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SV8100 – IP DECT

Pre-Sales Support

UNIVERGE SV8100

Release 4

Doc. Version 4.01

Promotion

DECT handsets

Access Points

Radio Planning

DAP Manager

IP DECT in SV8100

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Promotion

bundles →

Promotions Overview

UNIVERGE SV8000 DECT Handset bundels

Attractively Priced G355 IP DECT Handset Bundle ❓
Attractively Priced G955 IP DECT Handset Bundle including memory cards and bluetooth ❓

promotional packages

Customer Contact

Business ConneCT Starter Package ❓

System Management

MA4000 Expense Management (MAS9) Trial Package ❓

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Promotion

IP DECT Bundles of 20 handsets plus some accessories

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10 Reasons to sell IP DECT

1. **Proven and reliable**
   Business Mobility IP DECT builds on proven and mature technology

2. **It's Scalable**
   IP DECT is scalable for 1 to 256 Access Points, for projects even to 750 Access Points

3. **It's Affordable**
   It is very attractively priced with a very easy licensing structure

4. **It's Integrated**
   It offers all the relevant features users expect from any business telephone

5. **Easy deployment and management**
   IP DECT encryption and security are standard. It also comes with powerful management tools and the handset software can be downloaded "through the air"

6. **Rich choice of terminals**
   For every user-profile a specific handset and a choice of features and applications

7. **Take handset to other locations**
   With IP DECT the handset will also subscribe automatically in other locations allowing users to stay reachable under the same number

8. **Makes Unified Communications a reality**
   All IP DECT handsets share the same central directory which is always up-to-date. The directory even shows the presence of the required person

9. **Powerful messaging to alarm and alert staff**
   Alarms and text messages will alert staff, helping them to respond immediately to calamities

10. **Protects investment**
    IP DECT uses open standards such as the open messaging interface, the SIP protocols, the GAP compatibility for the handsets and many more

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DECT handsets

Basic	Office	Hi-office	Industry	Healthcare Industry	Healthcare Hospitality
C124	**G355**	**G955**	**I600** (EOL 2009Q3)	**I755**	**M155**

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DECT handsets

C124

C124

DECT	Handset I600	Handset C124	Handset G355

Handsets

10	?	Equipped
2	?	Sets Only

Documentation

0	?	C124 User Guide Int

Accessoiries

0	?	Belt Clips (10 pieces)

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DECT handsets

Handset G355 tab

20	G355 Handset Package (NEC)
400	Equipped
0	Sets Only
400	Desktop Charger
0	Charging Rack Kit
0	Wired Headset
0	Extra Belt Clip Sets
400	Memory Card (20 Pack)
0	Horizontal Pouch
0	Vertical Pouch
0	Rugged Holder
0	Battery Pack
0	Download Tool

Handset G955 tab

10	G955 Handset Package (NEC)
200	Equipped
0	Sets Only
200	Desktop Charger
0	Charging Rack Kit
0	Wired Headset
20	Basic Bluetooth Headset
10	Extra Belt Clip Sets
200	Memory Card (20 Pack)
20	Bluetooth Module
0	Horizontal Pouch
0	Vertical Pouch
0	Rugged Holder
0	Battery Pack
0	Download Tool

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DECT handsets

I755 replaces I600

I755

Based on the G955, with the following extra's:

- Protection Class IP54 (EN 60 529)
- Increased drop, force and vibration resistant
- Improved keypad with distinctive keys
- Large speaker for quality hands free
- Man Down detection
- Two antennas enabling fast diversity
- Two Color schemes, one brand NEC

Battery Pack:

- Inductive charging
- Intelligent: always correct indication
  of battery power level
- Easy replaceable

Handset G355	Handset G955	Handset I755
20		Standard Equipped
5		Standard Sets Only
2		Dark Equipped
1		Dark Sets Only
25		Standard Desktop Charger
3		Dark Desktop Charger
0		Basic Bluetooth Headset
0		Standard Belt Clip Set
0		Horizontal Pouch
0		Standard Battery Pack
0		Dark Battery Pack

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DECT handsets

Industry version

Office version

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DECT handsets

M155 DECT messaging watch

▌ Hands free calls (only)

▌ LRMS text messaging

▌ 5 selectable languages

▌ Talk time 8 hours

▌ Standby time 100 hours

Used for:

▌ Care

▌ Cure

▌ Hospitality

▌ Cruise Lines

▌ Normal, urgent, emergency messages

▌ Dialing of pre-programmed numbers

▌ 42 characters on 3 lines or combined 2/1line display

▌ Auto registration, based on unique AC code

▌ Positioning for healthcare, Hospitality, elderly homes, etc.

