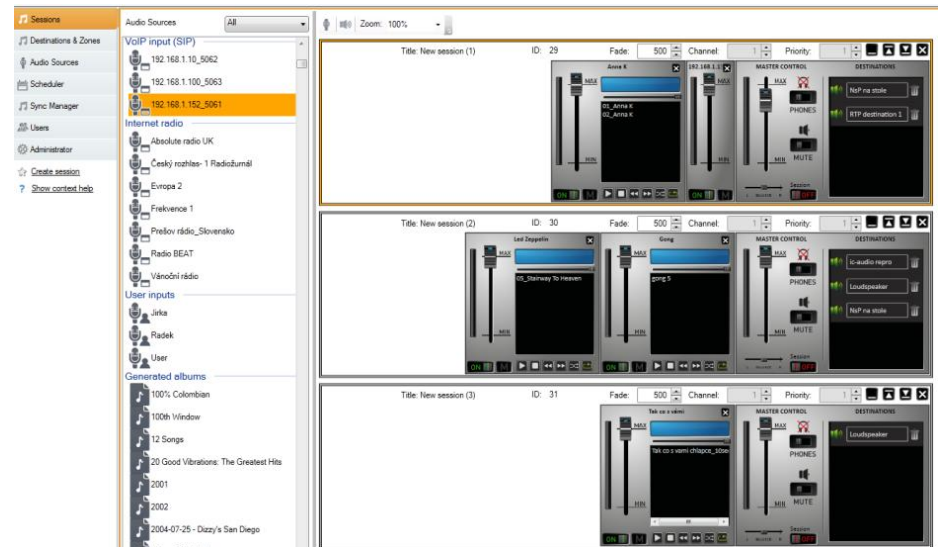


- Easy to use
- End user application
- Zone selection according user rights
- Live announcement from microphone
- Streaming of audio sources from user PC



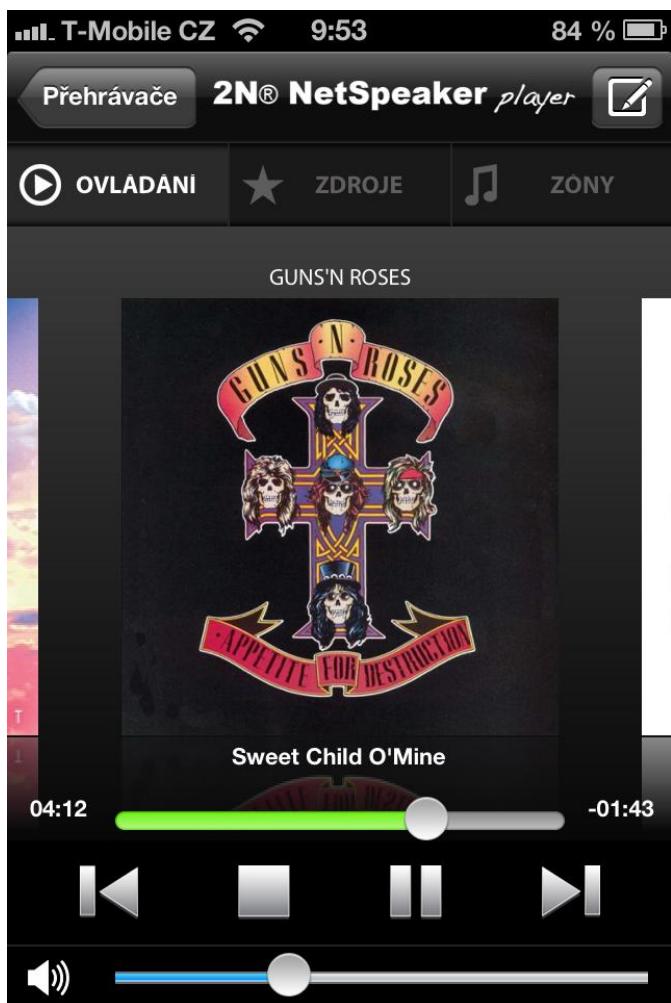
SW application – Control panel

- System configuration
- 2N[®] NetSpeaker device setting
- Zone & Destination creating
- Controlling the audio inputs
- Creating audio session
- Event scheduling
- User management





SW application – IP audio remote control



- Application for **iPhone/iPad**
- Easy to use
- Suitable for home usage
- Do not have to use PC
- Available on Apple Store





2N IP Audio System

Technical features

- Online reporting of current status of all speakers
- PoE - powering
- Unlimited stream mixing
- Up to 1 000 NetSpeakers
- Up to 100 zones
- Automated playback of scheduled announcements



