environexus

HOME AUTOMATION

INSTALLATION GUIDE

REMOTELY CONTROL YOUR HOME

IMPROVE SECURITY

ENERGY MANAGEMENT

VYNCO

ENVIRONEXUS HARDWARE

NEXUS-BRIDGE
Gateway Hub for Environexus Devices

Connects up to 232 Devices via mesh
Works with Android and IOS software
Allows access to all third party plug-ins
Offers local and remote control

NEXUS-PLUG
Plug-In On/Off Relay Module

10 AMP, 2400W Relay
Plugs into any standard GPO
Requires no hard wiring
Energy Monitoring of connected devices

NEXUS-QUAD
Wireless Quad Sensor

Powered via USB or Battery
Light, Temperature, Motion, Humidity
Designed for Indoor use only
Includes Mounting Bracket

NEXUS-LOCK
Nexus enabled Deadbolt System

Lock manufactured by Lockwood
Includes NEXUS Connect module
Manage up to 250 user codes
Integrated for notifications and triggers

NEXUS-REED
Wireless Door Sensor (open/close)

Wireless Sensor includes 2 x AAA Batt.
Sensor for Open/Close Trigger
Designed for Indoor use only
Includes tamper switch and screws

NEXUS-RELAY
Retro-Fit On/Off Relay Module

10 AMP, 2400W Relay
240V Pass Through Design
Requires Active and Neutral
Energy Monitoring of connected load

NEXUS-DIM-LE
Retro-Fit Leading Edge Dimmer Module

2.5 AMP, 600W Electronic Dimmer
240V Pass Through Design
Requires Active and Neutral
Energy Monitoring of connected load

NEXUS-BLIND
Retrofit Up/Down blind control module

2.5A 600W Blind Controller
240V Pass through design
Energy monitoring of connected load
Use with Motorised Blinds only

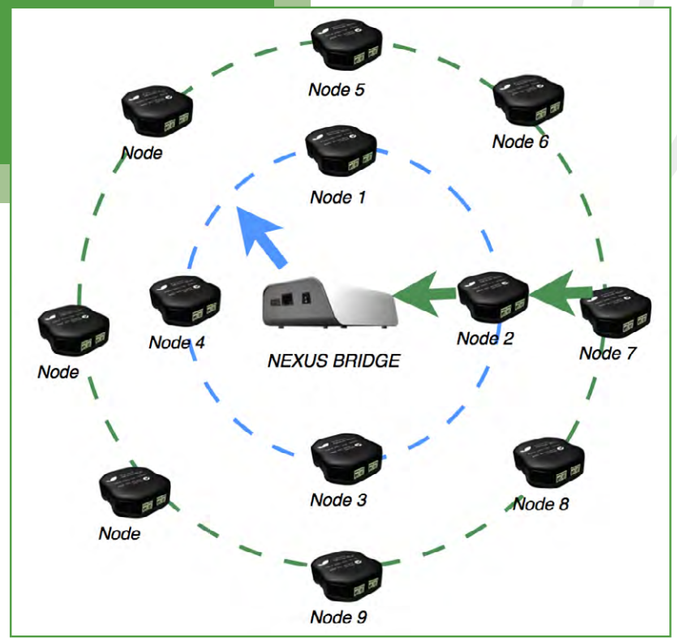
NEXUS-NETWORK EXPLAINED

The NEXUS-NETWORK is a mesh network. This means that if the NEXUS-BRIDGE is too far away from a device to communicate directly, the communication can be relayed via another device in-between.

A network map is created when you first add devices to your NEXUS-BRIDGE, allowing the best communication routes to be determined. As additional devices are added, you will begin to form an extended communication ecosystem where each device works as a receiver and transceiver.

NOTE: Battery operated devices do not act as signal repeaters in the NEXUS-NETWORK.

THE NEXUS-NETWORK works independently of your WIFI Network.



FAQ

WHAT IS THE MAXIMUM DISTANCE BETWEEN DEVICES?

All NEXUS devices have been certified for a maximum distance of 15 meters.

DO CONCRETE OR DOUBLE BRICK WALLS REDUCE THE RANGE?

As with all wireless technologies, the surrounding environment can impact the reliable communication distance between devices. Even in harsh environments with solid walls, you can expect to achieve at least a 5-7 meter range.

HOW DO I EXTEND THE RANGE CAPABILITIES OF THE NEXUS DEVICES?

