

Allworx[®] Connect[™] Server Family

Installation Guide

Version F Updated June 21, 2018



Allworx[®] Connect[™] Server Family



Installation Guide



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Documentation

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Environmental Conditions

Allworx servers and phones:

Operating:	
Temperature	+5° to 40° C / +41° to +104° F
Relative Humidity	5 to 90% (non-condensing)
Storage:	
Low Temperature Point	-40° C / +40° and any convenient humidity
High Temperature Point	+66° C / +150° 15% RH
High Relative Humidity Point	+32° C / +90° 90% RH

Trademarks

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Allworx® 92xx™ IP phone series
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Allworx® Verge™ 9308
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Allworx® Verge™ 9318Ex

Allworx® Reach™
Allworx® Reach Link™
Allworx® Extend™

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Allworx® View™
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Allworx® OfficeSafe™
Allworx® Migrate™

Allworx® Connect™ servers
Allworx® Connect™ 731 server
Allworx® Connect™ 536/530 server
Allworx® Connect™ 536 server
Allworx® Connect™ 530 server
Allworx® Connect™ 324/320 server
Allworx® Connect™ 324 server
Allworx® Connect™ 320 server

Revision History

Revision	Date	Description
A	03-JAN-2015	New Release
B	01-SEP-2015	Clarified mounting instructions
C	02-MAR-2017	Added Replaceable Battery Caution and translations
D	06-JUL-2017	Updated the Setup > Configure the Connect Server section. Added Appendix A Restore Factory Defaults
E	17-MAY-2018	Added Accessories > Line In/Out specifications.
F	21-JUN-2018	Updated Introduction > Important Safety Instructions

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Chapter 1 Introduction

The Allworx® Connect™ Server Family Installation Guide instructs Allworx administrators on the setup and installation of the Connect server:

- unpacking the Connect server and accessories.
- mounting the Connect server:
 - on a tabletop or shelf.
 - in a rack.
 - on a wall.
- performing electrical connections.
- configuring the Connect server.
- connecting the network ports.
- installing telephones.
- installing T1 (Connect server model 731 only).
- connecting accessories.

1.1 Who Should Read this Guide

This guide is for Allworx administrators that:

- install and maintain Allworx servers.
- understand computer networking and basic telephony.
- completed the Allworx Partner technical training.

1.2 Guide Purpose

The purpose this guide is to advise Allworx administrators on the set up, configuration, and installation of a Connect server.

1.3 Guide Organization

This guide describes:

- requirements necessary to perform the operations described within the document.
- steps necessary to setup and install the Connect server.

1.4 Equipment Requirements

The table below is a complete list of equipment and requirements necessary to perform all operations identified in this Installation Guide.

Equipment	Requirements
PC	<ul style="list-style-type: none"> Running OS (with latest service pack) <ul style="list-style-type: none"> Windows 7 32-bit SP1 Windows 7 64-bit SP1 Windows 8 32-bit Windows 8 64-bit Windows 8.1 32-bit Windows 8.1 64-bit Windows 10 32-bit Windows 10 64-bit RAM minimum: 2 GB Monitor resolution: 1024 x 768 (XGA) Internet connection
Allworx server	<ul style="list-style-type: none"> Server Software 8.0 Administration permissions and passwords for each Allworx server. IP Address or DNS name of each Allworx server.
Allworx Portal	<ul style="list-style-type: none"> Login permissions and password
Supported Web Browsers	<ul style="list-style-type: none"> Microsoft Internet Explorer 11 (latest release with auto upgrade enabled) Microsoft Edge Google Chrome (Latest Release) Mozilla Firefox (Latest Release)
Allworx Server Administrator's Guide	The guide that describes the features and functionality of the Allworx System Software. This guide is available at: https://allworxportal.com/ .

1.5 Allworx System Software Compatibility

	Connect Server Model				
	320	324	530	536	731
Allworx System Software					
System Software 8.0	X	X	X	X	X
Hardware Support					
Enhanced Diagnostic Port	X	X	X	X	X
Network Ports	2	2	3	3	3
Supported Web Browser					
Microsoft Internet Explorer 11	X	X	X	X	X
Google Chrome (latest version)	X	X	X	X	X
Microsoft Edge	X	X	X	X	X
Mozilla Firefox (latest version)	X	X	X	X	X
Allworx System Software 8.0 Support					
Activation Required	X	X	X	X	X
Reach Link*	X	X	X	X	X
Secure Web Page Access	X	X	X	X	X
Enhanced Codec Support	X	X	X	X	X
SIP-Video Pass-Through ***	X	X	X	X	X
Allworx Server Features					
FXO Ports	0	4	0	6	2
FXS Ports	2	2	2	2	2
T1 Ports**	0	0	0	0	1
Base Users	12	12	30	30	30
Maximum Users*	20	20	50	50	180
Maximum Handsets	40	40	100	100	360
Maximum External Calls	12	12	30	30	60
Conference Bridges*	1	1	1	1	4
Maximum Total Bridge Users	8	8	8	8	30
Maximum Calls in All Queues*	12	12	30	30	60
Maximum Calls per Queue*	12	12	30	30	60
Maximum Number of Queues*	10	10	10	10	10
Automatic Call Distribution*	No	No	Yes	Yes	Yes
Auto Attendant Ports	4	4	8	8	16
Multi-Site Controller*	Yes	Yes	Yes	Yes	Yes

	Connect Server Model				
	320	324	530	536	731
Voicemail Ports	4	4	8	8	15

* Requires an Allworx software feature key.

** Feature key not required on the Allworx 24x server.

*** A SIP endpoint that supports video can register with the Allworx server, and it supports negotiation of video calls with that device. The Allworx server enables up to two video sessions and one audio session per call. The Allworx server supported codecs are: H263, H264, and MP4V-ES.

1.6 Important Safety Instructions

When using your telephone equipment, basic safety instructions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Do not use this product near water for example: near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire they may explode. Check with local codes for possible special disposal instructions.

SAVE THESE INSTRUCTIONS.

Chapter 2 Overview

This section describes the Connect server:

- packing contents,
- front and rear chassis views, and
- physical and environmental specifications.

