

Spectralink IP-DECT Installation Manual



S33

Tynetec operates a policy of continual product improvement and reserves the right to modify the specification of its products.

If any variation to the details in this document are suspected please contact Tynetec's Technical Support.

CONTENTS

Section	Topic	Page
1	Product Overview	3
2	Safety Instructions	4
3	Regulatory Information	5
4	Maintenance & Care	5
5	DECT Overview	6
6	Related Documentation	7
7	Site Wiring Requirements	8
8	Wall Mounting DECT Radio Parts	10
9	S33 DECT Handset & Charger	11
10	IP-DECT Server 400	12
11	IP-DECT Server 6500	13
12	IP-DECT Base Station	14
13	DECT Repeater	15
14	DECT Repeater Battery Backed PSU	16
15	Matrix NENX IP50 PBX	18
16	Advent XT2 Programming	19
17	IP-DECT 400 System Installation	20
18	IP-DECT 6500 System Installation	24
19	Specification: S33 DECT Handset	28
20	Specification: S Series Desktop Single Charger & PSU	29
21	Specification: IP-DECT Server 400	30
22	Specification: IP-DECT Server 6500	31
23	Specification: IP-DECT Base Station	32
24	Specification: 4 Channel DECT Repeater	33
25	Specification: 10 Port PoE Ethernet Switch (8 x PoE)	34
26	Specification: Repeater Battery Backed PSU	35
27	Specification: Uninterruptible Power Supply	36
28	Specification: Matrix NENX IP50 PBX	37
29	Amendments Record	38

1. PRODUCT OVERVIEW

The Digitally Enhanced Cordless Telephone (DECT) system allows 2-way voice communications with residents via the Advent XT2 warden call system and between staff, both internally and externally if required.

When the Advent XT2 is operating in Onsite Mode all alarm calls are reported via the DECT system. When the phone rings the caller will be identified on the display (provided the phone book memory is programmed), when answered a voice message will announce the call type and channel ID before a speech link is opened.

The size and complexity of the building and/or the number of DECT handsets required will determine which one of two Spectralink DECT systems is installed;

1. IP-DECT 400 system for most average-sized installations
2. IP-DECT 6500 system for large or complex installations

All DECT systems use the same handsets, it's the Server type and number of Base Stations/Repeaters that are needed to achieve site coverage and how they are configured which differs. The type of DECT system and positioning of Base Stations/Repeaters will be determined by a site survey prior to commencing the installation.

All Base Stations are star-wired from a central PoE Data Switch on Cat5e cable (max length 100 metres). Repeaters operate wirelessly but require connection to a battery backed 12V DC power supply. In the event of a mains power failure a UPS (Uninterruptable Power Supply) will maintain operation of the DECT Server.

The IP-PBX allows the DECT handsets to access an outside line to make/receive telephone calls and integrate with the Advent XT2 warden call system. The DECT system can be setup so all the warden call system events are always alerted to all handsets, or day/night groups can be set so different handsets can be alerted depending on the time of day. The handsets can be configured into zones so alerts are only notified to the staff responsible for specific areas.

2. SAFETY INSTRUCTIONS

	Read and understand these instructions before use. Refer to the Manufacturers installation and user guides for more information (see section 6 of this manual). Keep all instructions for future reference.
	Take care when working on step ladders during installation or service.
	Isolate the mains supply before removing covers.
	Do not disassemble any part of the system or attempt to repair it yourself.
	No user serviceable parts inside. Refer all servicing to qualified service personnel.
	PSU's should only be connected to a 220-240VAC 50/60Hz mains supply. If you are unsure of the type of power supply consult your local power company.
	Danger of explosion if rechargeable batteries are incorrectly replaced. Use only Manufacturer approved batteries as specified in this manual.
	Only use Manufacturer approved cable during installation. See section 7 of this manual for details of cable type, recommended colour code and cable length restrictions.
	DECT products should be located at least 5 metres away from any other electronic equipment. Failure to provide this separation may result in reduced radio range.
	Do not locate DECT products above a radiator or other heat source.
	Do not expose DECT products to direct sunlight.
	Do not submerge DECT products in water and do not use in damp or humid conditions.
	Do not drop or expose DECT products to high vibration or shock.
	Do not expose DECT products to dripping or splashing water. Liquids can cause a failure and/or a fire hazard.
	Clean DECT products with a damp cloth and a non-abrasive cleaning product. Polish with a dry duster. DO NOT use a wet cloth.
	Avoid using harsh, abrasive, or corrosive cleaning agents or detergents (e.g. scouring powders, bleaches, polishes, etc.) when cleaning DECT products.
	At their end of life DECT products should be disposed of and recycled in accordance with the environmental regulations. See the Regulatory Information in section 3 of this manual.

3. REGULATORY INFORMATION

	We declare this product complies with the relevant UK legislation on condition that it is used in the manner intended, and in accordance with the current installation standards and/or the manufacturer's recommendations. A copy of the full UKCA Declaration of Conformity is available on request.
	We declare this product complies with the relevant European legislation on condition that it is used in the manner intended, and in accordance with the current installation standards and/or the manufacturer's recommendations. A copy of the full CE Declaration of Conformity is available on request.
	This symbol on the product indicates it is classed as Electrical or Electronic Equipment and should not be disposed of with other commercial waste at the end of its working life. The Waste of Electrical and Electronic Equipment (WEEE) Directive (2012/19/EU) has been put in place to recycle products using the best available recovery and recycling techniques to minimise impact on the environment, treat hazardous substances and avoid increasing landfill. For product disposal please contact your supplier and check the terms and conditions of the purchase contract and ensure this product is not mixed with other commercial waste for disposal.
	This symbol on batteries indicates separate collection. Batteries contain chemicals that can be hazardous to health and the environment and should not be disposed of in the waste bin. The EU Directive (2006/6/EC) has been put in place to ensure the safe disposal and recycling of batteries. Return used batteries to your supplier or drop-off at your local municipal waste recycling depot.

4. MAINTENANCE & CARE

For peace of mind and to ensure your system is maintained to the highest standard Tynetec recommend an annual Maintenance Contract. This will provide vital assistance in times of need from a nationwide team of trained Service Engineers who specialise in warden call systems.

A preventative maintenance visit (PMV) is also recommended, this covers the replacement of all batteries, a full system test, software updates (where applicable) and a Service Certificate.

For more information on Maintenance Contract packages and PMV's please contact your local Tynetec Approved Installer, a list can be found on our website; www.tynetec.co.uk/installer-locator

MONTHLY MAINTENANCE

DECT Servers, Base Stations, Repeaters and IP-PBX's do not require any regular maintenance, if any units show signs of external damage they should be replaced immediately by a Service Engineer.

Products needing repair can be returned via the website; www.tynetec.co.uk/returns-procedure/

ANNUAL MAINTENANCE

The rechargeable batteries in the DECT Repeater PSU's and UPS should be tested every year by a Service Engineer and replaced every 2-5 years depending environmental conditions. Rechargeable batteries in the DECT telephones should be replaced every 2 years or 500 charging cycles. See the specification for each product in section 19 onwards for details of battery types.



In the unlikely event that the DECT system needs to be turned-off or reset, please ensure all active calls are actioned before proceeding.

5. DECT OVERVIEW

The maximum theoretical range for any DECT system is 500 metres under ideal conditions, in practice the range will rarely exceed 300 metres due to reflections from nearby buildings, trees, water, etc.

Obstructions inside buildings such as walls and floors will reduce the range, some construction materials such as foil backed plasterboard, reinforced concrete or stone walls will reduce range further.

Environmental conditions such as high levels of transmission at nearby frequencies or emissions from other electrical equipment may also reduce range.

Clear line-of-sight will give maximum radio coverage, it is impossible to state a specific indoor range in advance of a site survey; however, as a guide you can usually achieve 50 metres radius from the Server/Base Station or Repeater.

Locating the Server/Base Station as high and free from immediate obstruction as possible will help to maximise its range. Even if the Server/Base Station is placed in the optimum position it may not always achieve coverage in the most remote corners, if this is the case then additional Repeaters will be required.

Repeaters are generally placed in a star configuration around the Server/Base station; however, it is possible to extend the coverage in one direction with up to 3 repeater jumps. A site survey will be required to establish the best DECT system and Base/Repeater configuration required.

The Server, Base Stations and Repeaters should always be located at least 5 metres away from the Advent XT2 controller, NTR's or any other electrical equipment to avoid the risk of interference.

All DECT products must be sited in a dry secure area; they are NOT suitable for outdoor locations.

AVOID LOCATING DECT PRODUCTS...



WITHIN 5 METRES OF
OTHER ELECTRONIC
EQUIPMENT



DIRECTLY ABOVE A
HEAT SOURCE



IN DIRECT SUNLIGHT



NEAR TO SPLASHING
WATER

IMPORTANT NOTE:

Care must be taken during installation and commissioning of any DECT system to ensure full radio coverage and correct Radio Part Numbering of Base Stations and Repeaters. Failure to follow the Manufacturer's installation and programming instructions may result in blind spots or calls dropping-out when moving between radio cells. Always perform several test calls in all extremes of the building with all DECT handsets in use, i.e. simultaneous phone-phone calls.

6. RELATED DOCUMENTATION

This manual provides general information regarding the installation of the DECT telephone system. For more detailed information refer to the Spectralink installation and user guides.