As each device works as both a receiver and transceiver, you can simply add another device in-between. For example, if your BRIDGE was located at the front of the house and you needed to control a switch at the back of the house (up to 30m away), you would need to run a "middle device" to communicate to the furthest device. NOTE: A command can hop through 4 devices.

DO ALL ENVIRONEXUS DEVICES HAVE MESH NETWORK CAPABILITY?

Only 240V products can extend the NEXUS-NETWORK. This means that battery operated devices can only receive communication and cannot relay commands.

IS THERE A LIMIT TO THE AMOUNT OF HOPS THAT A COMMAND CAN MAKE?

The NEXUS-NETWORK is optimized when there are several devices in a small area so the number of hops is kept to a minimum. Any communication from the NEXUS-BRIDGE can make four hops before that command dies.

WHERE IS THE BEST PLACE TO LOCATE MY NEXUS-BRIDGE?

The best place to locate the NEXUS-BRIDGE is at a central location to all the NEXUS devices. The most efficient NEXUS-NETWORK will keep hops to a minimum. NOTE: The bridge must be hardwired into a modem or data point.

GOOD SYSTEM DESIGN

All installations must be well designed to create variable routing paths for different nodes. A solid design element is to avoid any one node being a key point of transmission to other nodes. This can create bottlenecks and latency issues. Use the following diagram as considerations for any installation:

A GOOD FLOOR PLAN HAS A WELL-DISTRIBUTED MESH NETWORK, HAS HIGH NODE DENSITY TO COMPENSATE FOR FAILED DEVICES AND CREATES MULTIPLE ROUTING OPTIONS.

CALCULATING LOSS:
NEXUS-NETWORK

As with any installation with RF devices, the installer must consider a wide variety of installation material that can interrupt the flow of data from one node to the next. Recall that the optimum range is 8 meters for node-to-node transmission. The maximum is 15 meters in a perfect open environment. Finally, keep in mind that node transmission is Omni-directional.

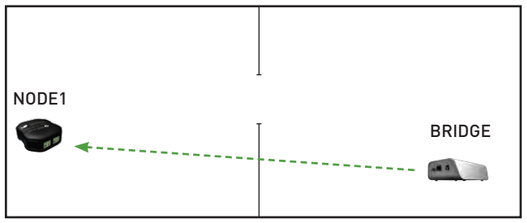
- **Calculate a 25% loss for any drywall or wood floor that the message must pass through.**
- **Calculate a 50% loss for any plaster, stone, or cinder block material that the message must pass through.**

In this example, we have a simple system with one NEXUS-BRIDGE and one Node. For a drywall installation, we calculate the loss as follows:

Dry Wall Installation: 8m x 25% loss = 2m (There will be a loss of 2m from the primary controller to the node.)

Concrete, Plaster, Stone, Cinder Block: 8m x 50% loss = 4m (There will be a loss of 4m from the primary controller to the node.)

What we determine from these calculations is the maximum optimal distance the message will travel is 6m if using drywall and 4m if using concrete, plaster, stone, or cinder block. If the distance to Node 1 exceeds these limitations, you will need to add another node on the interior wall to repeat the message.



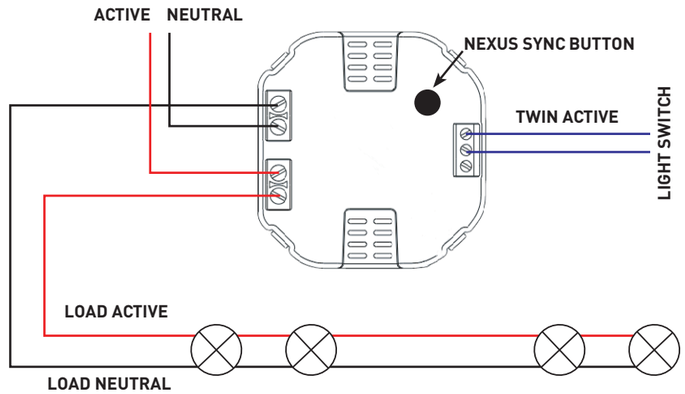
MODULE SPECS:
NEXUS-RELAY AND DIM-LE

	NEXUS-RELAY	NEXUS-DIM-LE
Retro-Fit	✓	✓
On/Off Control	✓	✓
Dimming	×	✓
Energy Monitoring	✓	✓
Electrical/Load Ratings		
Incandescent light bulb	2300W	600W
GU10 Downlights	2300W	600W
Iron Core Transformers	2300W	600W
Fluorescent (Compact & Ballast)	2300W	×
12V Halogen (Electronic Transformer)	2300W	×
LED Lighting	2300W	Test for compatibility
Amperage	10A	2.5A
Certifications		
FCC	✓	✓
CE	✓	✓
ROHS	✓	✓
Connectivity		
Neutral Required	✓	✓
240V pass through switching	✓	✓