▌ IP terminal license in SV8100 required

DECT handsets

M155 DECT messaging watch

▌ LCD with 1 icon line (status) and 3 text lines of which the top 2 lines can be combined to 1 line with characters of double height

▌ Info shown on display depends on operational mode

▌ Two keys for operation: upper and lower key

20	❓ M155 Equipped
5	❓ M155 Sets Only
10	❓ M155v Equipped
2	❓ M155v Sets Only
37	❓ Desktop Charger

Wrist strap
Upper key
Icon line
Display
LED (On charger indication)
Lower key
Charger
Marie
Text lines

M155 in charger

▌ Call number stored in local telephone book

▌ Call SOS number

▌ Call number received as call back info in text msg

▌ Answer / reject incoming call

▌ Send pre-defined / SOS msg

▌ Receive msg + reply

DECT handsets

SV8100 – IP DECT manuals

- User manuals
- Quick reference manuals
- Customer engineer manual
- DECT site survey

Package Contents:

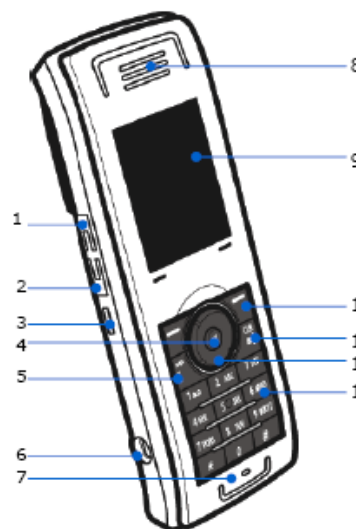|	
handset	2 belt clips
battery	removing tool

Main menu items:

Messaging — Calls
Contacts — Calendar
Settings — Accessories

Top row icons:

- Signal strength
- Message waiting
- Voice mail waiting
- Caller filter active
- Bluetooth active
- Keys locked
- Missed calls
- Silent mode
- Battery indication

1. Volume up key
2. Volume down key
3. SOS key
4. OK key
5. Off hook/enquiry (green phone key)
6. Headset jack connector
7. Microphone
8. Earpiece
9. Color display
10. Soft keys
11. On hook/clear/power (red phone key)
12. Navigational keys
    (Up/Right/Down/Left Nav. Key)
13. Keypad (0-9, *, #)

keys 1-9: long press for speed dialling (if programmed).

*: used in text editor to enter a star symbol and special characters, or to insert pause in dial mode.

0: used in text editor to enter space and special characters.

#: used in text editor to capitalize letters and type numbers. Long press activates the silent mode.

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Handsets

Accessories

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Handsets

Prophix Example

SV8100 with IP DECT

1. 20x M155
2. 20x I755 standard
3. 20x I755 dark
4. 20x M155 vibrator
5. 20x C124
6. 20x I600
7. 20x G955
8. 20x G355

Quote	Material Specification	Configuration Differences

Qty	Description	Prod.Code
⊟	**iSPBX**	
40	M155 DECT Desktop Charger	9600 015 69000
20	M155 DECT Message Device	9600 015 68000
20	I755s Desktop Charger	9600 015 89000
20	I755s DECT Handset	9600 015 84000
20	I755d Desktop Charger	9600 015 90000
20	I755d DECT Handset	9600 015 88000
20	M155v DECT Messenger	9600 015 70000
20	C124 DECT Handset Kit - NEC INT	9600 017 64000
20	I600 DECT Handset - INT	9600 015 07000
1	PZ-ME50-EU	BE107322
1	SV8100 Starter Package EU	BE108094
1	CH2U RACK MOUNT KIT	BE106405
⊟ 160	NEC SIP Licence	9922 260 00616
160	LK-SYS-IP-TERMINAL-SIP1-LIC	BE107586
⊟ 1	G955 Handset Package (NEC)	9922 260 00645
20	G955 DECT Handset - NEC	9600 015 61000
20	G355/955 Desktop Charger NEC	9600 015 72000
20	G355/955 AC Adapter - INT	9600 015 73000
1	G355/955/I755 Memcard - 20 pcs/...	9600 015 77000
1	G355/955 Belt Clip set	9600 015 79000
2	G955 Bluetooth Module	9600 015 78000
2	G955/I755 Bluetooth Headset	9600 017 76000
⊟ 1	G355 Handset Package (NEC)	9922 260 00644
20	G355 DECT Handset - NEC	9600 015 58000
20	G355/955 Desktop Charger NEC	9600 015 72000
20	G355/955 AC Adapter - INT	9600 015 73000
1	G355/955/I755 Memcard - 20 pcs/...	9600 015 77000
1	PZ-32IPLA	BE106911
⊟	**iSPBX Licences**	
1	LK-SYS-SMDR-LIC	BE107576