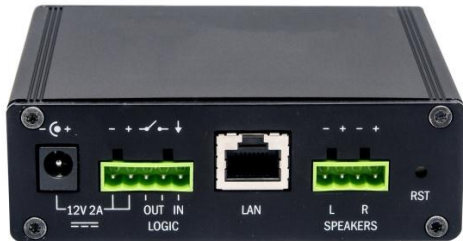
Hardware

- 2N® NetSpeaker / 2N® NetSpeaker Lite
- 2N® NetMic
- 2N® NetStreamer





2N® NetSpeaker



- PoE or 12V/2A power
- 10/100Base - TX Ethernet
- Stereo output of the amplifier class D
- Stereo output of the Line out / Headphones
- 2 user buttons (volume/channels)
- Slot for microSD card
- 1x digital input & output



Built-in amplifier

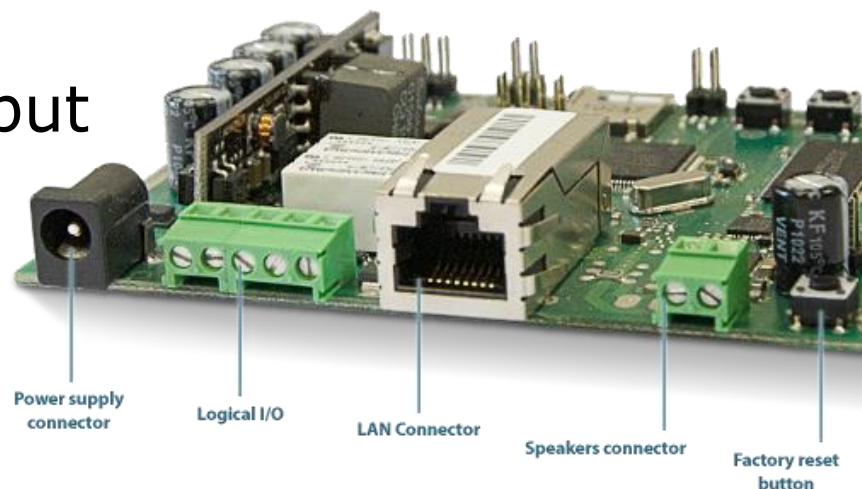


- Stereo / Mono Loudspeaker (4-16 Ω)
- 2x 4W (1x **8W**) **PoE**
- 2x 7W (1x **14W**) **12V/2A** power



2N® NetSpeaker mono PCB

- PoE or 12V/2A power
- 10/100Base - TX Ethernet
- Mono output of the amplifier
 - Speaker 8Ω, 6W
- 2 user buttons (volume / channels)
- Slot for microSD card
- 1x digital input and output





2N® NetSpeaker Lite



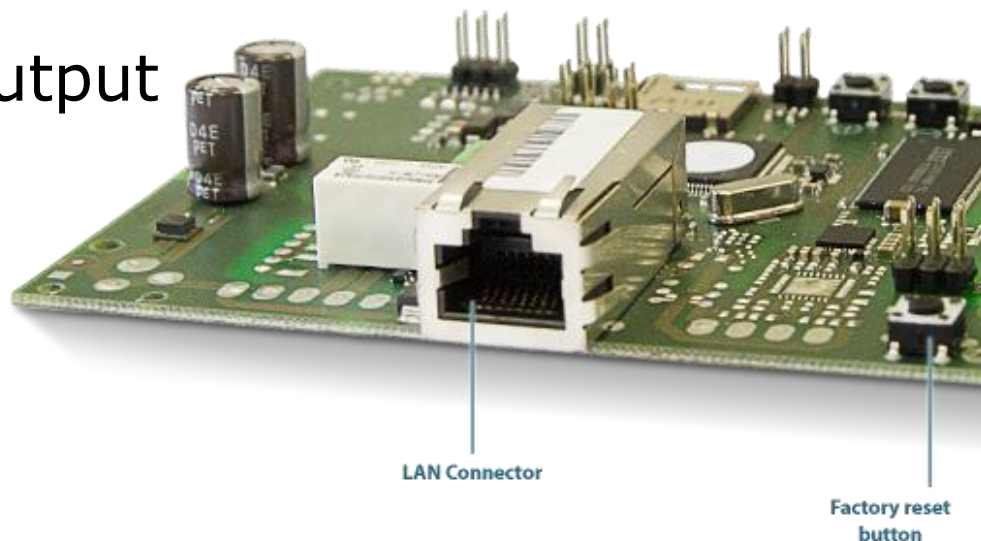
- 12V/2A power
- 10/100Base - TX Ethernet
- Stereo output of the Line out
- 2 user buttons (volume/channels)
- Slot for microSD card
- 1x digital input and output





2N[®] NetSpeaker Lite PCB

- 12V/2A power
- 10/100Base - TX Ethernet
- Stereo output of the Line out
- 2 user buttons (volume / channels)
- Slot for microSD card
- 1x digital input and output





2N® NetSpeaker Laudspeaker set



- 8W mono
- PoE or 12V/2A adapter
- Slot for microSD card
- 1x logic input and output
- 10/100Base - TX Ethernet