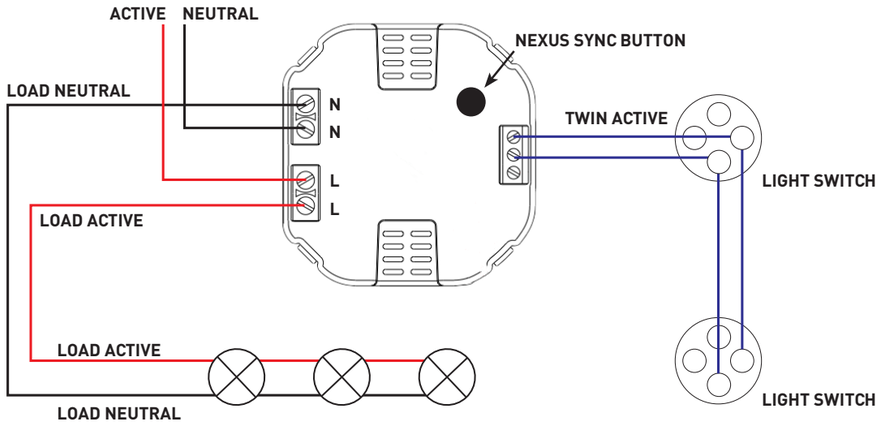
INSTALLATION:
LIGHTING CONTROL

1. Line Active (red wire), connect to live terminal of NEXUS DEVICE
2. Neutral (black wire), connect to Neutral Terminal of NEXUS DEVICE Note: If no neutral is present at switch, one must be installed.
3. Load wire, connect to load terminal of NEXUS DEVICE
4. Connect existing wall switch to NEXUS DEVICE, with twin active cable.

NOTE: For manual dimming control a momentary bell press mech is required

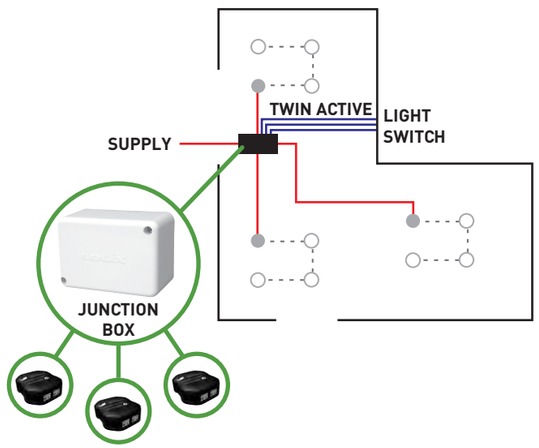


INSTALLATION:
TWO WAY LIGHTING CONTROL



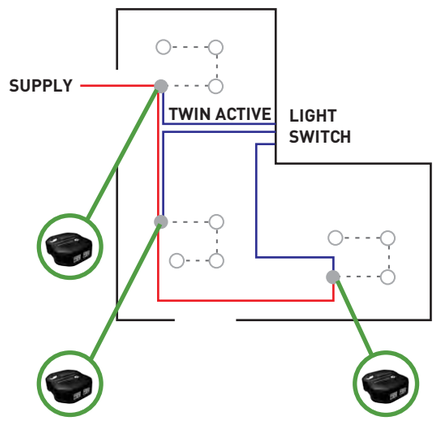
1. You can use Environexus on existing two way switches. You will need to use one device at the first switch.
2. Ensure you locate the dimmer module on the first switch with supply load as per standard install.
3. If connecting as a retro-fit, you may simply use the existing strappers
4. If wiring a new switch, use a twin active cable connected to C and 1 for each switch.
5. This configuration can be used for up to three switches on the same circuit.

NOTE: momentary mech is required at each switch



OPTION 1 GROUP DEVICES: The use of a junction box will allow multiple devices to be grouped together for easy installation.

