



# *Audio Intercom*

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*Design Guide*

## Solution Overview

Netgenium's IP audio intercom and IP lock controllers extend the functionality of an existing IP telephony deployment into the physical security arena.

Intercom panels register with and become part of the phone system. This means any request for access through a secured door can be routed by the phone system. Using the standard time of day routing, hunt groups and call forwarding functions of the phone system ensure that calls are answered promptly by the most appropriate personnel.

Because Netgenium's intercoms and lock controllers are native IP devices, powered from PoE and require a single network outlet each, deployment couldn't be easier.



## Telephony Integration

### Power

Every audio intercom panel from Netgenium is powered from PoE. Each panel requires an IEEE802.3af power source.

If resilient power is required, provision should be made for suitable UPS equipment protect both network switches and power source equipment.

### Call Setup

With IPT enabled and configured the intercom panel can be registered as a telephone handset with the IP telephony system. Each intercom panel supports both SIP and Cisco's SCCP or 'skinny' call control protocol.

With the panel registered, a DN number is allocated, allowing the panel to receive incoming calls. The panel can be setup to accept or reject incoming calls.

The call button of the panel can be configured to dial a DN configured on the IP telephony system. This can be the DN of a telephone handset or a pilot number of a hunt group. A call from the panel is initiated by pressing the call button and routed according to the IP telephony systems dial plan. A two way audio session is established between the panel and the answering handset.

### Audio

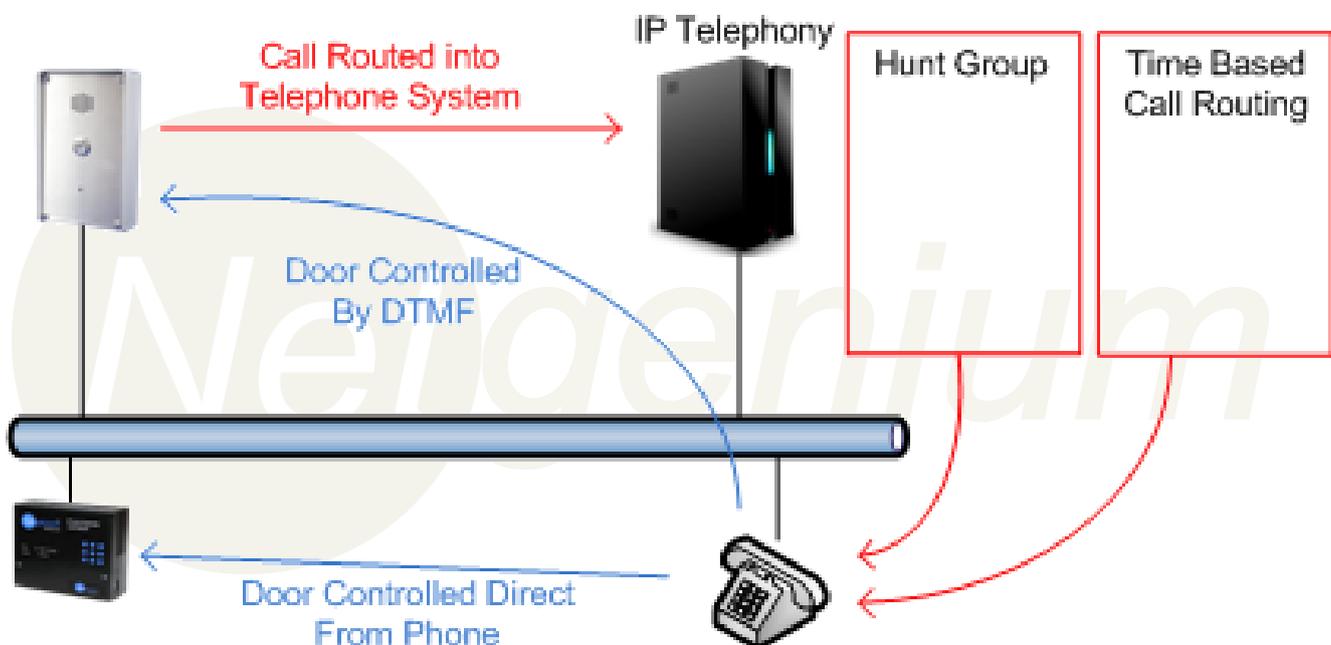
Netgenium Audio Intercom panels support the G711ulaw codec.

## Telephony Integration

### Door Control

With an audio session established with a telephone handset, every ICP0210-IP or later audio panel will intercept DTMF dial tone and compare the DTMF string to a configured value. When a valid DTMF string is received the panel can be configured to send an IP event to a Netgenium lock controller or trigger a clean set of contacts wired to an input of an OEM controller.

If the answering telephone handset has the ability to make a HTTP URL request. A soft button or speed dial can be configured to open a Netgenium lock controller over the network.



## Telephony Integration

### Network Design Considerations

Whilst there are no specific do's or don'ts when deploying intercom panels, the following recommendations may be considered good practice:-

- Consideration should be given to using a separate VLAN for audio traffic. If a voice VLAN is in place for telephony, it is recommended any intercom panels are installed on this VLAN, this must be configured at the network switch port.
- It is recommended that QoS is enabled on the network and each network port used for an audio intercom is configured to tag ingress traffic as high priority.
- Where IP handsets have speed dial and soft buttons configured to trigger Netgenium lock controllers using the network, it is important to ensure that inter VLAN routing is enabled.





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