2.1 Packing List

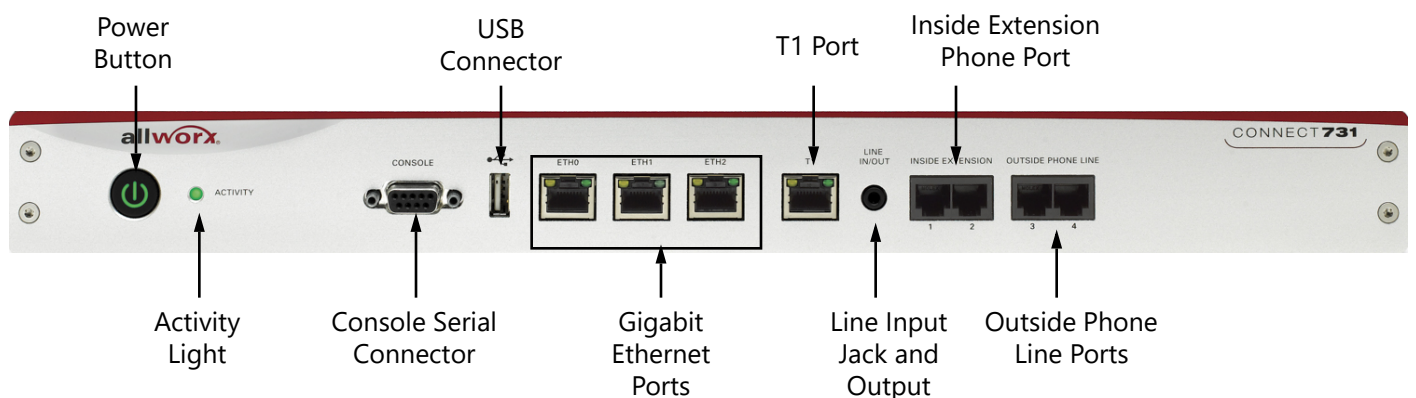
Open the box and carefully unpack it. Save all shipping and packaging materials. Verify all items against the parts list shown in the table below. If any items are missing, contact the dealer or Allworx Customer Support at 866-255-9679.

Parts List	Connect Server Family		
	300 Series	500 Series	731 Series
Allworx Connect Server	X	X	X
Power Cord			X
12 VDC Power Supply	X	X	
4 Rubber Feet (for Table Mount)	X	X	X
Rack and Wall Mount Hardware Kit	X	X	X
Allworx Connect Server Quick Start Guide	X	X	X

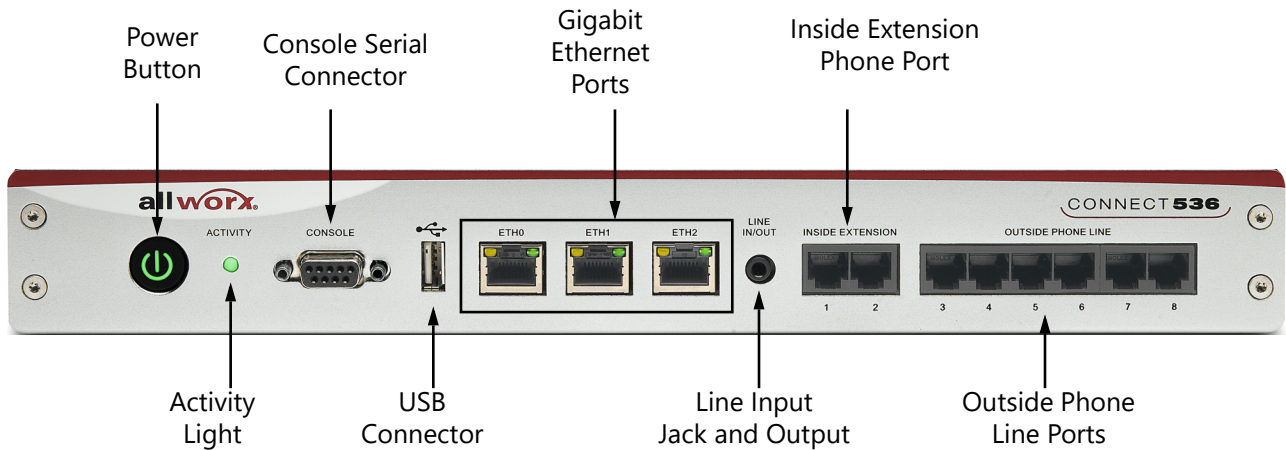
2.2 Front Chassis Views

The following views indicate the features available on the front of each Connect server.