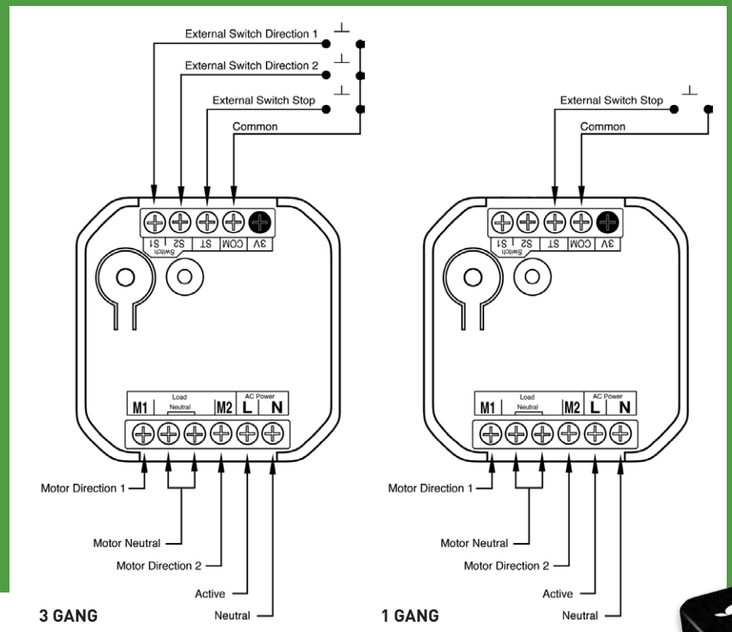
The sample diagram above would require the use of three single circuit dimmer modules, located in the junction box.



OPTION 2 AT FIRST DOWNLIGHT: The above uses three individual dimming devices, each device is located at the first point in the each group of switched lights.

The supply cables should be looped to each module location.

NOTE: The maximum distance allowed on the twin active between the device and the light switch is 25 meters. Each device will require a twin active connection between the device and the light switch for manual control



INSTALLATION:
BLIND CONTROL

The NEXUS-BLIND module is powered from the mains supply and is a four wire design. Active up, Active down, Neutral and Earth (if required).

NOTE: The Nexus-Blind is compatible with 4 core switch blind motors ONLY. If a blind is supplied with it's own proprietary remote control it will not be compatible.

The motors that are compatible with the NEXUS-BLIND are bi-directional 4-Wire (2 Hot, 1 Neutral, 1 Ground) motors with internal limit switches. Typically the relays inside the controllers can handle any size window covering motor. One hot wire runs the shade in one direction, the other is for the other direction, cutting power stops the shade or when the shade hits its set limit an internal switch disconnects power to that directional wire (stopping the motor).

INSTALLATION:
NEXUS-REED DOOR/WINDOW SENSOR

TECHNICAL SPECIFICATION

Wireless Sensor includes 2 x AAA Batt.
Sensor for Open/Close Trigger
Designed for Indoor use only
Includes tamper switch and screws
2.0cm x 3.4cm x 7.9cm (main body)
Inbuilt Low battery detection
Hidden Security tamper prevention trigger

The main sensor unit and magnet unit should be placed in a manner such that when the door/window is closed, they are within 2cm from each other. By opening the door or window, these two units should separate in proximity.

NOTE: The Reed-Sensor should be positioned vertically against the door/window frame. Nexus devices should not be enclosed by metal framing or other large metallic objects. This will reduce the NEXUS-NETWORK range.

INSTALLATION:
NEXUS-QUAD SENSOR

TECHNICAL SPECIFICATION

Temperature range: -20°C to 50°C (Accuracy ±1°c)
Humidity: 20% – 90% (Accuracy: ±5%)
Lighting range: 0 - 1000 LUX
Weight: 118g

Waterproofing: IP42
Power: 5V USB or AAA
Batteries (x4)
Antenna Range: 300ft
Outdoors and 80+ ft Indoors

NOTE: To USB power a Nexus-Quad, you will need a USB power source. Vynco recommends a USB power adaptor mech installed in a powerpoint.

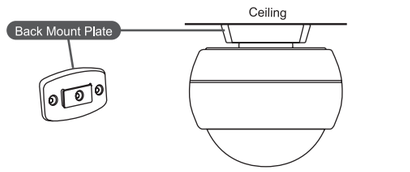
POWERING THE NEXUS QUAD

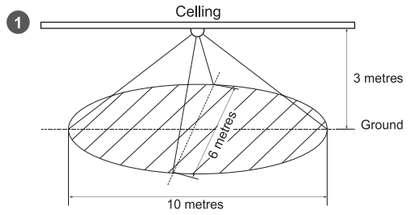
Battery powering the NEXUS-QUAD will put some of its features into a dormant mode in order to conserve battery life. While the NEXUS-QUAD is asleep, the device cannot be actively queried by your NEXUS-NETWORK, but it will pro-actively send its own reports to your NEXUS-NETWORK depending on your setting. It will automatically report its battery level to the Environexus portal throughout its life until the battery is fully drained and needs replacing E-mail notifications can be enabled when the battery levels goes below a specified level. USB powering the sensor will never go to sleep and you can configure the sensor from your NEXUS-NETWORK whenever you want.