Extension Interfaces	Trunk Interfaces	Networking Interfaces	System

Extension Interfaces

Calculated	Additional		
0	0	❓	Analogue Extension Interfaces
0	0	❓	Digital Extension Interfaces
0	0	❓	IP Extension Interfaces
0	0	❓	SIP (3rd party IP) Extension Interfaces
160	← →	❓	NEC SIP Interfaces

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Handsets

Handset positioning	Basic C124	Office G355	Hi-office G955	Industry I600	Healthcare Industry I755	Healthcare Hospitality M155
Calling name/number, call logging	√	√	√	√	√	√ (no logging)
SOS alarm key	-	√	√	√	√	√
Loudspeaker mode	√	√	√	√	√	√
Charger rack	-	√	√	√	√	-
Internal Directory	40	200	200	100	200	5
Central Directory	-	√	√	√	√	-
Messaging (nurse call)	-	-	√	√	√	√
Broadcast messaging	-	-	√	√	√	√
Location detection	-	√	√	√	√	√
IP54	- (IP20)	- (IP20)	- (IP20)	√	√	- (IP20)
Bluetooth headset			√	-	√	-
Man-down	-	-	-	√	√	-

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Handsets

Key features [2]	C124	G355	G955	I755	M155 Messenger
Call handling features: • Auto answer • Calling name display • Calling Line (CLIP) display/digits • Call logging/size	No Yes Yes/12 Yes/10	Yes Yes Yes/24 Yes/50	Yes Yes Yes/24 Yes/50	Yes Yes Yes/24 Yes/50	Yes Yes Yes No
Headset/Bluetooth	Yes/No	Yes/No	Yes/Yes	Yes/Yes	No
Built-in vibrator	No	No	Yes	Yes	No
Charger rack	No	Yes	Yes	Yes	No
Corporate Directory	No	Yes	Yes	Yes	No
Display	B/w display	Colour display	Colour display	Colour display	B/w display
Triple frequency band	No	Yes	Yes	Yes	No, dual
IP classification	IP20	IP20	IP20	IP54	IP20
Location detection	No	Yes (prepared)	Yes (prepared)	Yes (prepared)	Yes (prepared)
Loudspeaker mode	Yes	Yes	Yes	Yes	Yes
Man-down alarm	No	No	No	Yes	No
Memory card	No	Yes, optional	Yes, optional	Yes, optional	No
Messaging (LRMS)	No	No	Yes	Yes	Yes
Messaging broadcast	No	No	Yes	Yes	Yes
Multiple subscription DECT systems	No	Yes (8)	Yes (8)	Yes (8)	No
Personal Phone book	Yes	Yes	Yes	Yes	Yes
Number of contacts	40	200	200	200	5
SOS-key/alarm	No	Yes	Yes	Yes	Yes

[1] Availability depends on local market situation and frequency band. Contact your local NEC dealer for more information
[2] For details, see the datasheets for each type of handset