SPECTRALINK DOCUMENTS

You can request copies of the documents listed below from Tynetec's customer support. Tynetec Engineers can download them from the Legrand Dialog 365 UK AL&H Document Library. Alternatively download direct from Spectralink;

https://support.spectralink.com/products?qt-product_finder_tabs=1&type=All

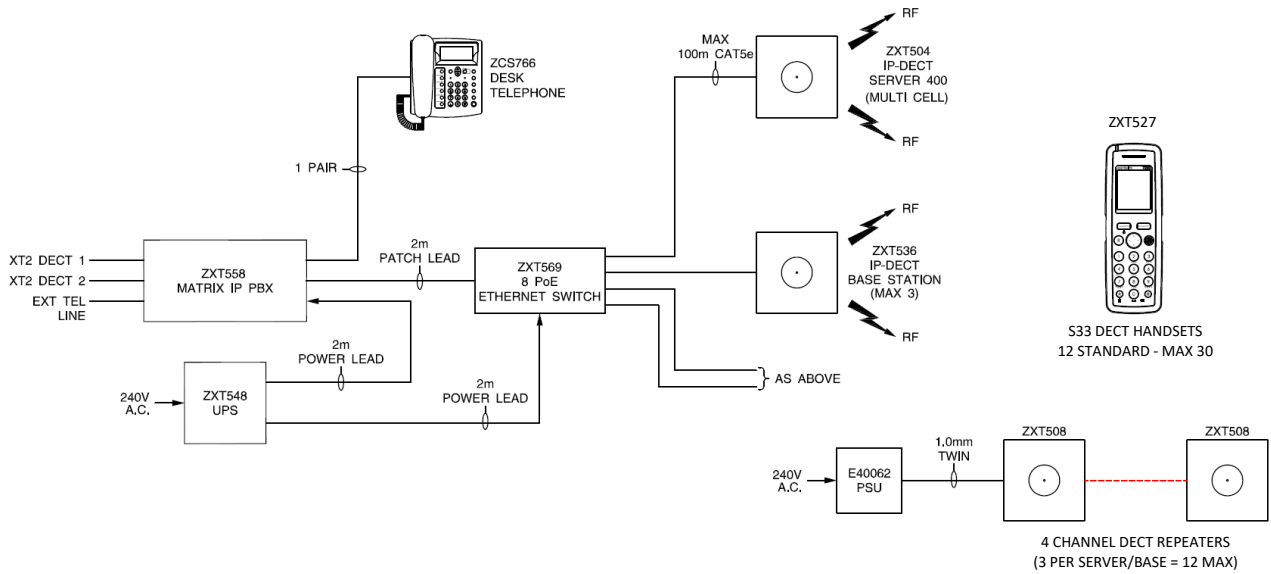
- Spectralink S33 Handset quick start guide
- Spectralink S33 Handset user guide
- Spectralink Handset Management user guide
- Spectralink Handset Battery information guide
- Spectralink IP-DECT Server 400/6500 installation & configuration guide
- Spectralink IP-DECT Server 400/6500 synchronization & deployment guide
- Spectralink IP-DECT Base Station installation guide
- Spectralink DECT Repeater installation guide
- Spectralink Base Stations or Repeaters?

Use the link below to download the DECT Repeater service tool software:

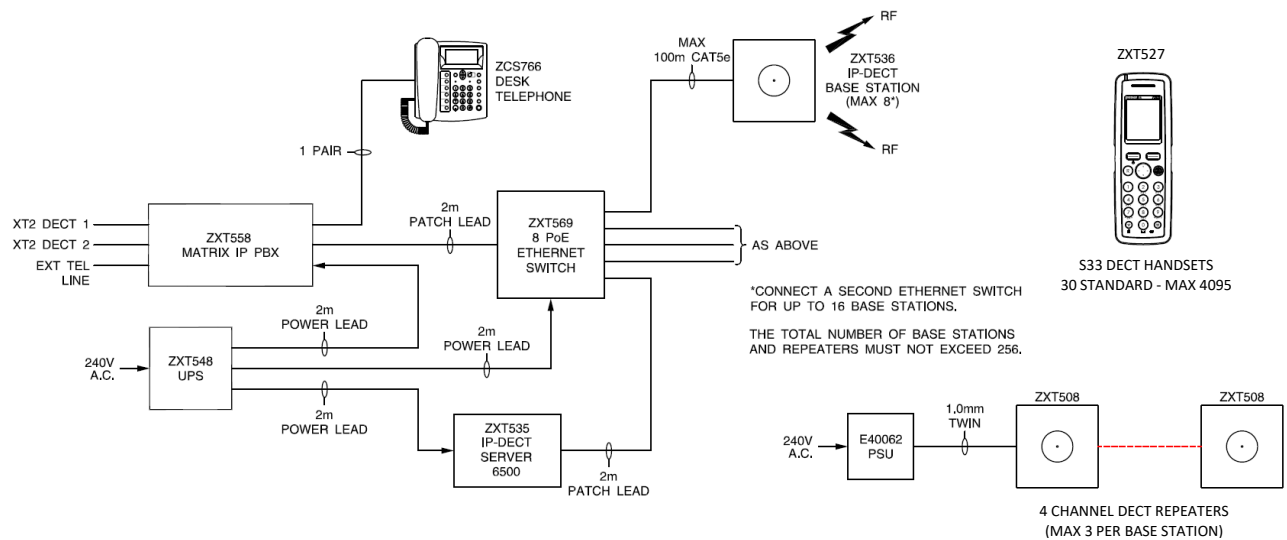
<https://support.spectralink.com/products/dect/spectralink-dect-repeater>

7. SITE WIRING REQUIREMENTS

IP-DECT 400 SYSTEM



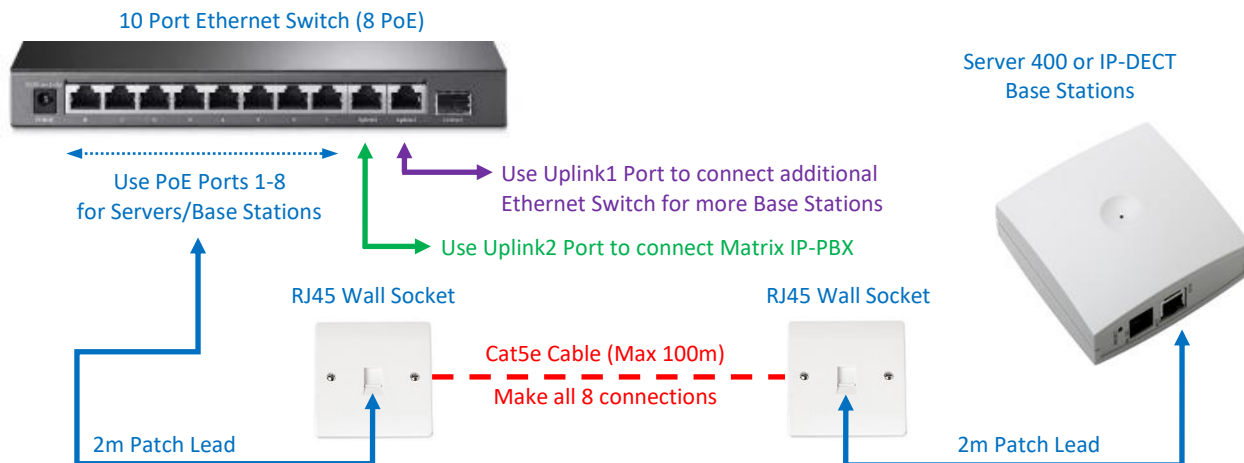
IP-DECT 6500 SYSTEM



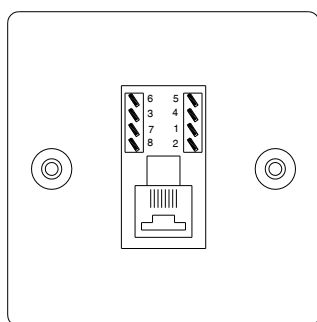
7. SITE WIRING REQUIREMENTS

IP-DECT Servers and Base Stations should be connected to PoE Ports on the Ethernet Switch using Patch Leads and Cat5e Ethernet U/UTP cable.

Wire between the wall sockets using Cat5e Ethernet U/UTP cable (Belden Type: 1583E.00B100) or equivalent, Tynetec Part No. YW1731. The maximum cable length must not exceed **100 metres**. Make all 8 connections.



WALL SOCKET FROM REAR



PIN No.	Cat5e WIRE COLOUR
1	White/Orange
2	Orange
3	White/Green
4	Blue
5	White/Blue
6	Green
7	White/Brown
8	Brown

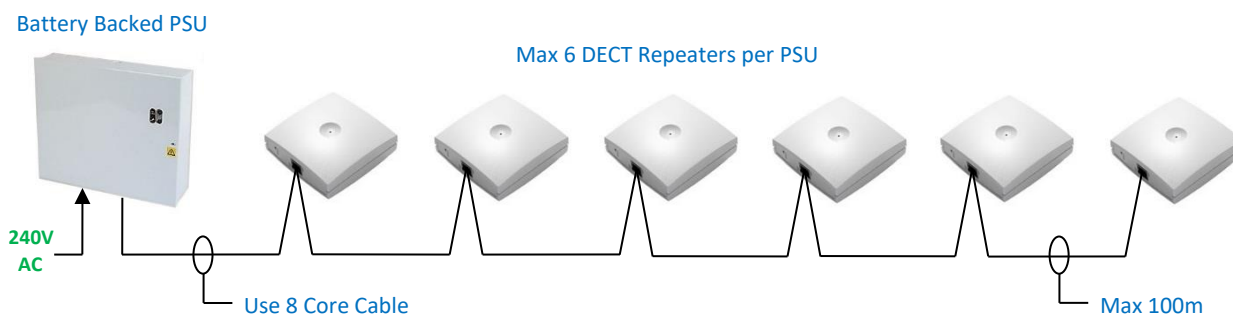
RJ45 Wall Socket:
Tynetec Part No. P10280

Surface Backbox:
Tynetec Part No. O15090

2m Patch Lead:
Tynetec Part No. W00402

DECT Repeaters should be connected to the 12V/2A Battery Backed PSU using 1.0mm Twin cable (or doubled-up pairs of CW1308).

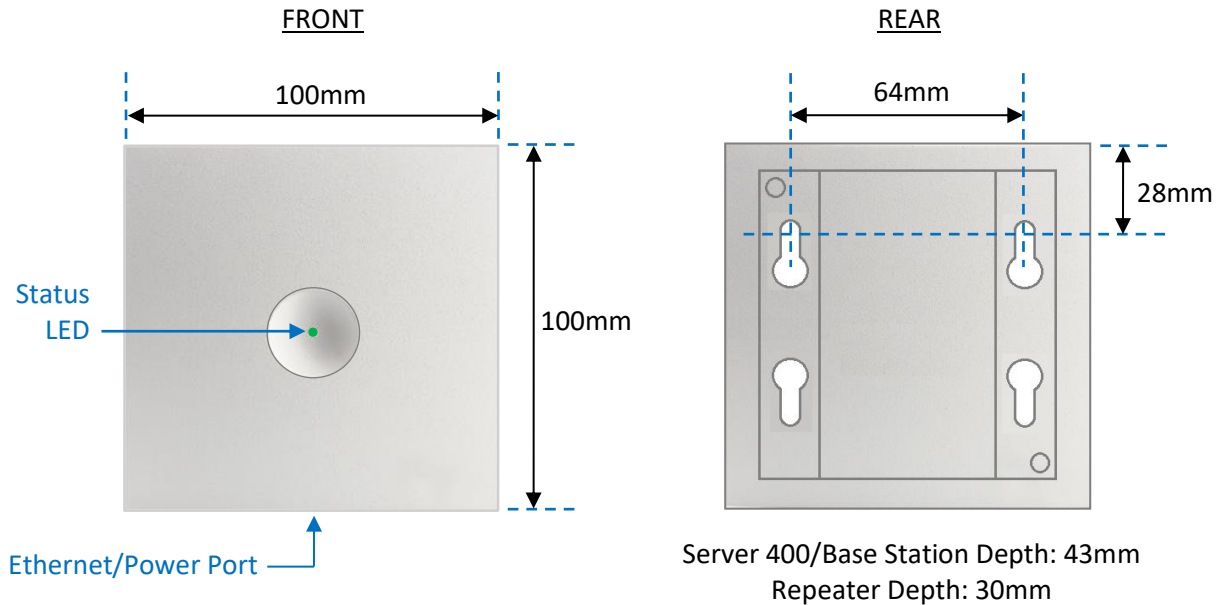
Connect a maximum of 6 Repeaters per PSU, the maximum cable length must not exceed **100 metres**.