INSTALLATION OPTIONS: NEXUS-QUAD SENSOR

CEILING MOUNT

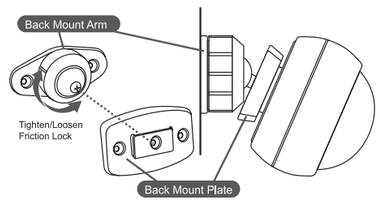
The NEXUS-QUAD can be mounted the flat against the ceiling via the Back-Mount Plate

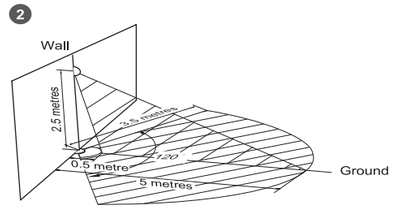




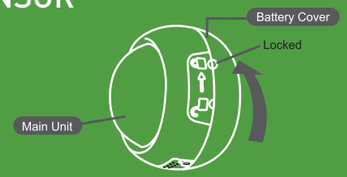
WALL MOUNT

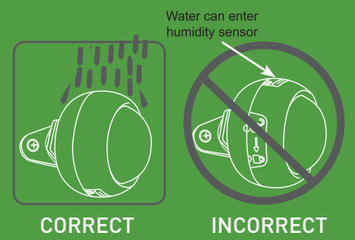
The NEXUS-QUAD can be mounted at an angle using the Back-Mount Arm





ORIENTATION:
NEXUS-QUAD SENSOR





INSTALLATION:
NEXUS-BRIDGE

STEP 1: CONNECT YOUR BRIDGE

Start by connecting your NEXUS-BRIDGE to your existing WIFI modem/router, and power the unit with the supplied cables. It is recommended that the network cable be connected before powering the bridge. NOTE: The NEXUS-BRIDGE comes with 4 x AA Batteries, these should not be used to power the NEXUS-BRIDGE. They can ONLY be used to add/remove devices.

STEP 2: POWER YOUR BRIDGE

You will need to wait approximately 2 to 5 minutes for the NEXUS-BRIDGE to establish a network connection. You will know when this is completed as all three indicator lights will be solid. NOTE: If the unit is unable to connect to the internet, the Internet light will flash rapidly.

Indicator Lights

Blue Light = Power
Orange Light = Mesh Network
Green Light = Internet Connection

STEP 3: LOCATE YOUR BRIDGE

The NEXUS-BRIDGE will assign itself an IP address via DHCP. To discover this address, you will need to use Fing (available from App Store and Google Play) or similar network sniffer. Look for the MAC address found on the underside of the NEXUS-BRIDGE.

STEP 4: REGISTER YOUR BRIDGE

Using any standard internet browser connected to the same network, type in the IP Address of the bridge and follow the prompts to register your details.

STEP 5: LOGIN TO YOUR BRIDGE

Once registration is complete, you may login to the box by visiting login.environexus.com.au and use your username and password to get access.

TIMEZONE:
NEXUS-BRIDGE

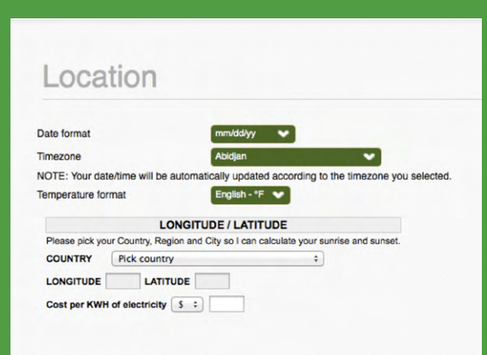
STEP 1: Click on the clock to edit the time and date settings, Or, select SETUP then LOCATION to edit the time and date settings

STEP 2: Select the desired Date Format, Time-zone and Temperature format

Under Longitude and Latitude select the Country, Region and city

This will automatically populate the longitude and latitude values giving the correct times for sunrise and sunset for the chosen location.

NOTE: Ensure you set the correct location settings if you wish to use the sunrise and sunset functions for automation.