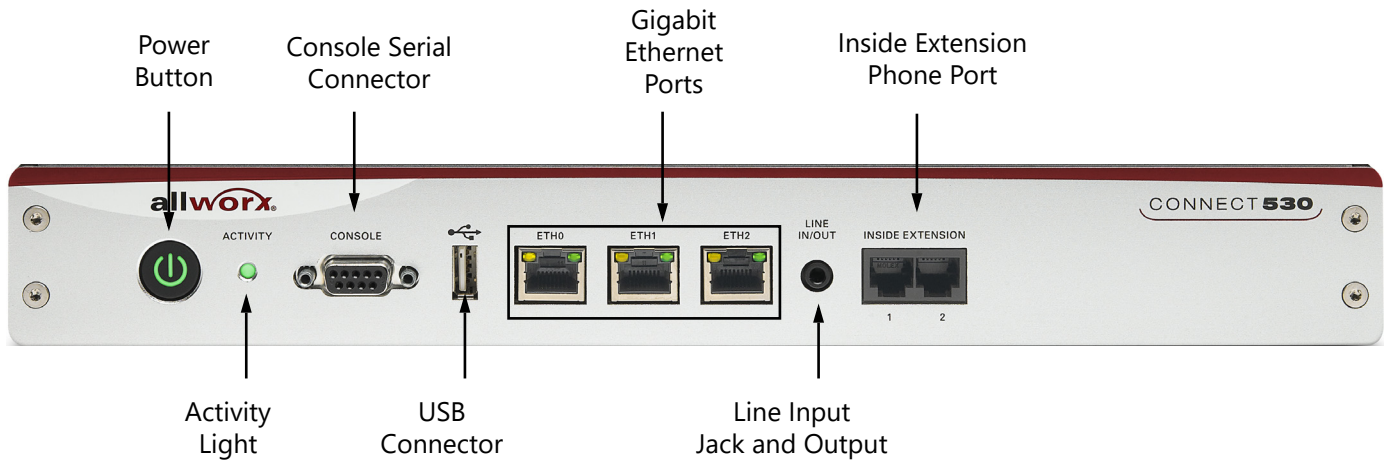
2.2.1 Connect 731 Server



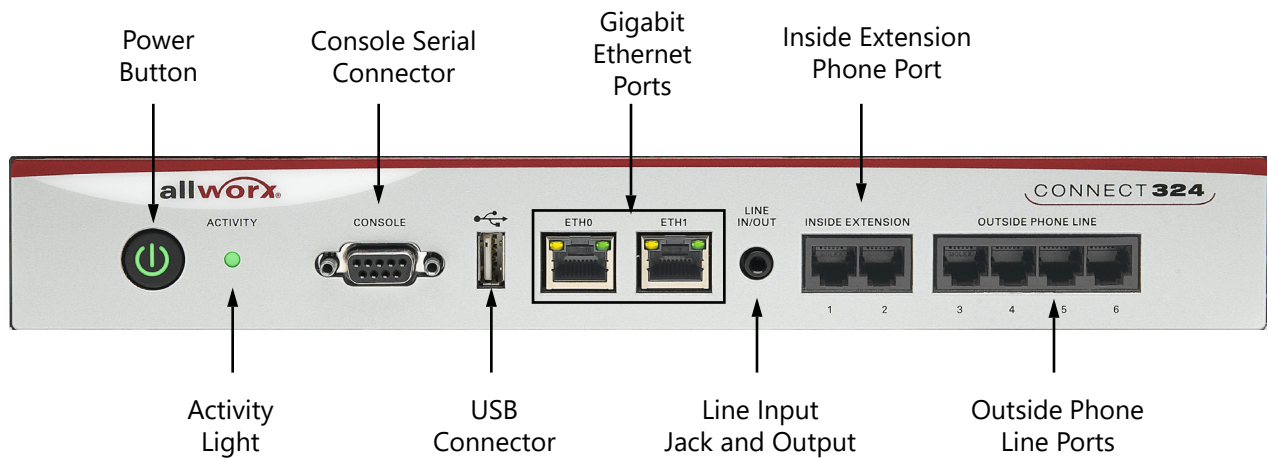
2.2.2 Connect 536 Server



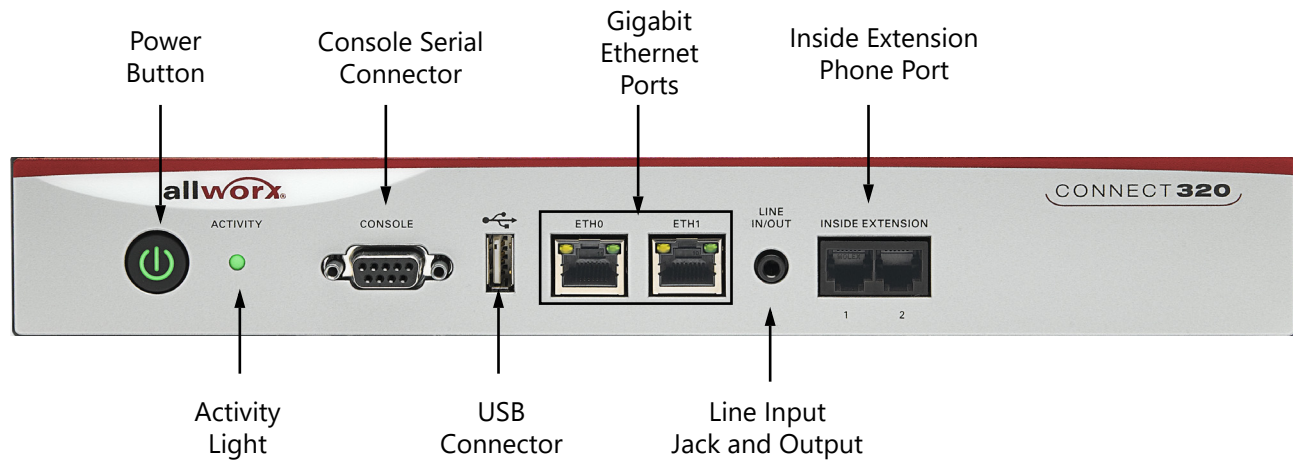
2.2.3 Connect 530 Server



2.2.4 Connect 324 Server



2.2.5 Connect 320 Server

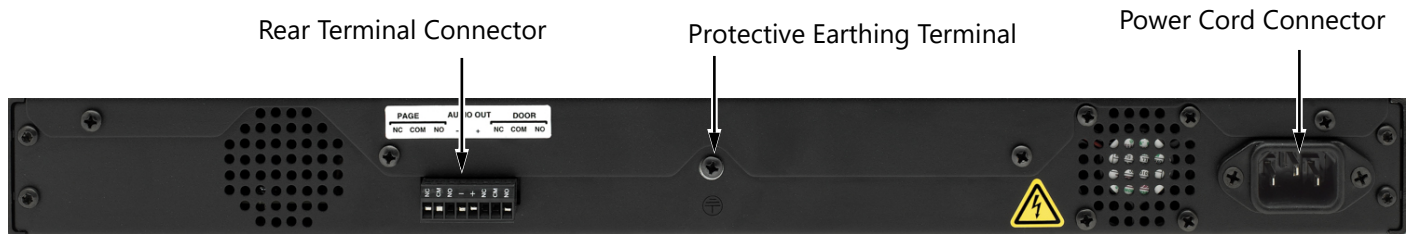


2.3 Rear Chassis Views

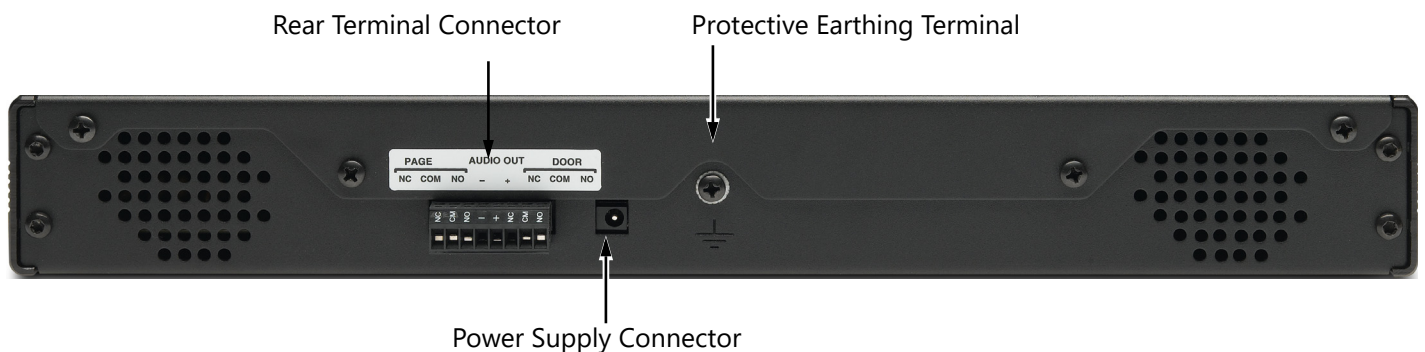
The following views indicate the features available on the rear of each Connect server. The Page and Door contacts are:

NO	Normally Open
COM	Common
NC	Normally Closed

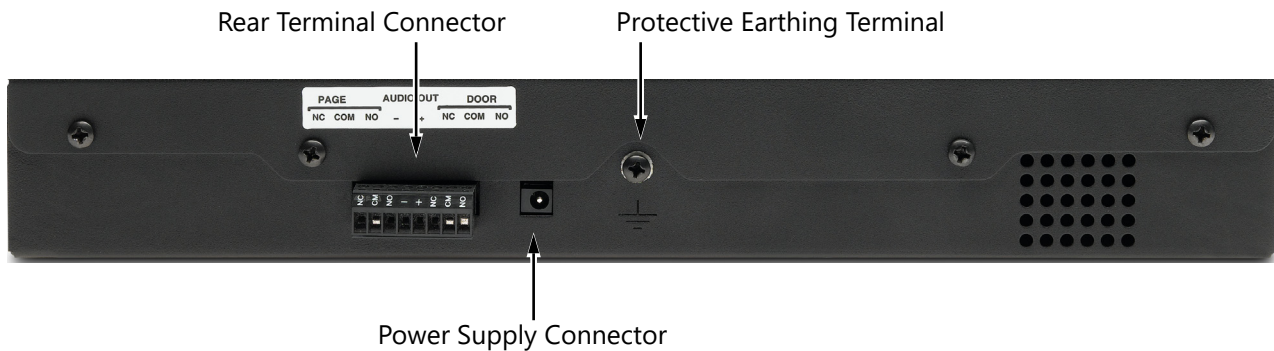
2.3.1 Connect 731 Server



2.3.2 Connect 500 Series Server



2.3.3 Connect 300 Series Server



2.4 Physical and Environmental Specifications

The following table provides the physical and environmental specifications for each Connect server.

Connect Server Family

Specifications	300 Series	500 Series	731
Dimensions (W x H x D)	11.875 x 1.75 x 5 inches (32.2 x 4.4 x 12.7 cm)	13.32 x 1.75 x 5 inches (33.8 x 4.4 x 12.7 cm)	17.125 x 1.75 x 5 inches (43.5 x 4.4 x 12.7 cm)
Weight (base model)	2.5 lbs (1.1 kg)	3.1 lbs (1.4 kg)	4.3 lbs (2 kg)
Power	12 VDC 1.5A from external supply 100-240 VAC 50/60 Hz 500 mA	12 VDC 1.5A from external supply 100-240 VAC 50/60 Hz 500 mA	115/230 VAC 0.6/0.4A, 60/50Hz
Temperature	41° ~ 104° F (5° ~ 40° C)	41° ~ 104° F (5° ~ 40° C)	41° ~ 104° F (5° ~ 40° C)
Humidity	15% ~ 90% RH Non-condensing	15% ~ 90% RH Non-condensing	15% ~ 90% RH Non-condensing

Chapter 3 Mount the Connect Server

Allworx administrators can mount the Connect server on a tabletop, in a rack, or on a wall.

When selecting a mounting site, consider the following requirements:

Elevated Operating Ambient	Verify maximum ambient temperature does not exceed 40°C. Rack operating ambient temperature may exceed room ambient temperature.
Reduced Air Flow	Proper air flow required for safe operation of the equipment.
Mechanical Loading	Avoid hazardous conditions due to uneven mechanical loading.
Circuit Overloading	Properly rated supply circuit (see equipment nameplate for ratings). Overloading the circuits may have an effect on over current protection and supply wiring.
Reliable Earthing	Maintain reliable earthing of rack-mounted equipment, especially supply connections other than direct connections to the branch circuit (e.g. power strips).
Température ambiante de fonctionnement élevée	Vérifiez que la température ambiante maximale ne dépasse pas 40 °C. La température ambiante de fonctionnement de la baie peut être supérieure à la température ambiante de la pièce.
Circulation d'air réduite	Vérifiez la circulation d'air nécessaire au bon fonctionnement de l'équipement.
Chargement mécanique	Évitez toute situation susceptible d'être dangereuse pouvant être créée par un chargement mécanique déséquilibré.
Surcharge du circuit	Utilisez un circuit d'alimentation nominale approprié (consultez la plaque signalétique de l'équipement au sujet des valeurs nominales). La surcharge des circuits peut avoir un effet sur la protection contre les surintensités et sur les câbles d'alimentation.
Mise à la terre fiable	Gardez une mise à la terre fiable des appareils installés dans une baie, notamment des connexions d'alimentation autres que les connexions directes au circuit de dérivation (par exemple, les barres d'alimentation).
Temperatura elevada del ambiente operativo	Verifique que la temperatura ambiente no exceda los 40 °C. La temperatura ambiente operativa del bastidor puede ser mayor que la temperatura ambiente de la habitación.
Flujo de aire reducido	Verifique que exista el flujo de aire adecuado que se requiere para la operación segura del equipo.
Carga mecánica	Evite las condiciones de riesgo debido a cargas mecánicas irregulares.
Sobrecarga de circuitos	Utilice un circuito de abastecimiento del valor nominal apropiado (consulte los valores nominales en la placa del equipo). El sobrecargar los circuitos puede tener un efecto en la protección contra sobrecargas y en el cableado de suministro.
Sistema de puesta a tierra confiable	Mantenga un sistema confiable de puesta a tierra para el equipo montado en el bastidor, especialmente para las conexiones de suministro distintas de las conexiones directas al circuito (p. ej., barras de contactos).

3.1 Tabletop or Shelf

The table below indicates a list of all equipment necessary place the Connect server on a tabletop or shelf.

Equipment	Qty
Rubber feet	4

To install the Connect server on a tabletop or shelf:

1. Remove the four rubber feet from the packaging and turn the chassis over.
2. Remove the paper backing from one rubber foot and place it at a corner on the bottom of the chassis.
3. Repeat for the remaining three rubber feet in the remaining three corners of the chassis.