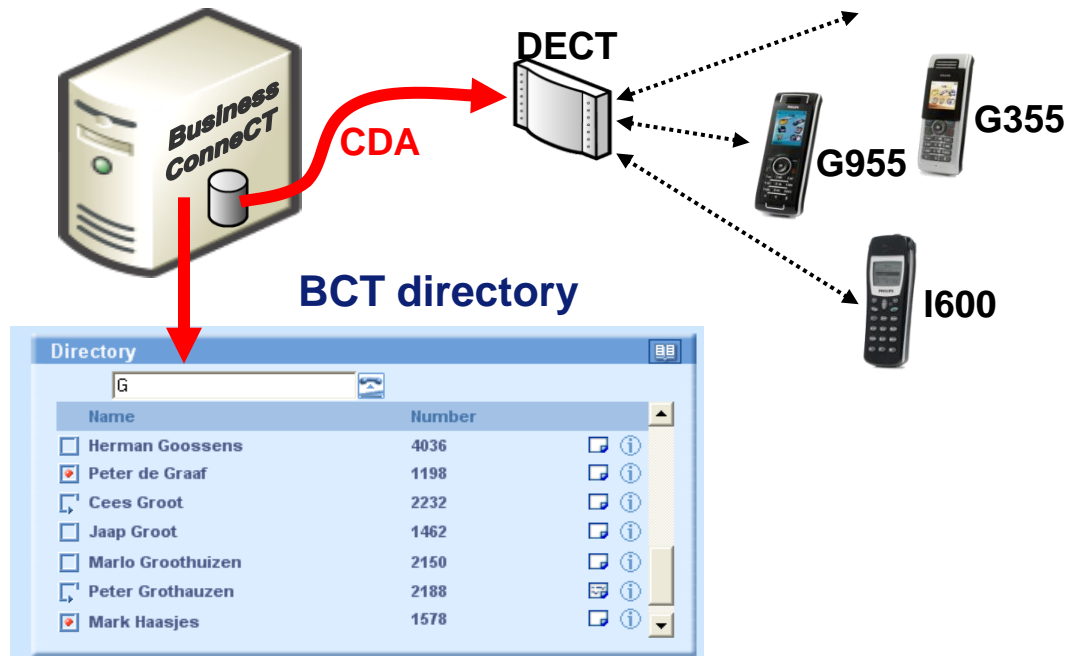Empowered by Innovation   NEC

Abbreviated Dial store (ABB)

System Abbreviated Dial store can be accessed by IP DECT phones

▎ DECT handset user can search a telephone number within the common abbreviated dialing (ABB) / speed dialing (SPD) data table and make an outgoing call.

▎ G355 and G955 DECT handset have this ability.

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Directory – BCT

- DECT handsets can access the central BCT directory

- No synchronisation of BCT / IP DECT corporate directory SV8100 dir.

- Names and presence on DECT phones

- DECT and SMS messaging from BCT Client

DECT

Business ConneCT

CDA

G955

G355

I600

BCT directory

Directory			
G			
Name	**Number**		
Herman Goossens	4036		
Peter de Graaf	1198		
Cees Groot	2232		
Jaap Groot	1462		
Marlo Groothuizen	2150		
Peter Grothauzen	2188		
Mark Haasjes	1578		

NEC

Central directory
- Bengtsson, Anj
- Berg, Geert va
- Berns, Joop
- Besselsen, Ber
- Bessem, Mark
- Bleau, Patrick
- Bliekendaal, B

Call   More

C955 + CDA

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SV8100 Central Directory Access tool

▎ IP DECT users can access SV8100 directory

▎ Directory db in Excel
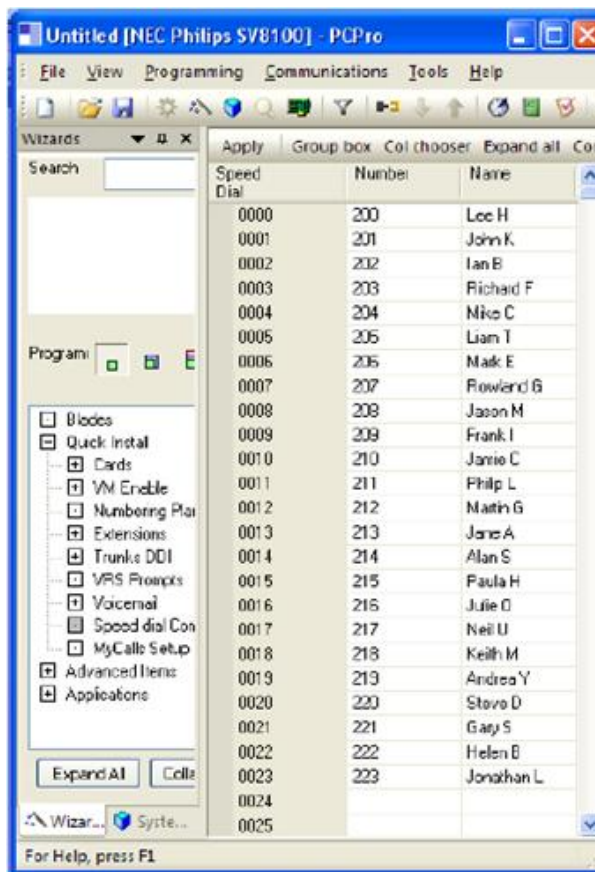
IP DECT user:

▎ Press menu

▎ Press contacts

▎ Press Central Directory

▎ Select name/nr

▎ Dial number

Bluespheres:
SVTP001 –
SV8100 IP DECT Central
Directory.pdf

Speed dial common

Source for CDA tool

DECT Access Points

AP200S

▌ Designed for NECP protocols and open SIP

▌ Up to 12 channels (max 11 concurrent calls)

▌ AP200S is not licensed!