EXTENDING NEXUS-NETWORK: ADDING A SECOND BRIDGE

There are a number of applications where you can install multiple NEXUS-BRIDGES. You may wish to install one bridge in the main house and one the guest house, or divide the main house in 2 to ensure devices are within direct range of one NEXUS-BRIDGE.

NOTE: There is no limit to the quantity of NEXUS-BRIDGES that you can have in a home, and so long as they are all connected to the same LAN (i.e. Ethernet network) multiple NEXUS-BRIDGES can be merged so they act as one using the Master Slave principle.

You should first add the devices to the NEXUS-BRIDGE which they are closest to, and then follow the steps below to port the devices from the slave NEXUS-BRIDGE onto the master NEXUS-BRIDGE.

The steps below should be carried out on the NEXUS-BRIDGE which has been chosen as the master NEXUS-BRIDGE. You should choose the NEXUS-BRIDGE with the greatest quantity of devices.

Select DEVICES, then ADD DEVICES
Select UPnP devices -> ADD
Click SCAN FOR UPnP devices, a pop up will appear
Click CLOSE
Click SAVE
Click Continue
Wait 10 minutes
Select ADD beside UPnP devices
Select NEXT
A list of devices that are on this network will all appear. Locate MiOS and a number. This number will be the serial number of your secondary NEXUS-BRIDGE

SYNCING
THE NEXUS-LOCK

1. Put the Bridge into sync mode
2. Touch the screen, enter Master PIN (M), press # and then Option 7
3. While NEXUS-BRIDGE is still in 'inclusion' mode, press 1 to join the Network.

NOTE: Do not rush the inclusion process of the NEXUS-LOCK. On setup, the Nexus-Lock will communicate all of its functionality to the Nexus-Bridge. If this process is interrupted errors may occur in the configuration. Fits standard barrel size for retrofit installation, full installation instruction inside box.

REPAIR
THE NEXUS-NETWORK

If you have moved devices around since the initial setup of the Nexus-Network, there is a possibility that you will need to run a repair.

The Nexus-Network is a mesh network. This means if devices want to talk to each other but are too far apart to communicate directly, they will relay messages through other Nexus devices that are in-between.

If control of Nexus-devices becomes unreliable it is because the network map needs to be reset. By repairing the Network, devices can recalculate their proximity to each other for relaying communication.

STEP 1: Select the SETUP tab, then Z-WAVE SETTINGS

STEP 2: Select REPAIR tab, then GO

When repairing the Nexus-Network, 3 parameters can be specified:

1. How long to wait for battery operated devices to wake up: During the first part of the network repair, an attempt will be made to locate all the devices on the network. Many battery operated devices, like sensors, will not respond except at periodic wakeup intervals. Indicate how long to wait for any battery operated devices to wake up. 60 minutes is usually safe since most battery operated devices wakeup every 30-60 minutes by default.

2. Re-configure all the devices: If you leave it checked, the green status icon will turn grey or blue as devices are re-configured, but when the repair is completed the icons should be green again

3. Indicate how long to run a stress test on the network: During this time the NEUXS-BRIDGE will constantly send data to all your devices and measure the delay and accuracy of their responses.

NOTE: A Heal of the Nexus-Network can take hours to complete. So It's best to let the heal run overnight. While the test is running, the status will say "Please wait... Configuring Z-Wave devices", and the progress of the test is shown below it.

Because this generates a lot of traffic on the Nexus-Network, your devices may respond very slowly if you try to use them while the repair is running.

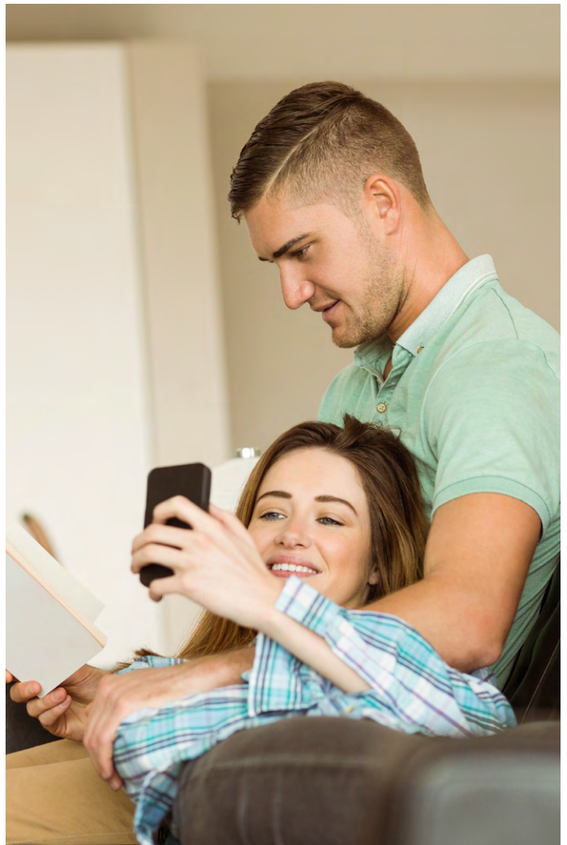
When the repair of the network is done, go back to the Z-WAVE SETTINGS