2N® NetMic

- Hardware console
- Live announcement
- Zones selection
- Pre-recorded messages
- Zones status indicator
- 12 buttons



SPORTS FACILITIES



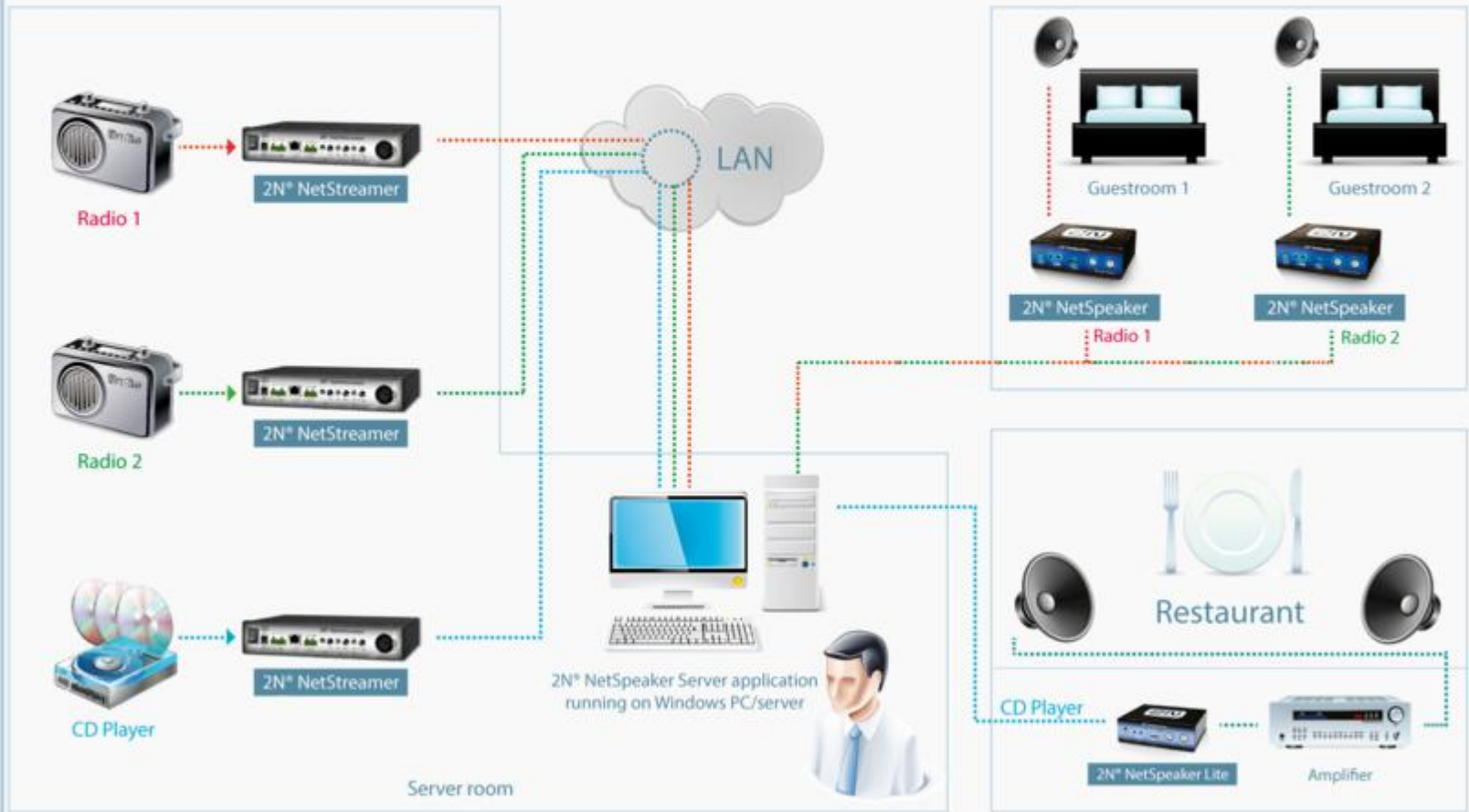


2N® NetStreamer



- **Analog --> IP** convertor device
- **Line-in** (FM receiver, CD player, any analog signal audio source)
- **MIC/XLR input** (logic input activation)
- Central management
- PoE

Hotel





2N IP Audio System

References

- Amusement park
 - 80 zones
 - Multiple channels in one zone



- Shopping mall chain
 - 25 very distant stores (up to 1000km from HQ)
 - Customized adverts to every store every 5 minutes



- Shopping centre
 - Wireless audio system





2N IP Audio System

Possible synergy

- NetSpeaker inbuilt into a speaker
 - ic audio (Germany)
- NetSpeaker inbuilt into an amplifier
 - Dexon (Czech Republic)





...Let's listen to the audio over IP...

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