▌ Calling Name and number

▌ Message waiting indication

▌ Central directory

▌ Broadcast Messaging

▌ LRMS Messaging

▌ Only open-SIP (No Protims or iTMP)

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▌ Peer-to-peer communication

▌ Priority & VLAN tagging

▌ PoE (IEEE802.3af) or external powering

▌ GAP/CAP compatible, encryption, seamless handover, text messaging

▌ Audio G.711, G.726 ADPCM

▌ No G.729ab in AP200S

DECT Access Points

AP200E

- External directional antenna 8 dBi
- Always with outdoor housing (inside and outside building)
- Always in combination with AP200S
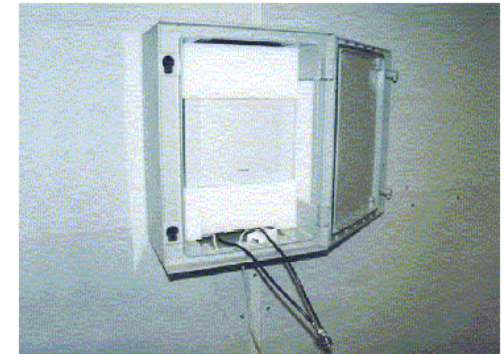
AP200S can also be used in outdoor housing

DECT	Handset C124	Handset G355	Handset G955	Handset I755	Handset M155

DECT Access Points

5	?	AP200S DECT Access Point
1	?	AP200E DECT Access Point For Directional Antennas
1	?	- AP200(E) Outdoor Housing
0	?	- AC Adaptor
0	?	AP300C DECT Access Point
0	?	AP300 DECT Access Point
0	?	AP300E DECT Access Point For Directional Antennas
0	?	- AP300(E) Outdoor Housing
1	?	- Directional Antenna
6	?	- Inline Power Adapter
☐	?	G729 support
☐	?	DAP Controller Rel 5 CD Rom for AP300

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DECT Access Points

AP300

- Replaces AP200

- SMB (AP300C) and Enterprise version (AP300)
  SV8100 uses AP300C

- AP200 and AP300 can be mixed in one network

- Very small housing, modern design

- Mountable on both the wall and on the ceiling

- 12 Channels

- G.729 via optional add-on board

- PoE class 2 compliant
  (no 230V Adapter available)

- Dap Manager release 5.0 required

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DECT Access Points

AP300 series

- AP300 NEC branded version , for all platforms, specific markets
- AP300C (Compact) NEC branded version for NEC SMB platforms
- AP300E version for external antenna, unbranded

Options

- Outdoor Cabinet AP300
- External antenna directional 60°
- G7A add-on board

DAP Manager

- Management, Subscription

DMLS

- Open interface for messaging and location services

AP300

Outdoor box with AP300E
and directional antenna

G7A

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Characteristics	AP300C	AP300E
Secure Air interface	✓	✓
Crystal clear speech and seamless handover	✓	✓
Connects directly to the LAN/Ethernet (10/100 Mb)	✓	✓
Power over Ethernet	✓	✓
IP peer-to-peer communication (also needs support by the used PBX/SIP Server)	✓	✓
Downloadable software	✓	✓
Support a combined AP300C and AP200S series system (with release 5.0 software)	✓	✓
SIP and Protims do not require any DECT licenses, for iTMP only channel and handset licenses are needed	✓	✓
A PARI license is available for unique DECT system identification	✓	✓
Multi-region support	✓	✓
AP300 can run any protocol released, including SIP, Protims and iTMP	✓	✓
12 channels of which 11 for speech/messaging and 1 for synchronization	✓	✓
Supports G.729ab compression with G7A add-on board		✓
Supports Alcatel Lucent OXE R9.0 and Cisco CUCM R6.1 based on SIP (certifications for higher version are ongoing)		✓
Support of external antenna		✓
Two antenna connectors		✓
Should only be used with the dedicated outdoor box (outdoor box small) (for indoor protection as well)		✓
Works together with all AP300 series models as well as a combination with AP200	✓	✓

DECT Access Points

Housing
- 146x174x43 mm (wxhxd) with horizontally positioned antenna
- 146x147x69 mm with vertically positioned antenna
- Weight 302 gram
- Colour white (RAL9010), Antenna light grey (RAL7035)

Network
- Network interface 10/100 BaseT

Frequency bands
- EMEA: 1880 – 1900 MHz
- Thailand: 1900 – 1906 MHz
- Latin America: 1910 – 1930 MHz (Brazil: 1910-1920 MHz)
- North America: 1920 – 1930 MHz