DECT Repeaters are supplied with a short RJ11 power lead; **YELLOW = 12V** & **BLACK = 0V**.

8. WALL MOUNTING DECT RADIO PARTS

The IP-DECT Server 400, IP-DECT Base Stations and 4 Channel DECT Repeaters are all housed in the same type of enclosure and have the same fixing centres.



All DECT radio parts should be mounted vertically on the wall at least 2.4 metres above floor level but no higher than 6 metres.

They will normally be fitted with the Ethernet/Power Port at the bottom; however, they can be inverted with the Ethernet/Power Port at the top if desired.

Do not fix flush on the ceiling as this will affect signal propagation.

The keyhole fixing slots on the back of all units are 64mm apart, fixing screws and wall plugs are provided. You can find a fixing template on the centre pages of the product information booklet in the box.

9. S33 DECT HANDSET & CHARGER

Spectralink S33 handsets are designed to allow Healthcare personnel to be mobile while still within quick reach in critical situations. Furthermore, the handset is robust, dust proof and protected against splashing water making it suitable for use in wet room environments.

The Spectralink S33 DECT handset comes complete with a desktop charger and a plug-top power supply (Tynetec bundle Part No. ZXT527).



S Series Handset Desktop
Single Charger



Desktop Charger Plugtop
Power Supply

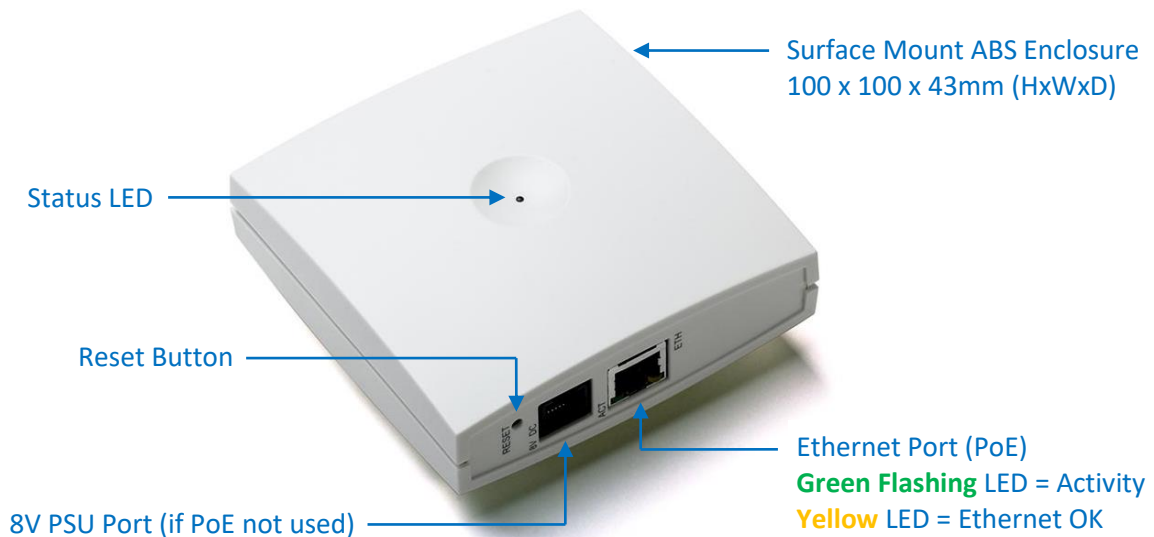


Refer to the Spectralink S33 Handset quick start and user guide (see section 6)

10. IP-DECT SERVER 400

The IP-DECT Server 400 (with built-in Base Station) is suitable for medium/large installations where coverage can be achieved with a max of 4 base stations and up to 12 Repeaters with up to 30 handsets. The IP-DECT Server 400 controls the IP-DECT Base Station(s) and manages the IP interface to the IP-PBX.

Spectralink Ref.	Tynetec Part No.	Product
0234 4500 + 1407 5520	ZXT504	IP-DECT Server 400



LED INDICATOR

The front cover Status LED will indicate the IP-DECT Server/Base Station status by different colours and flash patterns, see the table below;

LED Colour	Meaning
Steady Green	OK and idle
Slow Green Flashing	OK and active voice call
Fast Green Flashing	Busy (all channels in use)
Steady Red	Reset/shutdown in progress
Steady Red for 5 Seconds then Fast Red Flashing	Reset to factory settings
Red Flashing	Error or rebooting

RESET BUTTON

You can restart the IP-DECT Server/Base Station by pressing the RESET button on the bottom face, see the table below for the 2 possible actions;

Press Button	Action
Short press (2-5 Secs)	Server/Base Station restarts when the button is released
Long press (5-9 Secs) until front LED flashes red then release button	Reset to factory defaults (original IP setting and empty user data base) and restart.



Refer to the Spectralink IP-DECT Server 400/6500 installation guide (see section 6)

11. IP-DECT SERVER 6500

The IP-DECT Server 6500 provides the DECT solution for a large geographical area and/or a large number of mobile users. The modular nature of the IP-DECT 6500 Server makes it easy to increase the number of voice channels with the Media Resource and/or geographical coverage with additional IP-DECT Base stations.

19" Rack Mount Steel Enclosure
440 x 199 x 44mm (WxDxH)



SYSTEM CAPACITY

- Max No. of IP-DECT Base Stations: 512
- Max No. of simultaneous calls on each IP-DECT Base Station: 11
- Max No. of Repeaters on each IP-DECT Base Station: 3
- Max No. of Media Resources: 32
- Max No. of simultaneous calls with 1 Media Resource: 32
- Max No. of simultaneous calls with 32 Media Resources: 1024
- Max No. of DECT handsets: scalable to 4095 (stepwise 30/150/500/1500/4095 users)

LED INDICATOR

The front Status LED will indicate the IP-DECT Server status by different colours and flash patterns, see the table below;

LED Colour	Meaning
Steady Green	OK and idle
Slow Green Flashing	OK and active voice call
Fast Green Flashing	Active, in operation with the maximum connections (Busy)
Slow Red Flashing	Missing media resource or Base Station
Fast Red Flashing	Error
Steady Red	Reset/shutdown in progress
Steady Red for 5 Seconds then Fast Red Flashing	Reset to factory settings



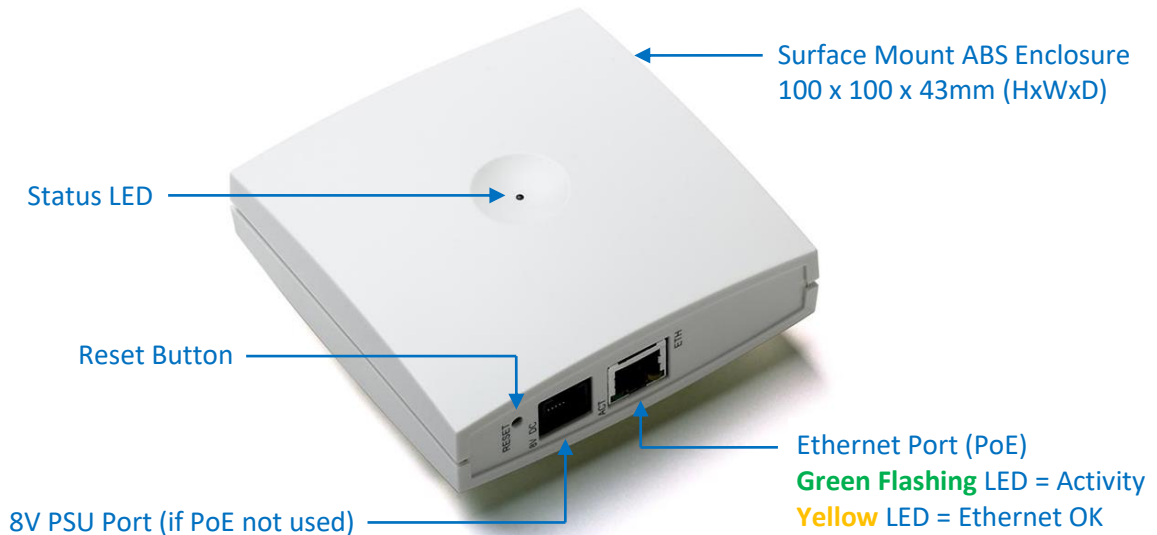
Refer to the Spectralink IP-DECT Server 400/6500 installation guide (see section 6)

12. IP-DECT BASE STATION

IP-DECT Base Stations are used with the Server 400 or Server 6500 systems.

IP-DECT Base Stations have 12 simultaneous traffic channels and work as the link between the DECT handsets and the IP-DECT 400/6500 Server.

Spectralink Ref.	Tynetec Part No.	Product
0233 7400	ZXT536	IP-DECT Base Station



LED INDICATOR

The front cover Status LED will indicate the IP-DECT Base Station status by different colours and flash patterns, see the table below;

LED Colour	Meaning
Steady Green	OK and idle
Slow Green Flashing	OK and active voice call
Fast Green Flashing	Busy (all channels in use)
Slow Red Flashing	No Server connection
Fast Red Flashing	Error – no over air sync possible
Steady Red	Reset/shutdown in progress
Steady Red for 5 Seconds then Fast Red Flashing	Reset to factory settings

RESET BUTTON

You can restart the IP-DECT Base Station by pressing the RESET button on the bottom face, see the table below for the 2 possible actions;

Press Button	Action
Short press (2-5 Secs)	Base Station restarts when the button is released
Long press (5-9 Secs) until front LED flashes red then release button	Reset to factory defaults (original IP setting and empty user data base) and restart.