Page click on REPAIR and VIEW REPAIR REPORTS you'll see a pull-down listing the heal network test that was just completed. Choose it to view the test results. You can copy/paste the test results if you want to keep a copy of them. The repair reports will be lost when you power cycle the NEXUS-BRIDGE.

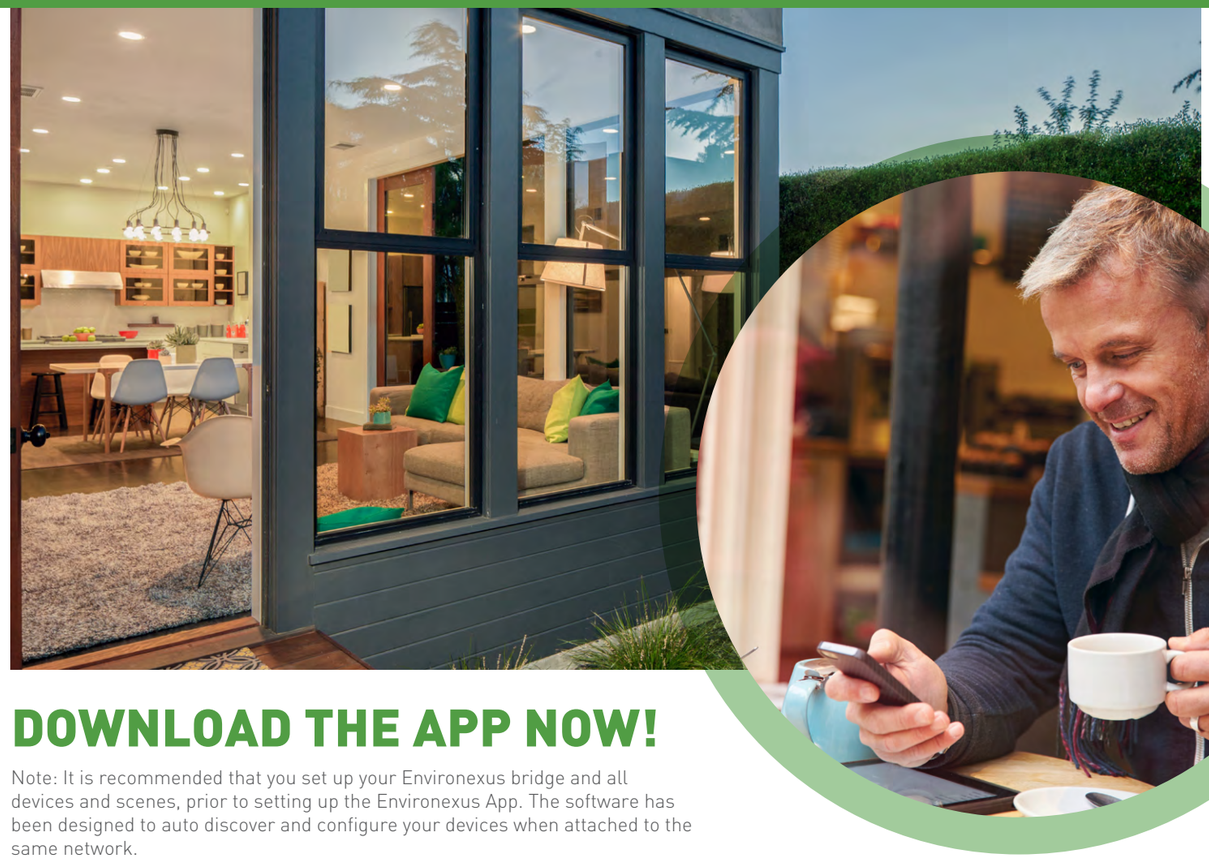
SPECS
THE NEXUS-LOCK

With the NEXUS-LOCK, brought to you by Lockwood, you can enjoy the full benefits of the Environexus solution by providing remote access security and integrated home control. Trigger scenes and settings on entry and exit. Leaving home ensures all lights and devices are switched off, and on your arrival you can bring your home to life, instantly.