3.2 Rack Mount

The table below indicates a list of all equipment and requirements necessary to rack mount the Connect server.

Equipment	Qty	Requirements
Rack	1	1U high rack mount standard 19" rack
Rack Mount Kit	1	Includes: <ul style="list-style-type: none"> • Two rack ears • Eight 6-32 flat head screws

To mount the Connect server:

1. Verify the clearance around the Connect server front and rear panels for the power, network, and telephony connections.
2. Align a rack ear on the side of the Connect server so that:
 - the four holes of the rack ear align with the four holes on the side of the Connect server.
 - the perpendicular side of the rack ear faces outward from the front of the Connect server to mount into the rack.
3. Secure to the Connect server chassis using four 6-32 flat head screws. Repeat for the opposite side of the Connect server.
4. Follow the ["Power Connection" on page 14](#) instructions.
5. Install the Connect server into the rack using appropriate hardware.

3.3 Wall Mount

Caution:	Securely mount the Connect server to the wall to avoid equipment damage or personal injury.
MISE EN GARDE :	Installez solidement le serveur Connect au mur, de façon à éviter dommages matériels et blessures.
PRECAUCIÓN:	Monte el servidor Connect de manera segura en la pared para evitar daños al equipo o lesiones personales.

Note:	For Connect 731 Wall Mount only: Discard the power cord and only use a UL listed power cord of type SJ or SO or better.
Note:	Mount the Connect server with the front facing left or right, not up or down

The table below indicates a list of all equipment and requirements necessary to wall mount the Connect server.

Equipment	Qty	Requirements
Rack	1	1U high rack mount standard 19" rack
Rack Mount Kit	1	Includes: <ul style="list-style-type: none"> • Two rack ears • Eight 6-32 flat head screws

Verify the correct orientation prior to mounting the Connect server to the wall.



Required wall mount orientation



To mount the Connect server to a wall:

1. Verify the clearance around the Connect server front and rear panels to accommodate the power, network, and telephony connections.

2. Align a rack ear on the side of the Connect server so that:
 - the four holes of the rack ear align with the four holes on the side of the Connect server.
 - the perpendicular side of the rack ear aligns with the bottom of the Connect server.
3. Align the four holes on the rack ear with the four holes on the side of the Connect server and secure to the Connect server chassis using the 6-32 flat head screws.
4. Repeat for the opposite side of the Connect server.
5. Use the upper and lower end of the Connect server mounting rack ears to mark the anchor positions on the wall. Install self-drilling drywall anchors rated for at least 20 lbs with #6 or #8 screws per the anchor manufacturer's recommendation.
6. Install the mounting screws through the rack ear holes and into the anchors. Tighten the screws to secure the Connect server firmly against the wall.

Chapter 4 Setup

The Setup chapter explains:

- performing electrical power connections,
- configuring the Allworx server,
- connecting the Allworx server network ports,
- performing analog telephony installation, and
- performing T1 installation (Connect 731 server only).

4.1 Install Checklist

Follow the order of the steps for a successful installation. Use the links in the table below to access more detailed information about the step..

Step	Description	Installation Guide Link
Power Connections		
1	Ground the Connect server chassis.	"Chassis Ground" on page 14
2	Provide power to the Connect server.	"Power Connection" on page 14
Configure the Connect server		
3	Plug a PC into the Connect server and set up the PC network interface to obtain an IP address automatically (using DHCP).	
4	Verify the PC default IP address.	
5	Open a browser window and enter the URL.	"Configure the Connect Server " on page 15
6	Log in to the web server admin page using the default username and password: admin.	
7	Upgrade the server to the latest available Allworx Server Software version.	
8	Configure the Connect server: <ul style="list-style-type: none"> • Set the time. • Register and activate. • Update the remaining settings. 	"Configure the Connect Server " on page 15 See the Allworx Server Administrator's Guide.
Connect the Connect server		
9	Connect the network ports.	"Connect the Network Ports" on page 19
10	Install the analog telephony ports.	"Install Analog Telephony Ports" on page 20
11	Install the T1 line (applies to the Connect 731 server only).	"Install the T1 Line" on page 20

4.2 Electrical Connections

Caution:	Failure to follow these steps may result in equipment damage, personal injury, and void the product warranty.
Caution:	No user serviceable parts inside. Refer servicing to qualified personnel.
Caution:	Replaceable Batteries: CAUTION: Risk of Explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
MISE EN GARDE :	Le non-respect de ces étapes peut entraîner des dommages matériels et des blessures, et annuler la garantie du produit.
MISE EN GARDE :	L'appareil ne contient pas de pièce pouvant être réparée par l'utilisateur. Confiez l'entretien à du personnel qualifié.
MISE EN GARDE :	Piles remplaçables : MISE EN GARDE : Risque d'explosion si la pile remplacée n'est pas du bon type. Éliminer les piles usées selon les instructions.
PRECAUCIÓN:	No hay partes internas a las que les pueda dar servicio el usuario. Solicite el servicio al personal calificado.
PRECAUCIÓN:	El no seguir estos pasos puede ocasionar daños en el equipo, lesiones personales y la cancelación de la garantía del producto.
PRECAUCIÓN:	Baterías reemplazables: PRECAUCIÓN: Riesgo de explosión si se reemplazan con un tipo incorrecto. Desechar baterías usadas según instrucciones.

Follow the steps below in order to provide electrical power to the Connect server.

4.2.1 Chassis Ground

To prevent electrical shock, permanently connect the separate protective earthing terminal, located in the center of the rear panel, to earth using 18 AWG wire or larger.

4.2.2 Power Connection

To provide electrical power to the Connect server, insert the female end of the power source into the receptacle at the rear of the unit and connect the opposite end to the electrical outlet.

After providing electrical power to the Connect server, it automatically:

- begins the power up sequence after a few seconds and the front panel lights respond.
- boots up after a power failure.

Front Panel Light	Power Up Sequence Description
Power	Flashes green during the power up sequence. Steady green when the Connect server is ready.
Activity	Solid green when internal drive mounted; blinking light indicates activity.

4.2.3 Safe Mode Sequence

To boot the Connect server in Safe Mode:

1. Power off the Connect server.
2. Press and hold the power button for at least one second, and then release it before four seconds has elapsed. The button flashes amber during the Safe Mode boot sequence.