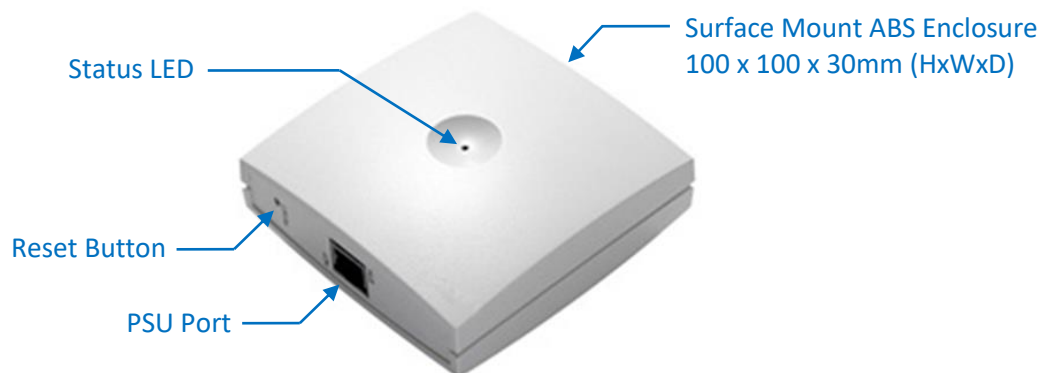
Refer to the Spectralink IP-DECT Base Station installation guide (see section 6)

13. 4 CHANNEL DECT REPEATER

DECT Repeaters are used to extend the wireless coverage area in a DECT network. The Repeater provides a larger geographical spread of the traffic channels and increases the coverage area but it does not increase the number of channels available. The Repeater is normally used in areas with limited coverage e.g. long hallways, stairwells, and corridors.

The Repeater is wireless with no connection to the IP-DECT Server or Base Station; however it does need connection to a battery backed power supply.

Spectralink Ref.	Tynetec Ref.	Product
7244 1610	ZXT508	4 Channel DECT Repeater



LED INDICATOR

The front cover Status LED will indicate the Repeater status by different colours and flash patterns, see the table below;

LED Colour	Meaning
Steady Green	OK and idle
Short Green Flash	OK and active voice call
Fast Green Flashing	Busy (all channels in use)
Fast Red Flashing	Error – no over air sync possible

RESET BUTTON

You can restart the Repeater by pressing the RESET button on the bottom face.

PROGRAMMING

Refer to the manufacturer's installation guide for full instructions – see section 6 of this manual. Programming kit (P/No. ZXT509) is required, the Service Tool software can be downloaded via the link in section 6 of this manual.

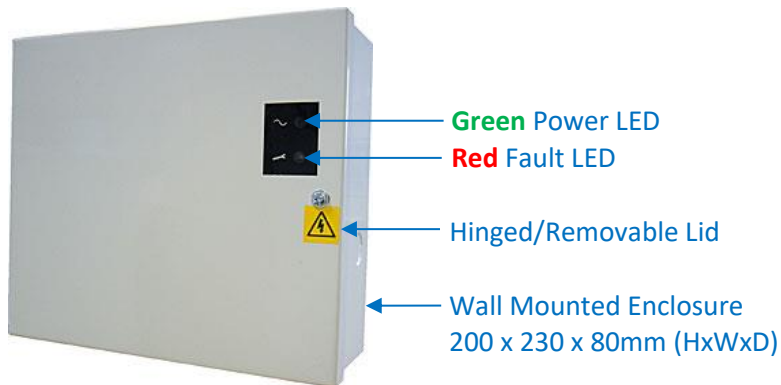


Refer to the Spectralink DECT Repeater installation guide and Service Tool software (for Windows) for programming Repeaters (see section 6)

14. DECT REPEATER BATTERY BACKED PSU

The 12V DC 2A battery backed PSU (Tynetec Part No. E40062) requires connection to the mains supply via an un-switched 13A socket.

12V DC 2A PSU



2m Mains Lead & 13A UK Plug



INSTALLATION

Undo the lid fixing screw and open the lid.

Note: if the lid is removed ensure the Safety Earth is re-connected.

Position the PSU within 2 metres of an un-switched 13A mains socket.

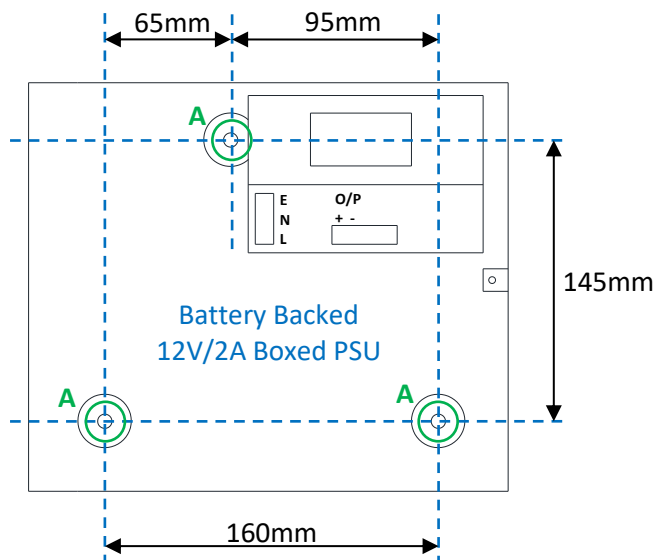
Fix the power supply unit to the wall using the 3 holes "A" as shown below.

Connect the mains lead provided to the power supply unit mains terminals using the colour code in the table alongside.

Note: the mains plug is fitted with a 240V AC 5A BS1362 fuse.

Mains Connection	
Colour	Terminal
Brown	L
Blue	N
Green/Yellow	E

PSU FIXING



PSU LED INDICATORS

The **GREEN POWER** LED should be permanently illuminated when the Mains supply is healthy.

The **RED FAULT** LED will illuminate if the 12V output fuse has blown or the battery PTC resettable fuse has tripped.



The PSU should only be opened during installation and service – the lid must be screwed shut at all other times to prevent the risk of electric shock.
Never leave a live PSU unattended with the lid open.

14. DECT REPEATER BATTERY BACKED PSU

BATTERY REPLACEMENT

The 12V/2A power supply unit provided for the Repeaters includes a 12V 3.4Ah rechargeable battery. This battery will maintain normal operation for several hours in the event of a mains power failure.

12V DC 2A
Power Supply



12V 3.4Ah Lead Acid
Rechargeable Battery

The rechargeable battery should be removed and tested by a Service Engineer on an annual basis and replaced every 3-5 years.

With the battery disconnected; check the charge voltage across the battery leads is between 13.6V DC and 14.2V DC (13.8V nominal).

If the battery shows any signs of damage, swelling or leakage during an annual inspection it should be replaced immediately.

Only replace with the Manufacturers Approved battery type:

Yuasa NP3.4-12: 12V 3.4Ah Sealed Lead Acid Rechargeable Battery

Replacement batteries are available from Tynetec; order Part No. F00040

IMPORTANT: always mark the battery with the date it was replaced for reference on future Service visits.

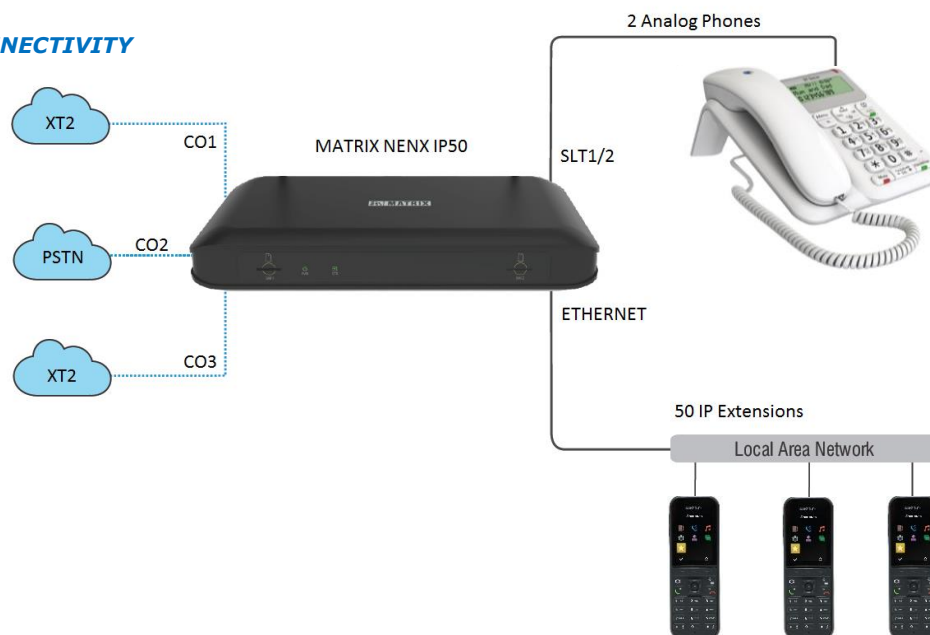


See section 3 of this manual for Regulations regarding the safe disposal of used batteries

15. MATRIX NENX IP50 PBX

The Matrix NENX IP50 PBX provides 4 CO analogue trunks for connection to the XT2 system and the outside world, an Ethernet port for up to 50 IP extensions (IP-DECT handsets) and 2 analogue extensions for standard (SLT) desk telephones.

IP-PBX CONNECTIVITY



XT2 MATRIX NENX IP50 CONFIGURATION

The ZXT558 Matrix NENX IP50 with **Tynetec Config Rev 6** is designed for operation with **XT2** systems. Any incoming call rings the SLT phone and IP-DECT extensions 151 to 180.

Dial 81 for CO1 (XT2), 82 for CO2 (outside line) and 83 for CO3 (XT2).

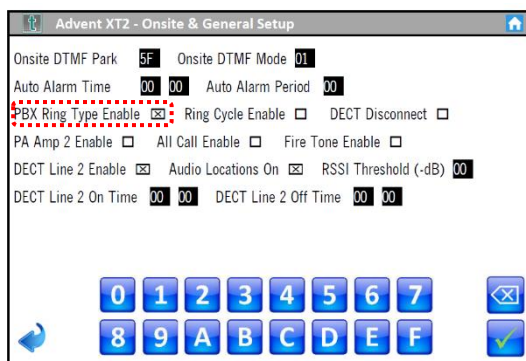
This Rev 6 Config has the correct CLI format set for XT2 systems and the internal DHCP Server enabled.