- 25.4mm latch hole and 54mm lock hole
- Front and Back Escutcheon: High purity zinc alloy
- PIN Code Management
- 250 user codes
- Key Override
- Add time restrictions on PIN Codes
- Trigger other Environexus devices on entry/exit
- Low battery warning
- Weather resistant
- Enable Notifications on door unlocking, specific PIN code entry, PIN Code entered outside of valid date.



ENVIRONEXUS SOFTWARE



DOWNLOAD THE APP NOW!

Note: It is recommended that you set up your Environexus bridge and all devices and scenes, prior to setting up the Environexus App. The software has been designed to auto discover and configure your devices when attached to the same network.

ISO SET UP

1. Scroll to the Settings Option
2. Select ENVIRONEXUS BRIDGES
3. Select EDIT SERVICE SETTINGS
4. Enter the USERNAME and PASSWORD that you registered for the NEXUS-BRIDGE
5. Click CONTINUE
6. Select the Serial Number of the NEXUS-BRIDGE and click CONFIGURE
7. You will now return to the Environexus Bridges Page, you should see CONNECTED in green and all the devices listed under

Available on iTunes

ANDROID SET UP

1. In the top right hand corner of the screen, you will find the Settings Icon. Go to SETTINGS
2. Select MY SYSTEMS to add or view all configured systems
3. Select ADD A NEW SYSTEM
4. Select NEXUS-BRIDGE
5. Enter the credentials for the NEXUS-BRIDGE that you wish to configure

GET IT ON Google play

ENVIRONEXUS FOR ANDROID

The Environexus home automation application is designed to provide native Android control of your NEXUS enabled devices like never before.

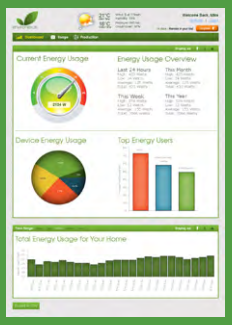
- Fast and responsive user interface
- Voice recognition
- NFC tags actions
- Customizable dashboards with smart widgets
- Android shortcuts
- Local or remote network auto detection
- Layouts for both smartphones and tablets
- Several options to fine-tune the application
- Import/export preferences
- Automatic wake-up using front camera move detection.
- Tasker Plug-in
- REST Control API

ENVIRONEXUS ENERGY DASHBOARD

The Environexus Energy Dashboard will give you insight into when, where and how much power you are consuming in your home. The dashboard will report your current energy usage relative to your past usage, allowing you to put some perspective on your energy consumption. Display reports in hours, days, weeks, months, kWh, dollars and Carbon footprint.

Usage/Production Reports Include:

- Current Energy Usage
- Energy Usage Overview
- Device Energy Usage
- Top Energy Users
- Total Energy Usage for your home
- Total Energy Production for your home
- Energy Production by Device



ENVIRONEXUS ANDROID WEAR

The Environexus Android Wear software has been designed to give you even greater access to your Smart Home system by putting the control directly on your wrist!

Primary Features include:

- Access to devices
- Access to scenes
- Voice Control (requires watch mic)

Environexus Third Party Plug-ins can also be accessed via Android Wear.

- Control your Sonos sound system (transport and playlists)
- Trigger Tasker scenes
- View Security Cameras

SONOS INTEGRATION

Give your home a voice! The new Sonos NEXUS software upgrade will allow you to add voice verification to your home automation system. By simply adding the Environexus Bridge to the same network as your Sonos devices, you can receive voice confirmation of device activity, integrate announcements for weather and traffic and much much more!

WIFI PRODUCT INTEGRATION

The flexibility of the Environexus system allows the end-user to be able to expand into other third party products from companies. These will seamlessly integrate into the Smart Device Software so consumers do not need to open and close the native applications.

ENVIRONEXUS IOS

The Environexus home automation application is designed to provide native iPhone and iPad control of your NEXUS enabled devices. The application allows the user full control with feedback over lighting, appliance and climate modules and more. It also provides a user configurable user interface so that you can add and place the controls that you want where you want within the application.

For further Environexus assistance, click here to go to the Environexus help desk

environexus

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