Front Panel Light	Power Up Sequence Description
Power	Flashing Amber - power sequence in progress. Amber - safe mode boot initialized.
Activity	Off

4.3 Configure the Connect Server

Prior to deploying the Connect server, it is best practice to set the time on the server and upgrade the server to the latest Allworx System Software version. Upgrading the Connect server to the latest Allworx System Software version ensures that all checklist items and Allworx system features are available for immediate use.

New Connect servers come with a temporary Software Upgrade feature key that is valid for one year from date of activation to perform these upgrades. After one year, Connect servers require the Software Upgrade Feature Key available for purchase from the Allworx Distributor.

To configure a Connect server:

1. Plug a PC into the server ETH0 port and set up the PC network interface to obtain an IP address automatically (using DHCP).
2. Verify the PC network port configuration is DHCP (default PC configuration).
3. Verify the PC has an IP address in the range of 192.168.2.X It may be necessary to release and renew the PC IP address to get an address from the server.
4. Open a browser window and enter the URL of <https://192.168.2.254:8443>. The Welcome to Allworx page displays.
5. Log in to the web admin page using the default username and password: admin. The Home page displays. **Recommendation:** change the default admin password after logging in.
6. Set the time on the Allworx server OR configure the Allworx server to use a time server and connect it to the Internet.
 - a. Log in to the Allworx server admin page and navigate to **Maintenance > Time**.
 - b. Click **modify** in the action column.

- c. Do one of the following:
 - Manually update the settings, and then click **Set Time** to save the current changes.
 - Click **Get Time** to update the clock to the current time using an SNTP server.

7. Upgrade the Connect server software using one of the following procedures (see the Allworx System Software Administrator Guide for more information):
 - **Software Upgrade: New Installation**
 - for new, out-of-the-box Connect servers, which have never been part of an Allworx system configuration setup.
 - for previously-deployed Connect servers being re-deployed in a new Allworx system configuration setup.
 - **The steps in this procedure clear all data and settings stored (if any) on the Connect server.**
 - Use ["Software Upgrade: New Installation" on page 17.](#)
 - **Software Upgrade: Standard Upgrade**
 - for Connect servers currently deployed and being re-deployed with the same Allworx System setup.
 - to access new Allworx system features available in each Allworx System Software release.
 - **The steps in this procedure maintain all data and settings stored on the Connect server.**
 - Use: ["Software Upgrade: Standard Upgrade" on page 18.](#)

8. Verify the time on the Allworx server.

9. Register and activate the Connect server.

Caution:

Do not attempt to place emergency (911) calls prior to activating the Allworx server. Failure to activate results in incomplete 911 emergency calls.

10. Locate and click the **Install Checklist** link on the web admin page to open a new window containing the steps necessary to set up a new Allworx system. A link to the appropriate administrative web page to execute the step follows each description. Follow the order of the steps for a successful configuration. Most of the web pages used to execute each step contain detailed feature descriptions and help instructions required to complete the step. Use the *Allworx System Software Administrator Guide* as a supplement for the information on the web pages, as necessary.

Note:

Install Checklist item numbers 1 (time) and 11 (upgrade) are complete.

Software Upgrade: New Installation

Note:

If using an Allworx Connect server from another installation, the steps below clear **all** data and settings currently stored on the server.

1. Download the latest version of the Allworx System Software to a PC from the Allworx Partner Portal.
2. (if the web admin login page is not already available) Open a browser window and enter the URL of <https://192.168.2.254:8443>. The Welcome to Allworx page displays.
3. Log in to the Allworx server admin page and navigate to **Maintenance > Restart**.
4. Check the box for **Restart Allworx Server** and select **Enter Safe Mode after restart**.

Note:

In the Restart menu, there is an option to **Restore to Factory Defaults**. This option is only for Allworx Connect servers currently in use that require resetting the Connect server configuration settings. This option maintains all user data (i.e., Users). See Appendix A ["Restore Factory Defaults" on page 31](#) to learn which settings are restored to the factory defaults.

To restore the Connect server to the factory defaults, see the Allworx System Software Administrator Guide.

5. Click **Restart Now**. A warning banner displays.
6. Click **Continue**. The server reboots in Safe Mode. The Power button is yellow.
7. Enter the URL: 192.168.2.254:8080 in the browser and hit enter.
8. Locate the **Disk Operations** section and click the **Format** button, and then click **OK** at the confirmation pop-up window.
9. Locate the **Software Update** section, and then locate step **3. Load an upgrade file**.
10. Click the **Browse...** button. Use the browser window to locate the latest version of the Allworx System Software (downloaded in step 1), and then click **Open > Load**.
11. Locate step **4. Activate the Update**, and then click **Update**, when available.
12. Locate the **Reboot Operations** section and select **Reboot in Normal Mode**.
13. Click **Reboot**. The Allworx server reboots and the web admin login page displays.
14. Log in to the Allworx System web admin page, and then continue the ["Configure the Connect Server" on page 15](#).

Software Upgrade: Standard Upgrade

Note:	If using an Allworx Connect server from another installation, this procedure maintains the data and settings currently stored on the server.
--------------	---

1. Perform an OfficeSafe backup of the Connect server.
2. Log in to the Allworx server admin page and navigate to **Maintenance > Update**.
3. Select an option:

Note:	Always upgrade the Allworx System Software versions sequentially. If more than one upgrade file is available, select the next major upgrade file (example: Connect server is currently at 8.0. Select the 8.1 upgrade file).
--------------	--

- a. Option 1: Download update from web.
 - Click **Download Update**. If necessary, select the appropriate upgrade file.
 - Click **Activate Update Now > Start Update**. The server reboots.
 - Repeat from step 2 for remaining software versions until the latest Allworx System Software installation is complete on the Connect server.
- b. Option 2: Upload update from PC.
 - Download the Allworx System Software major versions (i.e., 8.1, 8.2, etc.), as needed, from the Allworx Partner Portal onto the PC.
 - Click **Choose file > Browse**. Use the browser window to locate the Allworx System Software version.
 - Click **Open > Load > Activate Update Now > Start Update**. The server reboots.
 - Repeat from step 2 for remaining software versions until the latest Allworx System Software installation is complete on the Connect server.

The web admin login page displays each time when the update is complete.

4. Open a browser window and enter the URL to connect to the Connect server. The Welcome to Allworx page displays.
5. Log in to the Allworx System web admin page, and then continue the ["Configure the Connect Server" on page 15](#).