Typical range:
- Indoor: 20 – 50 m, Outdoor: 300 m

PBX protocol support
- SV8100: SIP

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DECT Access Points

DECT site survey is necessary to determine place and number of DAPs (DECT Access Points)

Up to 16 DAPs can be applied based on plug & play
▌ DAP manger only required during configuration

For 17 to approximately 50 DAPs:
▌ DAP Manager on PC is 24 / 7 required

Above 50 DAPs it will become special project (RAP):
▌ Special precautions, network assessments, etc become applicable

Absolute maximum is 750 DAPs:
▌ Theoretical value, will never be practically deployed

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DAP Manager

DAP Manager consists of:

- Two services running in the Background.
- Web Server application based on Internet Information Services
- If installed, TFTP Server is running as service
- If installed, DHCP Server is running as application

Define Handset Packages

Select handset type :

- G355 v01.51
- G955 v01.51
- I755
- M155

Select firmware package :

- G955 v0151

Select / Remove

Select firmware package for upload :

[Browse...] [Upload]

Number	Status	PIN	RPN	Presence	Registration status
2000	Subscribed		010	Present	Registered
2001	Subscribed		011	Present	Registered
2002	Subscribed		010	Present	Registered
2003	Subscribed		010	Absent	Registered

DECT Access Points

Branch Office: All

RPN	Working	IP Address	MAC Address	Package ID	Number of channels	Number of handsets	Comment	
010	Yes	192.168.4.100	00:18:27:00:21:EC	4910b4b6	8	3		OK Cancel
011	Yes	192.168.4.150	00:18:27:00:21:EA	4910b4b6	4	5		Edit

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DAP Manager

IP DECT in SV8100

SV8100

CD-CP00

PZ-32IPLA

Optional DAP Manager with Web server for management interface

IP switch

DAP
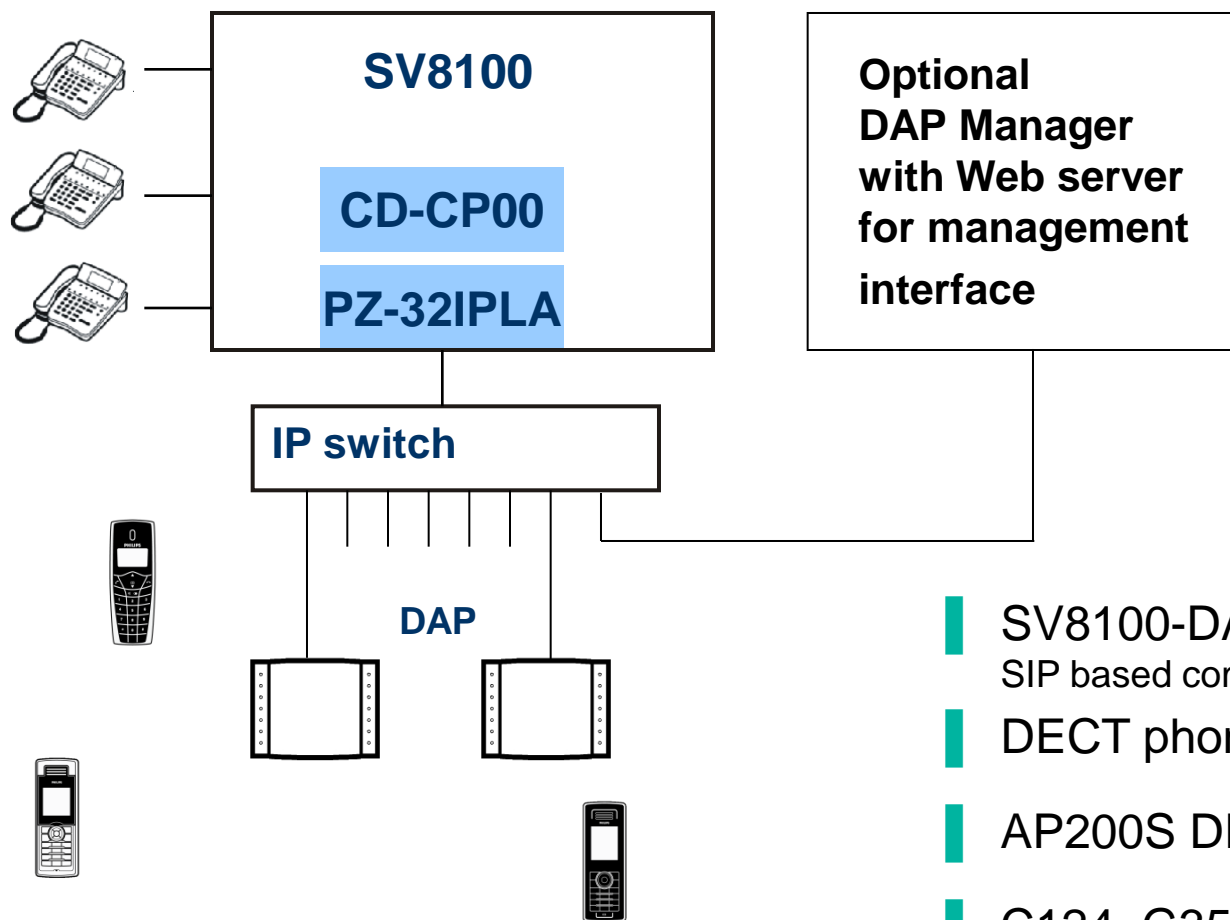
- **SV8100-DAP:** SIP based communication
- DECT phones act as SIP extensions
- AP200S DECT Access Point
- C124, G355, G955, I755, M155 handsets
- DAP Manager on PC