16. ADVENT XT2 PROGRAMMING

The PBX Ring Type must be enabled in the Advent XT2 system programming;

ADVENT XT2 PROGRAMMING

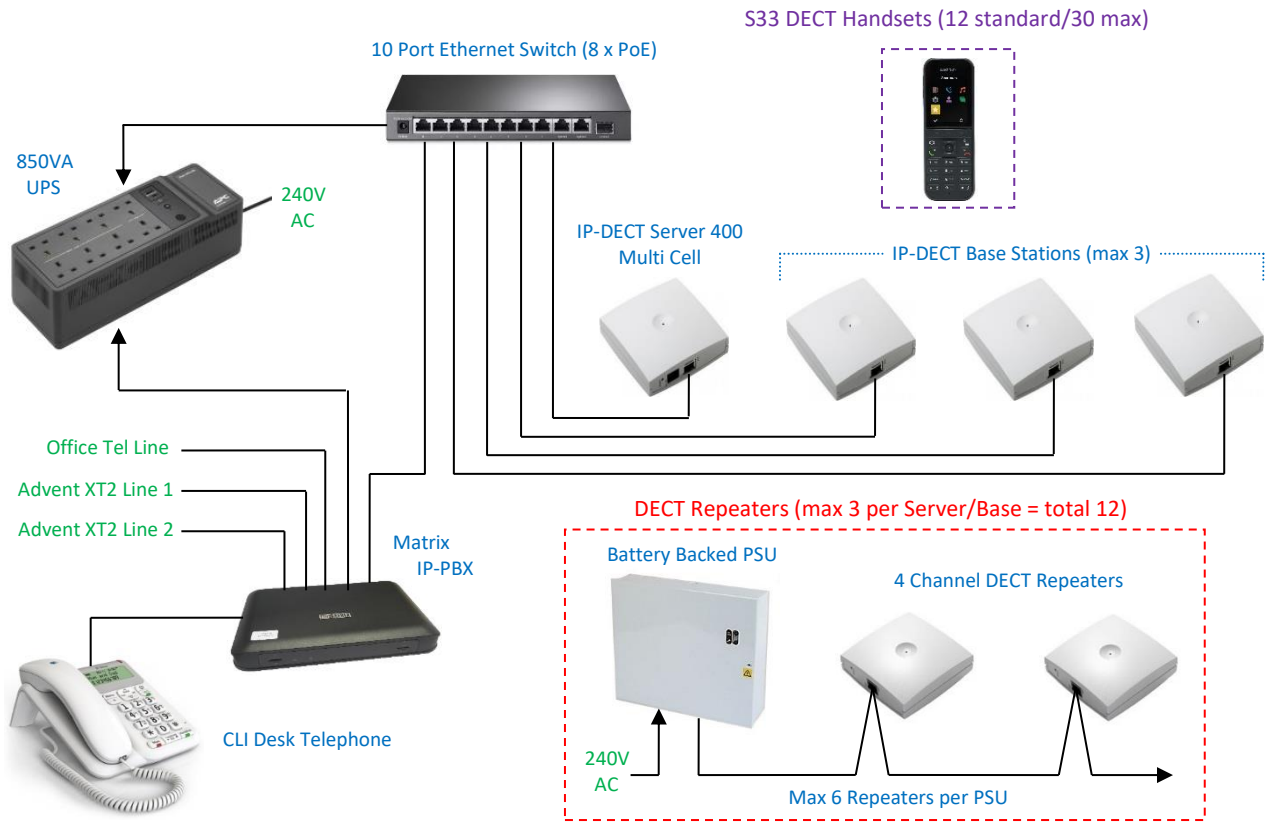
Enter programming mode on the Advent XT2 controller and go to the **Onsite & General Setup** page. Set the **PBX Ring Type Enable** ☒ check box, press the green  button then **Apply** the change.



Refer to the Advent XT2 programming manual Doc No. FM0815 for more information.

17. IP-DECT 400 SYSTEM INSTALLATION

The IP-DECT Server 400 system is suitable for medium/large installations using up to 4 Base Stations and 12 Repeaters. Up to 12 DECT handsets can be used as standard, or up to 30 with an additional licence.



PART NUMBERS

Part No.	Description	Notes
ZXT548	APC 850VA UPS	1 per site
ZXT558	Matrix NENX IP50 IP-PBX (50 IP Ports)	1 per site
ZXT569	TP-Link 10 Port Ethernet Switch (8 x PoE)	1 per site
ZXT504	Spectralink IP-DECT Server 400	1 per site
ZXT536	Spectralink IP-DECT Base Station	max 3 per site
ZXT508	Spectralink 4 Channel DECT Repeater	max 12 per site
ZXT509	Spectralink Repeater Programming Kit (USB)	1 off purchase
ZXT527	Spectralink S33 DECT Handset inc Charger & PSU	max 12 (30 with additional licence)
ZCS766	BT Décor CLI Desk Telephone	1 per site
E40062	12V DC 2A Battery Backed PSU	1 per site

UPS CONNECTION

To maintain DECT operation during a mains failure the Matrix IP-PBX and Ethernet Switch must both be powered from the battery backed output sockets on the UPS.

Note: If the Matrix IP-PBX and Ethernet Switch are plugged directly into the mains there will be no DECT coverage during a mains failure; however, the CLI desk telephone will still operate.

17. IP-DECT 400 SYSTEM INSTALLATION

10 PORT ETHERNET SWITCH CONNECTIONS

The 10 Port Ethernet Switch provides 8 PoE Ports for the IP-DECT Server 400 and IP-DECT Base Stations.

53.5V 2.43A - connect to the mains supply (or a battery backed output on the optional UPS) via the in-line mains adapter provided.

PoE PORTS 1 to 8 - connect to the IP-DECT Server 400 and IP-DECT Base Stations using RJ45 patch leads/wall sockets. These connections can be extended to a maximum of 100 metres using Cat5e cable.

UPLINK2 - connect to the Matrix NENX IP50 PBX Ethernet Port using an RJ45 patch lead.

UPLINK1 - connect to an additional Ethernet Switch Uplink Port using an RJ45 patch lead. This connection can be extended to a maximum of 100 metres using Cat5e cable. This will provide another 8 PoE Ports for up to 8 more IP-DECT Server 400 and IP-DECT Base Stations.

MATRIX CONNECTION

The Matrix IP-PBX interfaces the Advent XT2 to the DECT equipment; it also gives access to an outside line and allows zoning of calls.

24VDC - connect to the UPS via the in-line PSU module provided.

CO1 - connect to the Advent XT2 DECT 1 output using the RJ11/BT lead provided.

CO2 - connect to an external telephone line using the RJ11/BT lead provided.

CO3 - connect to the Advent XT2 DECT 2 output using the RJ11/BT lead provided.

SLT1 - connect to the CLI desk telephone via a BT master socket (cut plug off the RJ11/RJ11 lead provided).

ETHERNET - connect to the Ethernet Switch Port 9 using the RJ45 patch lead provided.

Note; in the event of a mains failure i.e. if the UPS batteries run flat or if a UPS is not fitted, the Matrix connects CO1 to SLT1 and the Advent XT2 will only ring the CLI desk telephone.

IP-DECT SERVER 400 PROGRAMMING

The IP-DECT Server 400 must have its IP address set to 192.168.0.3 and its Radio Part Number set to 3. Refer to the manufacturer's installation guide for full instructions – see section 6.

IP-DECT BASE STATION PROGRAMMING

IP-DECT Base Stations must have their IP addresses set 192.168.0.4/5/6 and Radio Part Numbers 4/5/6. Refer to the manufacturer's installation guide for full instructions – see section 6.

4 CHANNEL DECT REPEATERS

A maximum of three 4 Channel DECT Repeaters can be connected to the IP-DECT Server 400 Multi Cell plus three per IP-DECT Base Station (total 12 per site). Repeaters require a power connection only; they communicate with the Server/Base Station via low power radio signals and do not require a line connection. To maintain DECT coverage during a mains failure all Repeaters must be connected to a battery backed 12V DC PSU.

REPEATER POSITIONING

Before installing power cables to Repeater positions, it is important that the optimum position for coverage is established. Register the Repeater onto the IP-DECT Server 400 then with the Repeater powered from a battery walk away in the direction that cover is to be extended. When the red LED on the Repeater starts to flash it is out of range and must be moved back towards the Server by a minimum of 5 metres before selecting its final location. The LED should be steady green. See Repeater Deployment Rules on the following page.

REPEATER PROGRAMMING

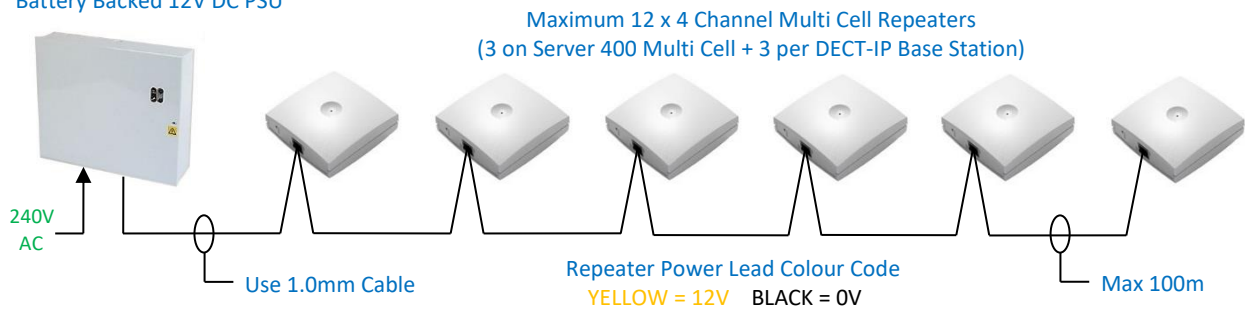
Refer to the manufacturer's installation guide for full instructions – see section 6. A programming kit (P/No. ZXT509) is required to program Repeaters, the Service Tool software can be downloaded via the link in section 6 of this manual.

17. IP-DECT 400 SYSTEM INSTALLATION

REPEATER POWER CONNECTION

Repeaters should be connected using 1.0 mm pair cabling, if CW1308 is being used then spare pairs can be doubled-up and/or looped back to form a ring circuit to reduce the voltage drop if necessary.