4.4 Connect the Network Ports

Caution:	Do not plug any network or ISP service into the Connect server without first properly configuring the server as this may result in a disruption of network connectivity with other equipment on the network.
MISE EN GARDE :	Ne branchez pas un réseau ou un service d'accès Internet (ISP) au serveur Connect, sans avoir d'abord correctement configuré le serveur, car cela pourrait entraîner une interruption de la connectivité réseau à d'autres appareils du réseau.
PRECAUCIÓN:	No conecte ningún servicio de red o ISP al servidor Connect sin haber configurado primero el servidor, ya que esto puede ocasionar interrupciones en la conectividad de la red con otros equipos dentro de la red.

The data network ports are 10/100/1000 BASE-TX auto-sensing and auto MDI-MDIX ports. The network port availability on the Connect servers is:

Port	Connect server		
	300 Series	500 Series	731
ETH0	X	X	X
ETH1	X	X	X
ETH2		X	X

After properly configuring the server (see the *Allworx System Administrator's Guide* Install Checklist, for more information), plug in the network infrastructure cables. Use standard RJ-45 category 5e network cables or better.

LED Identification	LED State	Description
Green	Off	No Link: no network connection.
	On	Link: successful network connection.
	Blinking	Activity: transmitting or receiving data.
Amber	Off	Speed: 10 or 100 Mb/s
	On	Speed: 1000 Mb/S

4.5 Install Analog Telephony Ports

Caution:	To reduce the risk of fire, use only 26 AWG (or larger) UL listed or CSA certified telecommunications line cord.
MISE EN GARDE :	Pour réduire les risques d'incendie, utiliser uniquement des conducteurs de télécommunications 26 AWG au de section supérieure.
PRECAUCIÓN:	Para reducir el riesgo de incendio, use solamente el No. 26 AWG o un cable de línea de telecomunicaciones.

Use the server analog phone connections to connect Central Office (CO) lines or telephone handsets.

RJ-11 Port	Type	Description
3-8*	FXO (loop-start)	Connects to Central Office (CO) lines.
1-2	FXS	Connects to telephone handsets.

* The number of FXO ports depends on the Connect server model. Additionally, FXO ports are not available on the Connect 320 or Connect 530 server model.

The Connect server provides surge protection internally on all telephony interfaces.

4.6 Install the T1 Line

Note:	The Connect 731 server does not require an external CSU/DSU (do not use).
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This feature is available on the Connect 731 server only. The T1 interface pin-outs for typical service connections may require either a straight through cable or a cross-over cable. Verify the cable is a shielded cable.

Allworx Connect 731 Server Connector Pinout

Pin	Description	Pin	Description
1	Receive (ring).	5	Transmit (tip).
2	Receive (tip).	6	Not used.
3	Not used.	7	Not used.
4	Transmit (ring).	8	Not used.

The Connect server is for T1 "short haul" use and has a fully integrated Channel Service Unit / Data Service Unit (CSU/DSU). Plug-in the Connect server directly to the on-site smart jack or local T1 device using the proper cabling. Do not connect the Connect server directly to the "long haul" wire pairs

exiting the building.

Note:	Do not plug any network or ISP service into the server without first properly configuring the server. Failure to heed this warning may result in a disruption of network connectivity with other equipment on the network.
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Network Port LED Definitions

Green LED State	Amber LED State	Description
Off	Off	Red alarm state - no received signal.
On	Off	No alarms or errors - good lock to line
On	On	Amber alarm state - remote end error.
On	Blinking	Signal quality problem - error.

Chapter 5 Accessories (Optional)

The Connect server supports optional accessories. This chapter explains:

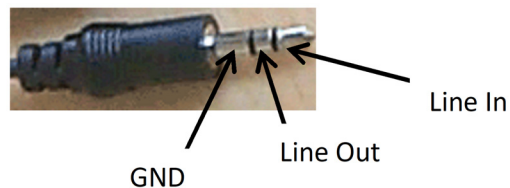
- connecting an audio cable for Music On Hold or Overhead Paging systems.
- connecting a rear terminal block for remote door releases and paging amplifiers.
- connecting a serial port.

5.1 Line In/Out

Connect the output from the system music and paging system to the server using a Y-Adapter Audio Cable. Insert the 3.5mm stereo plug into the audio connector labeled Line In/Out on the front panel. This requires a stereo splitter (not included) to use both Music-On-Hold and Overhead Paging.

The Line In/Out specifications for the Connect series servers are as follows:

Specification	Description
Line In	
Nominal Line In Level	-10dBV
Input Impedance	20K ohms
Line Out	
Nominal Line Out Level	-10dBV
Output Impedance	Approximately 5 to 10 ohms



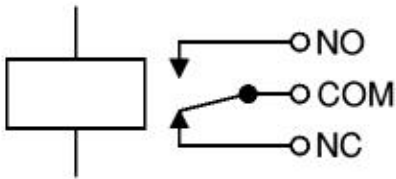
Note:	Use the white audio channel for music input and the red audio channel paging output.
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5.2 Rear Terminal Block

5.2.1 Relays

The Connect server comes with two (2) sets of C-form relay contacts for connecting to external devices such as remote door releases and paging amplifiers. The contacts rating is 30 VDC @1A. Only connect the SELV circuits meeting IEC 60950-1 / UL 60950-1 OR NEC Class 2 circuits. Insert the wire in front of the removable terminal block and tighten the top screw. :

Relay schematic



Contacts Labels

NO	Normally Open
COM	Common
NC	Normally Closed

5.2.2 Line Out

Connections for line out are available on the rear terminal block. The front and rear outputs are not physically connected together but provide the same audio signal.

5.3 Serial Port

Serial Port Pin-Out DB-9 Female		
Pin	Signal	Direction
2	TX	Output
3	RX	Input
5	GND	--

For connections to a serial port on a PC, use a straight through male-to-female DB-9 cable. Set the serial settings to 115.2K baud rate with no parity and 1 stop bit.