IP DECT in SV8100

Ethernet connection to CD-CP00 blade in SV8100

Media gateway in SV8100 is always needed:

- 3 media gateway variants: PZ- 32 / 64 / 128 IPLA
- Required for signaling of IP phones
- No voice channel occupation

Memory expansion (PZ-ME50 board) needed when:

- Using more than 64 system ports same is valid for IP phones

SV8100 SIP station **license** required per DECT handset

- SIP station license + DECT handset becomes cheaper

In-skin CD-ETIA switch and CD-RTA Router can be used for IP DECT

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IP DECT in SV8100

SV8100 series requires IP DECT R4.2 or R5 when using AP300

▌ Corporate directory with Central Directory Dialing (SV8100 Rls2 + BCT)

▌ Firmware upgrading over the air (easy maintenance)

▌ Broadcast messaging (all sets simultaneously receive a message)

▌ Text messaging from Business ConneCT

▌ Unlicensed, easiest deployment possible

Currently:

▌ No location detection

▌ No Messenger application (MSG@Net)

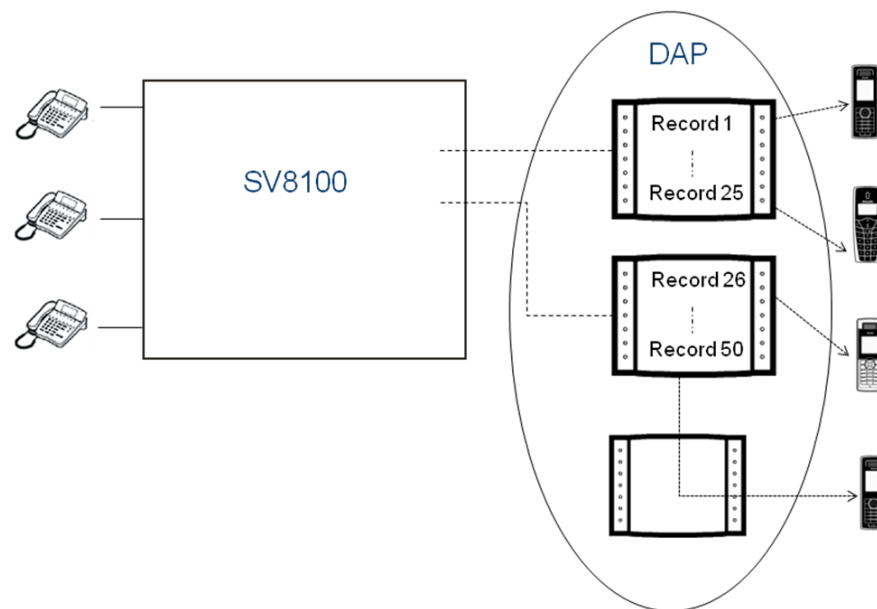© NEC Philips Unified Solutions 2010   SV8100 Sales Support Training - IP DECT   Empowered by Innovation **NEC**

IP DECT in SV8100

IP switch:

> ▌ If you use another type of IP Switch, it must support:
>> ▌ IP Multicasting
>> ▌ IGMP snooping must be disabled
>> ▌ Fast Forward

▌ IP DECT uses the SIP protocol

▌ No difference between DECT handset and SIP extension on SV8100

▌ All in one network segment (multicast)