Battery Backed 12V DC PSU



REPEATER DEPLOYMENT RULES

- A maximum of 3 Repeaters can be configured on an IP-DECT 400 Multi Cell Server - RPN 3
- If you have up to 3 Repeaters on an IP-DECT 400 Multi Cell Server they should be numbered: 67, 131 and 195 i.e. RPN 3 + 64, +128 and +192
- A maximum of 3 Repeaters can be configured on an IP-DECT Base Station - RPN 4/5/6
- If you have up to 3 Repeaters on an IP-DECT Base Station they should be numbered as:
Base Station RPN 4/5/6 +64, +128 and +192
- A maximum of 3 Repeaters can be configured in a chain
- 2 Repeaters cannot have the same number
- See deployment examples below; **RPN** = the Radio Part Number

Multi-Cell Server/Base is shaded **ORANGE**

Repeaters are shaded **GREEN**

Radio handover **BLUE**



Multi-Cell Server/Base
RPN 3-6

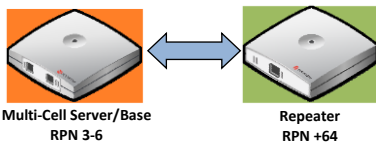


Repeater
RPN XX



1 REPEATER DEPLOYMENT

1 Repeater connected directly:

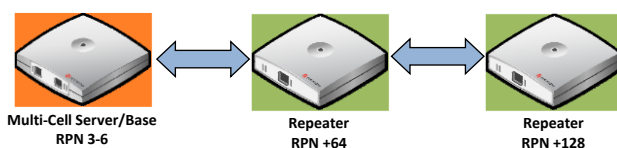


2 REPEATER DEPLOYMENT EXAMPLES

2 Repeaters connected directly:



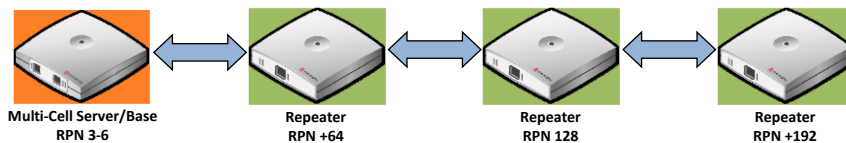
2 Repeaters connected in a chain:



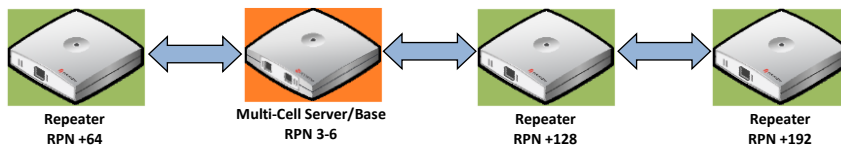
17. IP-DECT 400 SYSTEM INSTALLATION

3 REPEATER DEPLOYMENT EXAMPLES

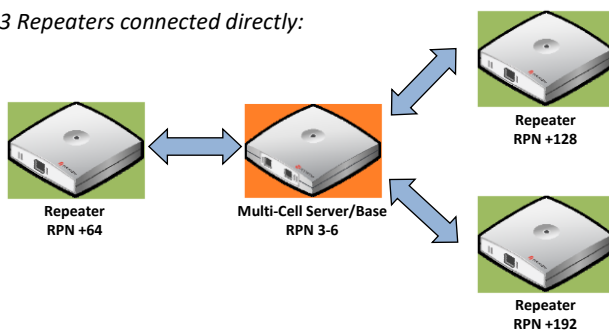
3 Repeaters connected in a chain:



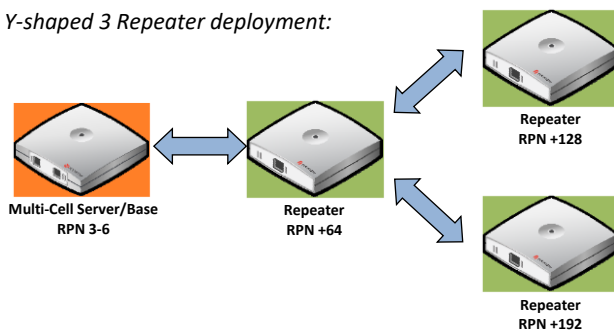
1 Repeater connected directly and 2 in a chain:



3 Repeaters connected directly:

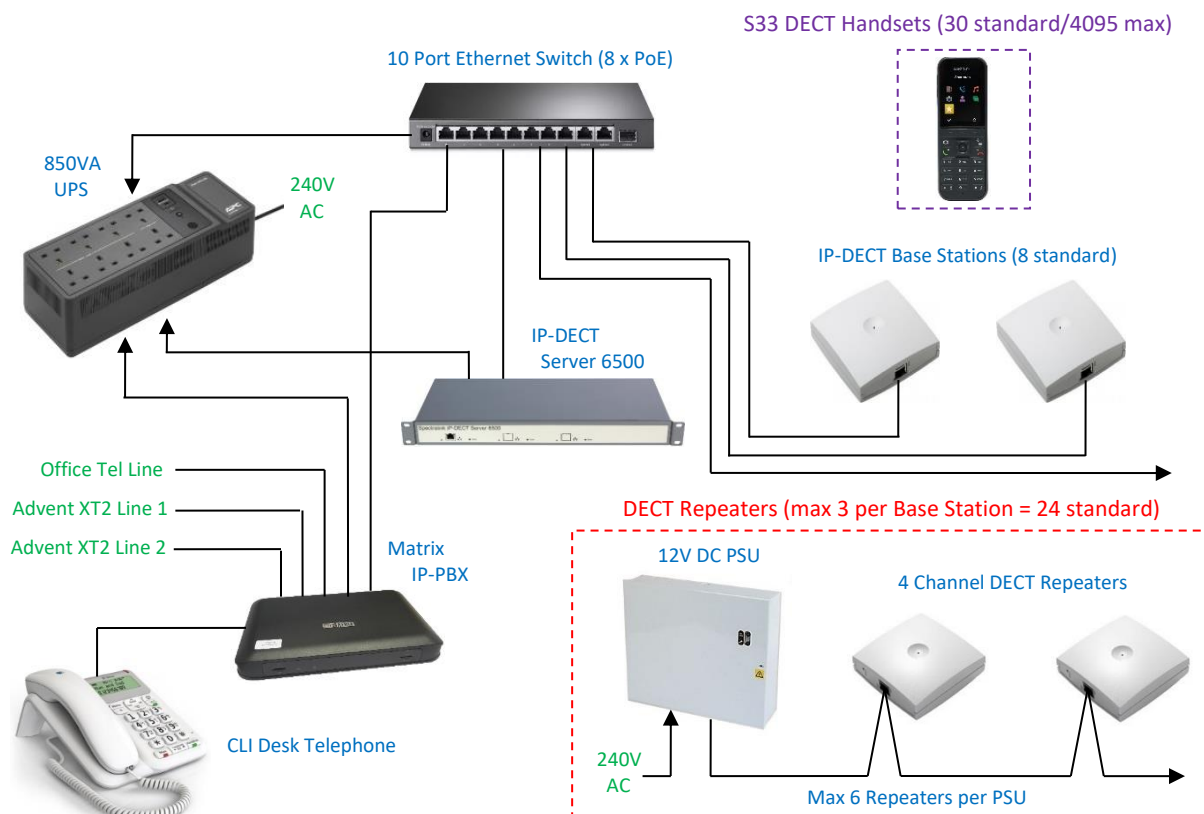


Y-shaped 3 Repeater deployment:



18. IP-DECT 6500 SYSTEM INSTALLATION

If full site coverage cannot be achieved using the IP-DECT Server 400 Multi Cell option then the IP-DECT Server 6500 must be used. The standard IP-DECT Server 6500 can expand up to 8 Base Stations, 24 Repeaters and 30 DECT handsets. Larger systems are possible by adding additional Ethernet Switch's to increase the number of PoE Ports & Base Stations/Repeaters and an additional licence to increase the number of DECT handsets.



PART NUMBERS

Part No.	Description	Notes
ZXT548	APC 850VA UPS	1 per site
ZXT558	Matrix NENX IP50 IP-PBX (50 IP Ports)	1 per site
ZXT569	TP-Link 10 Port Ethernet Switch (8 x PoE)	As required
ZXT535	Spectralink IP-DECT Server 6500	1 per site
ZXT536	Spectralink IP-DECT Base Station [‡]	max 8 per Ethernet Switch
ZXT508	Spectralink 4 Channel DECT Repeater [‡]	max 3 per IP Base Station
ZXT509	Spectralink Repeater Programming Kit (USB)	1 off purchase
ZXT527	Spectralink S33 DECT Handset inc Charger & PSU	max 30 per site (4095 with additional licences)
ZCS766	BT Décor CLI Desk Telephone	1 per site
E40062	12V DC 2A Battery Backed PSU	1 per site

[‡] Note: the IP-DECT Server 6500 allows connection of 256 radio points which can be made up of either Base Stations or Repeaters.

UPS CONNECTION

To maintain DECT operation during a mains failure the Matrix IP-PBX, Ethernet Switch and IP-DECT Server 6500 must all be powered from the battery backed output sockets on the UPS.

Note: If the Matrix IP-PBX, Ethernet Switch and IP-DECT Server 6500 are plugged directly into the mains there will be no DECT coverage during a mains failure; however, the CLI desk telephone will still operate.

18. IP-DECT 6500 SYSTEM INSTALLATION

10 PORT ETHERNET SWITCH CONNECTIONS

The 10 Port Ethernet Switch provides 8 PoE Ports for the IP-DECT Server 6500 and IP-DECT Base Stations.

53.5V 2.43A - connect to the mains supply (or a battery backed output on the optional UPS) via the in-line mains adapter provided.

PoE PORTS 1 to 8 - connect to the IP-DECT Server 6500 and IP-DECT Base Stations using RJ45 patch leads/wall sockets. These connections can be extended to a maximum of 100 metres using Cat5e cable.

UPLINK2 - connect to the Matrix NENX IP50 PBX Ethernet Port using an RJ45 patch lead.

UPLINK1 - connect to an additional Ethernet Switch Uplink Port using an RJ45 patch lead. This connection can be extended to a maximum of 100 metres using Cat5e cable. This will provide another 8 PoE Ports for up to 8 more IP-DECT Base Stations - repeat for every additional 8 Base Stations.

MATRIX CONNECTION

The Matrix IP-PBX interfaces the Advent XT2 to the DECT equipment; it also gives access to an outside line and allows zoning of calls.

24VDC - connect to the UPS via the in-line PSU module provided.

CO1 - connect to the Advent XT2 DECT 1 output using the RJ11/BT lead provided.

CO2 - connect to an external telephone line using the RJ11/BT lead provided.

CO3 - connect to the Advent XT2 DECT 2 output using the RJ11/BT lead provided.

SLT1 - connect to the CLI desk telephone via a BT master socket (cut plug off the RJ11/RJ11 lead provided).

ETHERNET - connect to the Uplink2 Port of the 10 Port Ethernet Switch using the RJ45 patch lead provided.

Note; in the event of a mains failure i.e. if the UPS batteries run flat or if a UPS is not fitted, the Matrix connects CO1 to SLT1 and the Advent XT2 will only ring the CLI desk telephone.

IP-DECT SERVER 6500 PROGRAMMING

The IP-DECT Server 6500 must have its IP address set to 192.168.0.3.

Refer to the manufacturer's installation guide for full instructions – see section 6 of this manual.

IP-DECT BASE STATION PROGRAMMING

IP-DECT Base Station IP addresses must start at 192.168.0.4 with RPN 4 and carry on sequentially.

Refer to the manufacturer's installation guide for full instructions – see section 6 of this manual.

4 CHANNEL MULTI-CELL DECT REPEATERS

A maximum of three 4 Channel DECT Repeaters can be connected per IP-DECT Base Station. Repeaters require a power connection only; they communicate with the Base Station via low power radio signals and do not require a line connection. To maintain DECT coverage during a mains failure all Repeaters must be connected to a battery backed 12V DC PSU.