Chapter 6 Troubleshooting

Condition	Description	Solution										
Server is not shutting down properly.	Server is not responding to a normal shut down request.	Press and hold the Power button for at least 4 seconds.										
Server Power button is blinking red.	Server is not operating properly.	The red blinking sequence is: <table border="1" data-bbox="776 512 1490 873"> <thead> <tr> <th>Blinks in sequence</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Internal system error.*</td> </tr> <tr> <td>2</td> <td>Internal power supply error.*</td> </tr> <tr> <td>3</td> <td>Internal operating temperature exceeds maximum recommended limits. Check for proper ventilation and installation environment.</td> </tr> <tr> <td>4</td> <td>The main processor did not boot properly.*</td> </tr> </tbody> </table>	Blinks in sequence	Description	1	Internal system error.*	2	Internal power supply error.*	3	Internal operating temperature exceeds maximum recommended limits. Check for proper ventilation and installation environment.	4	The main processor did not boot properly.*
Blinks in sequence	Description											
1	Internal system error.*											
2	Internal power supply error.*											
3	Internal operating temperature exceeds maximum recommended limits. Check for proper ventilation and installation environment.											
4	The main processor did not boot properly.*											
* Contact the Allworx Technical Support for further assistance.												

For other Power button indications, see [“Power Connection” on page 14](#) or [“Safe Mode Sequence” on page 15](#).

Chapter 7 Regulatory Notices

7.1 FCC Part 68

This equipment complies with Part 68 of FCC rules and the requirements adopted by ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US: AAAEQ##TXXXX. If requested, provide this number to the telephone company.

A plug and jack to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact our company. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

7.2 Industry Canada

The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operation and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions might not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution:	Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.
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NOTICE: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

AVIS: Le présent matériel est conforme aux spécifications techniques d'Industrie Canada applicables au matériel terminal. Cette conformité est confirmée par le numéro d'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie que l'enregistrement s'est effectué conformément à une déclaration de conformité et indique que les spécifications techniques d'Industrie Canada ont été respectées. Il n'implique pas qu'Industrie Canada a approuvé le matériel.

NOTICE: The Ringer Equivalence Number (REN) for this terminal equipment is 0.1. The REN assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

AVIS : L'indice d'équivalence de la sonnerie (IES) du présent matériel est de 0.1. L'IES assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

7.3 Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee, however, that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commissions rules.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numérique de la class A prescrites dans le Règlement sur le brouillage radio électrique édicte par le Ministère des Communications du Canada.

Appendix A Restore Factory Defaults

The Allworx System restores the following settings to the Factory Defaults when performing a **Maintenance > Restart > Restart with factory defaults restored.**

Phone System > Call Details	Call Detail Storage Call Detail Streaming Call Detail Streaming Port
Phone System > Call Park	Timeout (seconds) After timeout:
Phone System > Dial Plan	Emergency <ul style="list-style-type: none"> • Emergency Number Rules <ul style="list-style-type: none"> • Number Dialed • Service Group • Dial Direct Services <ul style="list-style-type: none"> • Long Distance Services - Service Group • International Calls - Service Group • Outside Line Seizure - Service Group
Phone System > Languages	Primary Secondary
Phone System > Outside Lines	Anonymous Call Handling <ul style="list-style-type: none"> • Anonymous calls are:
Phone System > Paging	Door Relay Mode Paging Zones: <ul style="list-style-type: none"> • LINE OUT
Network > Configuration	Allworx Network Mode <ul style="list-style-type: none"> • LAN Host Mode • NAT • Firewall • Stealth Mode VLAN Configuration Public Interface <ul style="list-style-type: none"> • VLAN • PPPoE (on WAN Port) <ul style="list-style-type: none"> • PPPoE Username • PPPoE Password • PPPoE Service Name • PPPoE MTU Default Route Default Gateway <ul style="list-style-type: none"> • External IP Address

Network > Configuration (con't)	Interface Blocking Rules Host Information • Host Name • Domain Name (DNS) Firewall • All check boxes for services
Network > Digital Lines	PPP Username PPP Password PPP MTU
Network > Multi-Site	Voicemail Transfer Settings • TCP/IP Port • Maximum Sessions • Single Message Size Limit (bytes) • Maximum Messages Per Session
Network > Static Routes	Static Route Table Entries
Network > VPN	VPN PPTP Server PPTP Network Address PPTP Network Mask PPTP Port Number PPTP Max Tunnels PPTP MTU
Servers > DHCP Server	Server • Dynamic DNS • Dynamic Start Address • Dynamic End Address • DHCP Address Reservations
Servers > DNS Server	Operation mode • Primary DNS Server • Secondary DNS Server Host Table • Allworx DNS Server hosts the DNS Zone • Host Name / IP Address
Servers > Email	Features • Connection Timeout (secs) • Voicemail Attachment Format
Servers > SMTP Settings	SMTP Port SMTP Transmit Threads SMTP Transmit Queue Depth SMTP Notify Sender of Delivery Delay

Servers > SMTP Settings

(con't)

Use SMTP Smart Host

- Smart Host Address
- Smart Host Port
- Smart Host requires authorization
 - Smart Host User Name
 - Smart Host Password
- Smart Host - Email for local domain
- Smart Host - Voicemail for local domain

Use External Outgoing Mail (SMTP) Server

- External Outgoing mail (SMTP) Server Address
- External Outgoing mail (SMTP) Server Port
- External Outgoing Mail (SMTP) Display Name
- External Outgoing Mail (SMTP) Sender's Email Address
- External Outgoing mail (SMTP) Sender requires authentication

POP3 Settings

- Port Number
- Maximum Connections
- Number Client Threads
- Max. Depth Client Deferred Queue
- Min. Poll Period (minutes)
- Secure Login

IMAP Settings

- Port Number
- Maximum Connections

Alternate Email Domains

- [entries]

Unsolicited Bulk Email

- Use Block Services
- Block Services

Servers > SNMPEnable SNMP Agent

Servers > VoIP Server

BLF Port

Secure BLF

Force Remote Phone audio through server

Plug and Play Secret Key

Phone Administration Password

Global SIP Connection Limit

Paging Base IP Addr

Paging Port

Paging Max Hop Count

RTP Base Port

RTP DSCP Tag

SIP DSCP Tag

Servers > Web	Connection Timeout (secs) Maximum HTTP/HTTPS Sessions My Allworx Manager Secure Port (HTTPS) Web Administration Secure Port (HTTPS) My Allworx Manager Port (HTTP) Web Administration Port (HTTP)
Maintenance > Backup	Start Time Frequency IP Address / Domain Name TCP/IP Port Mode
Maintenance > Time	Use NTP Server NTP Server NTP Server Poll Period
Maintenance > Tools	Advanced Troubleshooting <ul style="list-style-type: none">• SSH port• TelnetPort Syslog - System Events <ul style="list-style-type: none">• Start/Stop• IP Address• Port



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