▌ Max. 512 handsets These can all assigned to 1 duplication group

For much more information, consult

"SV8100 IP DECT Customer Engineer Manual" manual

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IP DECT in SV8100

Single site DECT

DAP

SV8100

Record 1
Record 25
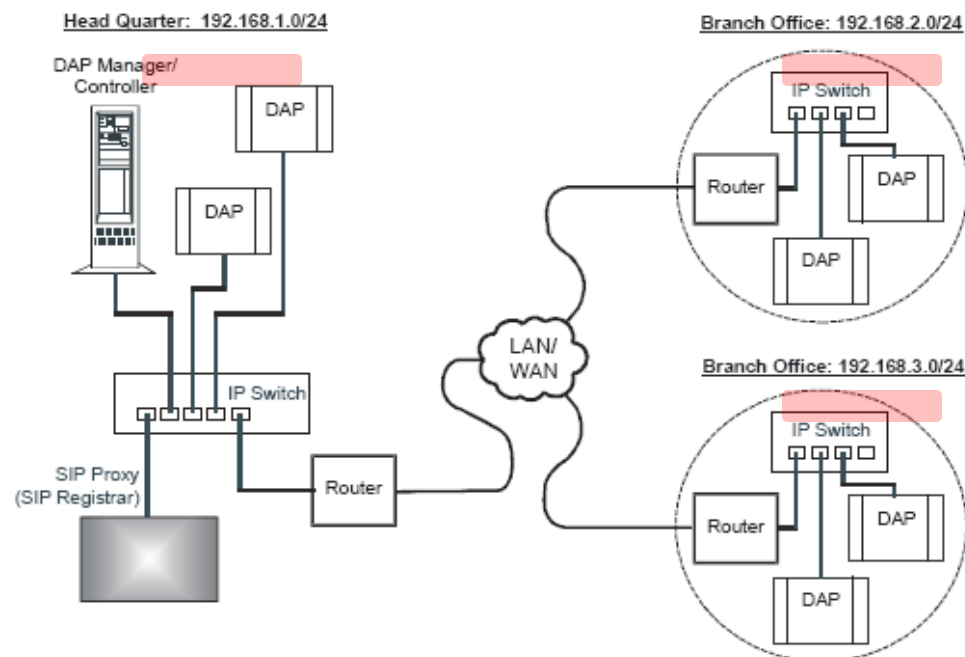
Record 26
Record 50

One subnet

All DAPs on 1 site:

▍ DECT handset is associated with subscription record in a DAP

▍ Record is created during DECT handset subscription

▍ Handset functions as long as its subscription record can be reached

▍ All DAP'S in one subnet (otherwise we talk about Multi Site)

IP DECT in SV8100

Multi Site

DAPs on Multiple sites is now supported

▮ DAPs in different subnets at different physical locations

▮ If the network supports Multicasting we talk about
  - "**Routed Headquarter**" solution.
    otherwise about
  - "**Branche Office**" solution

Head Quarter: 192.168.1.0/24

DAP Manager/Controller

DAP

DAP

IP Switch

SIP Proxy (SIP Registrar)

Router

LAN/WAN

Branch Office: 192.168.2.0/24

IP Switch

Router

DAP

DAP

Branch Office: 192.168.3.0/24

IP Switch

Router

DAP

DAP

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Branch Office

▌ Multisite networking requires permanently connected DAP controller

▌ Main site and remote sites consists of different IP subnets forming different broadcast domains

▌ All DAPs assigned to the same duplication group (New in R3)

▌ Multicast is Disabled (or not possible) in the network

▌ DAP's of a site Must Be out of the range\view of other sites

▌ Roaming from an office to another is possible, but:
- No Seamless handover

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IP DECT in SV8100

Routed Head Quarter

- Multisite networking requires permanently connected DAP controller

- Main site and remote sites consists of different IP subnets forming different broadcast domains

- All DAPs assigned to the same duplication group (New in R3)

- Multicast is Enabled in the network

- DAP's of a site Must Be "in view" of other sites

- Seamless handover is possible

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IP DECT in SV8100

Another way

▌ Another way to connect branch offices: Tunneling

▌ IP tunnels to group main site and branch offices into a single subnet, which in fact emulates a DECT single site solution

▌ Multicast Must be Enabled. Note Most tunnels do NOT support this

▌ Although this leads to a working DECT solution, it does demand sufficient throughput and reliability of network links between sites

General:

▌ Multisite networking approach requires skilled IP installation

          SV8100 Sales Support Training - IP DECT   Empowered by Innovation **NEC**

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