REPEATER POSITIONING

Before installing power cables to Repeater positions, it is important that the optimum position for coverage is established. Register the Repeater onto the IP-DECT Base then with the Repeater powered from a battery walk away in the direction that cover is to be extended. When the red LED on the Repeater starts to flash it is out of range and must be moved back towards the IP-DECT Base by a minimum of 5 metres before selecting its final location. The LED should be steady green. See Repeater Deployment Rules on the following page.

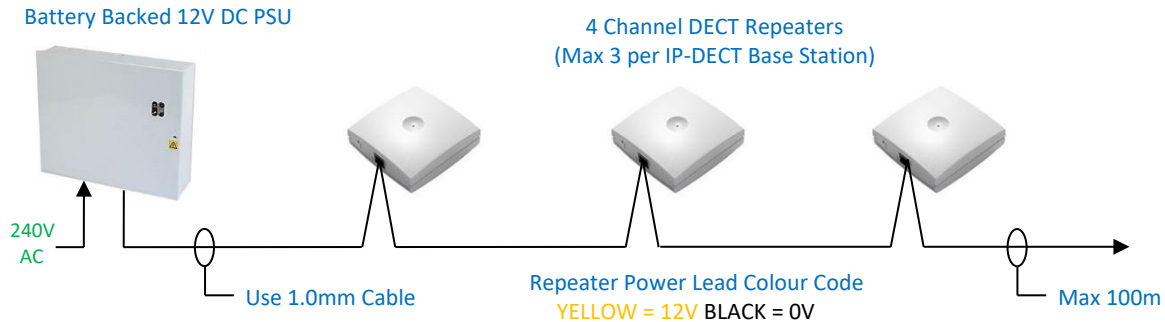
REPEATER PROGRAMMING

Refer to the manufacturer's installation guide for full instructions – see section 6. A programming kit (P/No. ZXT509) is required to program Repeaters, the Service Tool software can be downloaded via the link in section 6 of this manual.

18. IP-DECT 6500 SYSTEM INSTALLATION

REPEATER POWER CONNECTION

Repeaters should be connected using 1.0mm pair cable; if CW1308 is being used then spare pairs can be doubled-up and/or looped back to form a ring circuit to reduce the voltage drop if necessary.



REPEATER DEPLOYMENT RULES

- A maximum of 3 Repeaters can be configured on an IP-DECT Base Station; RPN = IP Address
- If you have up to 3 Repeaters on an IP-DECT Base Station they should be numbered as: Base Station No. "X" +64, +128 and +192. The first Base Station is No. 4, second No. 5 and so on...
- A maximum of 3 Repeaters can be configured in a chain
- 2 Repeaters cannot have the same number
- See deployment examples below; **RPN** = the Radio Part Number

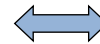
IP-DECT Base Station is shaded **PURPLE** Repeaters are shaded **GREEN** Radio handover **BLUE**



IP-DECT Base Station
RPN 4 →

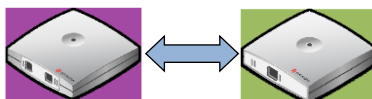


Repeater
RPN = XX



1 REPEATER DEPLOYMENT

1 Repeater connected directly:

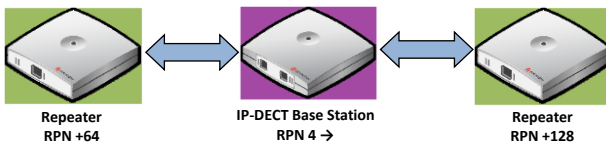


IP-DECT Base Station
RPN 4 →

Repeater
RPN +64

2 REPEATER DEPLOYMENT EXAMPLES

2 Repeaters connected directly:



Repeater
RPN +64

IP-DECT Base Station
RPN 4 →

Repeater
RPN +128

2 Repeaters connected in a chain:



IP-DECT Base Station
RPN 4 →

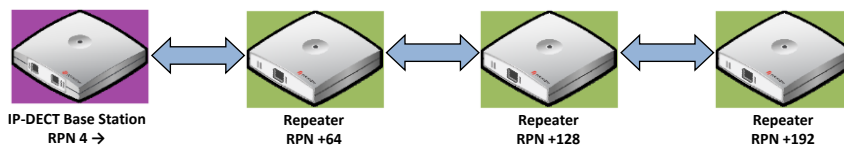
Repeater
RPN +64

Repeater
RPN +128

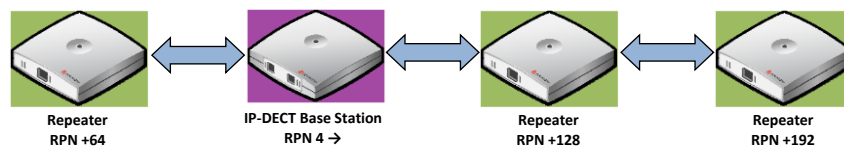
18. IP-DECT 6500 SYSTEM INSTALLATION

3 REPEATER DEPLOYMENT EXAMPLES

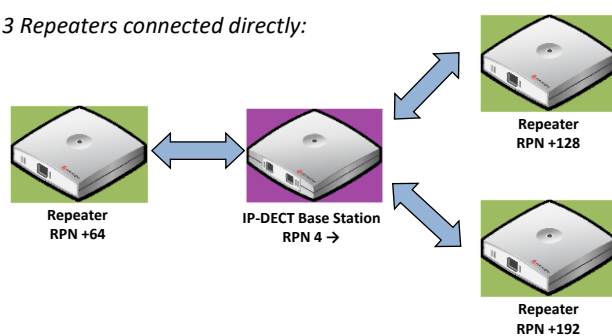
3 Repeaters connected in a chain:



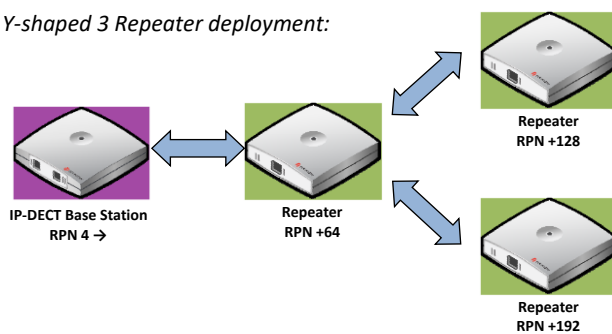
1 Repeater connected directly and 2 in a chain:



3 Repeaters connected directly:



Y-shaped 3 Repeater deployment:



19. SPECIFICATION: S33 DECT HANDSET

S33 DECT Handset	
Manufacturer/Model No.	Spectralink 7268 2000
Aidcall Bundle Part No.	ZXT527 (includes handset, desk single charger and PSU)
Compliance	
EMC	EN 301 489-1, EN 301 489-6, FCC, ICES
Radio	EN 301 406, EN 300 328, FCC, ICES
Safety	EN 62368, WEEE, RoHS
Sustainability	WEEE, RoHS
Energy Efficiency	ErP, DoE, NRCAN, GEMs
Durability	
Ingress Protection Rating	IP54 (water and dust resistant)
Drop Test (1m)	IEC 60068-2-32 (tested x12 from 1m)
Drop Test (1.5m)	Exceeds MIL-STD-810H (multiple drops from 1.5m onto steel plate)
Tumble Test	1000 x 0.5m
Health Grade Resin	Withstands daily disinfectant cleaning and UV-C lamps
Battery	
Type	Removeable and replaceable Li-ion 1200mAh
Talk Time	Up to 16 hours
Standby Time	Up to 120 hours
Charge Time	Less than 4 hours
Lifetime	2 years or 500 charging cycles
User Interface	
Display	Colour 2.4" QVGA 240 x 320 pixels
Languages	15: UK/FR/DE/ES/IT/NL/CZ/PL/DK/NO/SV/FI/PT/RU/TR
Mechanical	
Dimensions	150mm x 52mm x 18mm (HxWxD)
Weight	151 grams including battery
Environmental	
Operating Temperature Range	-10°C to 55°C
Storage Temperature Range	-40°C to 70°C

20. SPECIFICATION: S SERIES DESKTOP CHARGER & PSU

S Series Desktop Charger & PSU	
Manufacturer/Model No.	Spectralink 7268 5101
Compliance	
Safety	EN 60950, C-Tick, UL, CE, UKCA
Mechanical	
Desk Charger Enclosure	Black, desktop design, indoor use only
Desk Charger Dimensions	54mm x 85mm x 77mm (HxWxD)
Desk Charger Weight	218 grams
PSU Enclosure	Black, plug-top design, indoor use only
PSU Dimensions	58mm x 40mm x 29mm (HxWxD) exc UK AC Plug
PSU Weight	58 grams
UK AC Plug Weight	20 grams
Electrical	
Input Plug	UK BS1363
Input Voltage/Current	100-240VAC 50/60Hz 0.3A
Output Voltage/Current	5V DC 1.5A
Output Max Power	7.5 Watts
Output Connector	USB-A
Output Cable	USB-A to USB-C 1.8 metres
Environmental	
Operating Temperature Range	0°C to 40°C
Operating Humidity	5-95% RH, Non-condensing

21. SPECIFICATION: IP-DECT SERVER 400

IP-DECT Server 400	
Manufacturer/Model	Spectralink 0234 4500 + 1407 5520 Multi Cell Licence
Tynetec Part No.	ZXT504
Compliance	
Radio Approval	2012/53/EU
EMC Approval	EN 301 489-1, EN 301 489-6, FCC 15, ANSI C63.4
LVD Approval	2014/35/EU
Safety Approval	EN 62368-1
Environmental Approval	RoHS: 2011/65/EU, WEEE: 2012/19/Eu
Features	
Network Provisioning	RJ45 10/100 Mbps Ethernet Port, DHCP, NTP, LED Status indication
Protocol Support	SIP (Session Initiated Protocol)
System Architecture	12 wireless users/6 simultaneous calls
Optional Licence	30 wireless users/12 simultaneous calls
Radio	
Typical Range	20-50 metres indoor (300 metres outdoor)
Peak Transmit Power	250mW
Typical Receiver Sensitivity	-90dBm
Electrical	
Power Requirement	PoE Class 1 Device, Power over Ethernet (IEEE 803.3af), mode A&B
Typical Power Consumption	3 Watts
Power Input Port	FCC-68 RJ11 6/6 Socket for optional 8V plug-top PSU (if no PoE)
Mechanical	
Colour	Grey-White (NCS 0502-Y)
Material	ABS
Enclosure	Wall mountable, indoor use only
Dimensions	100mm x 100mm x 43mm (HxWxD)
Weight	120 grams
Environmental	
Operating Temperature Range	+10°C to +40°C
Operating Humidity	20-80% RH, Non-condensing

22. SPECIFICATION: IP-DECT SERVER 6500

IP-DECT Server 6500	
Manufacturer/Model	Spectralink 0235 0000
Tynetec Part No.	ZXT535
Compliance	
Radio Approval	2012/53/EU
EMC Approval	EN 301 489-1, EN 301 489-6, FCC 15, ANSI C63.4
LVD Approval	2014/35/EU
Safety Approval	EN 62368-1
Environmental Approval	RoHS: 2011/65/EU, WEEE: 2012/19/Eu
Features	
Network Provisioning	RJ45 10/100 Mbps Ethernet Port, DHCP, NTP
Protocol Support	SIP (Session Initiated Protocol)
System Architecture	30 users/32 simultaneous calls
Optional Licences	150/500/1500/4095 users/max 1024 simultaneous calls
Electrical	
Power Requirement	100-240V AC 50-60Hz
Typical Power Consumption	1.5A
Mechanical	
Colour	Grey
Material	18 SWG Mild Steel
Enclosure	19" Rack or wall mountable, indoor use only
Dimensions	440mm x 199mm x 44mm (HxWxD)
Weight	2354 grams
Ingress Protection Rating	IP20 (protected against dust – no protection against water)
Environmental	
Operating Temperature Range	+10°C to +40°C
Operating Humidity	20-80% RH, Non-condensing

23. SPECIFICATION: IP-DECT BASE STATION

IP-DECT Base Station	
Manufacturer/Model	Spectralink 0233 7400
Tynetec Part No.	ZXT536
Compliance	
Radio Approval	2012/53/EU
EMC Approval	EN 301 489-1, EN 301 489-6, FCC 15, ANSI C63.4
LVD Approval	2014/35/EU
Safety Approval	EN 62368-1
Environmental Approval	RoHS: 2011/65/EU, WEEE: 2012/19/Eu
Features	
Network Provisioning	RJ45 10/100 Mbps Ethernet Port, DHCP, NTP, LED Status indication
Max No. of Speech Channels	12
Radio	
Typical Range	20-50 metres indoor (300 metres outdoor)
Peak Transmit Power	250mW
Typical Receiver Sensitivity	-90dBm
Electrical	
Power Requirement	PoE Class 1 Device, Power over Ethernet (IEEE 802.3af), mode A&B
Typical Power Consumption	2 Watts
Power Input Port	FCC-68 RJ11 6/6 Socket for optional 8V plug-top PSU (if no PoE)
Mechanical	
Colour	Grey-White (NCS 0502-Y)
Material	ABS
Enclosure	Wall mountable, indoor use only
Dimensions	100mm x 100mm x 38mm (HxWxD)
Weight	120 grams
Environmental	
Operating Temperature Range	+10°C to +40°C
Operating Humidity	20-80% RH, Non-condensing

24. SPECIFICATION: 4 CHANNEL DECT REPEATER

4 Channel DECT Repeater	
Manufacturer/Model No.	Spectralink 7244 1610
Tynetec Part No.	ZXT508
Compliance	
Radio Approval	EN 301 406, FCC Rules Part 15/Subpart D RSS-213
EMC Approval	EN 301 489-1, EN 301 489-6
Safety Approval	UL 60950-1, EN 60950-1
Environmental Approval	RoHS: 2015/863/EU, WEEE: 2012/19/EU
Radio	
Typical Range	20-50 metres indoor (300 metres outdoor)
Peak Transmit Power	250mW
Typical Receiver Sensitivity	-90dBm
Max No. of Speech Channels	4
Electrical	
Power Input Port	FCC-68 RJ11 4/4 Socket
Power Requirement	9V DC, 180mA
Typical Power Consumption	1.62 Watts (Max 2Watts)
Mechanical	
Colour	Grey-White (NCS 0502-Y)
Material	ABS
Enclosure	Wall mountable, indoor use only
Dimensions	100mm x 100mm x 30mm (HxWxD)
Weight	113 grams
Environmental	
Operating Temperature Range	0°C to +55°C
Operating Humidity	20-80% RH, Non-condensing

25. SPECIFICATION: 10 PORT ETHERNET SWITCH (8 PoE)

10 Port Ethernet Switch (8 PoE)	
Manufacturer/Model No.	TP-Link TL-SG1210MP
Tynetec Part No.	ZXT569
Compliance	
Certification	CE, FCC
Ethernet	
Standards	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x, IEEE 802.3af, IEEE 802.3at, IEEE 802.1p & IEEE 802.3z
Protocol	CSMA/CD
Features	
Switch Type	Unmanaged – no configuration necessary
Data Rate	10/100/1000 Mbps
Network Interface	10 x RJ45 & 1 Gigabit Combo Port
Network Ports	10 auto-speed sensing 10/100/1000 Mbps UTP Ports, 1-8 with PoE
Status LED's	Power and Ethernet Link/Activity indicators
Electrical	
Power Adapter Model	T535243-2-DT
Power Requirement	Input: 100-240V AC 50/60Hz, Output: 53.5V DC 2.43A
Typical Power Consumption	130 Watts max
Mechanical	
Colour	Black
Enclosure	Desktop or wall mounting, indoor use only
Dimensions	209mm x 126mm x 26mm (WxDxH)
Weight	620 grams (excluding Power Adapter)
Environmental	
Operating Temperature Range	0°C to +40°C
Operating Humidity	10-90% RH, Non-condensing

26. SPECIFICATION: REPEATER BATTERY BACKED PSU

Power Supply	
Manufacturer/Model	Elmdene G13802N-A
Tynetec Part No.	W00525
Compliance	
EMC Approval	2014/30/EU
LVD Approval	2014/35/EU
Environmental Approval	RoHS2: 2011/65/EC, WEEE: 2012/19/EU
Electrical	
Input Voltage	100V to 240V AC 50/60Hz
Output Voltage/Current	13.8V DC @ 2A
Output Ripple	150mV peak to peak
Mains Fuse Protection	T2.0A 20mm HRC
Load Fuse Protection	F2.0A 20mm Glass
Features	
PSU Type	Switch Mode with Electronic Overload Protection
LED Indicators	Green = Mains Present and Red = Fault (Output/Battery Fuse Fail)
Battery Protection	Re-settable PTC
Mechanical	
Colour	White
Material	Powder coated 18 SWG steel
Enclosure	Wall mounting with hinged lid
Dimensions	200mm x 230mm x 80mm (HxWxD)
Weight	1.85 kilograms (excluding battery)
Ingress Protection Rating	IP41 (indoor sheltered)
Environmental	
Operating Temperature Range	-10°C to +40°C
Operating Humidity	75% RH, Non-condensing

Standby Battery	
Manufacturer/Model	Yuasa NP3.4-12
Tynetec Part No.	F00040
Type	12V 3.4Ah Rechargeable Lead Acid
Dimensions	133mm x 66mm x 60mm (LxWxH)
Weight	1000 grams
Operating Temperature Range	-15°C to 50°C

27. SPECIFICATION: UNINTERRUPTIBLE POWER SUPPLY

UPS	
Manufacturer/Model No.	APC BE850G2-UK
Aidcall Part No.	ZXT548
EMC Approvals	EN 62040-2:2006+AC:2006 (IEC 62040-2:2005) Category C1
Safety Approvals	UL 1778
Input	
Nominal Input Voltage	230V AC
Input Frequency Range	47-63Hz
Max Input Current	6.0A
Efficiency at Full load	80%
Input Connection	1.8 metres long with BS 1363A moulded non-rewireable 13A UK Plug
Fuse Type/Rating	BS 1362 1" 240V AC 10A
Output	
Output Capacity (6 Outlets)	850VA 520 Watts (1 hour 30 minutes @ 40W typical)
Output Voltage (on utility)	230V AC 47-63Hz
Output Voltage (on battery)	230V AC +/- 8% 50Hz +/- 1Hz
Output Connections	8 x BS 1363 Sockets (6 with battery back-up plus surge protection and 2 with surge protection only)
Standby Battery	
Battery Type	Maintenance-free, sealed lead acid battery, leak proof
Battery Life	2-5 Years (depending on number of discharge cycles and temperature)
Battery Recharge Time	16 Hours (typical)
Replacement Battery Kit	APC RBC17
Features	
Status LED's	Power, on battery, replace battery and overload
Audible Alarm	Beep when on battery, rapid beep for low battery, constant for overload
Mute Button	Yes (to silence audible alarms)
USB Ports	2.4A (1 x Type A and 1 x Type C)
Mechanical	
Enclosure	Black, free standing or wall mount, indoor use only
Ingress Protection Rating	IP20
Dimensions	120mm x 130mm x 365mm (HxWxD)
Weight	4.5kg
Environment	
Operating Temperature Range	0°C to 40°C
Operating Humidity	0-90% RH, Non-condensing

28. SPECIFICATION: MATRIX NENX IP50 PBX

Matrix NENX IP50 PBX	
Manufacturer/Model No.	Matrix NENX IP50
Tynetec Part No.	ZXT558
Resources	
4 CO (TWT) Analogue Trunks	To connect up to 4 Two Wire Trunk lines
50 SIP Extensions	To connect up to 50 IP-DECT Handsets
2 SLT Analogue Ports	To connect Single Line Telephone (SLT1)
1 Ethernet Port	To connect VoIP users & trunks, programming & CDR reports
16 Voice Messages	For auto-attendant & other voice based applications (14 seconds each)
Configuration	Local and remote programming via web based GUI
Mechanical	
Colour	Black
Material	ABS
Enclosure	Desk or wall mounting
Dimensions	320mm x 51mm x 200mm (WxHxD)
Weight	1.16kg
Ingress Protection Rating	IP30
Environmental	
Operating Temperature Range	-10°C to +50°C
Operating Humidity	5-95% RH, Non-condensing

Power Supply	
Manufacturer Model No.	ADS-65HI-19A-1
Input Voltage/Current	100-240V AC 50/60 Hz 1.5A
Output Voltage/Current	24V DC 2.5A
Power Consumption	15 Watts (Max)
Enclosure	In-line design with 2.0 metre mains lead & 1.2 metre low voltage lead

29. AMENDMENTS RECORD

The table below lists significant changes to this manual;

Issue	Amendments	Date
1	Preliminary issue	16/08/18
2	First release	27/09/18
3	Matrix IP-PBX changed, 6500 handsets changed to 30 as standard	31/07/19
4	Advent XT programming and Matrix NENX Config info added	20/09/19
5	IP-DECT 400 Single Cell replaced by IP-DECT 200 Single Cell Spectralink Repeater and battery backed PSU part numbers changed APC 7000VA UPS replaced by APC 850VA UPS New TP-Link PoE injector for IP-DECT Server 200 New TP-Link PoE Ethernet switch for IP-DECT 400/6500 system	10/08/22
6	Spectralink 7202/7212 handsets replaced by S33 Handset multi-charger option removed IP-DECT 200 Single Cell option removed	15/01/25