



EX2-8

Quick Installation Guide



TR2031-03

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About the Quick Installation Guide

This Quick Installation Guide is intended to guide a professional installer in the deployment of the EX2-8 radio.

Conventions



Warning:

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- This sign indicates warning or caution statement.
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Note:

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- This sign indicates important information.
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Chapter 1 Introduction

Introduction

Tranzeo's EX2 series of wireless LAN products are IEEE 802.11b/g/n compliant, operate in the license-free 2.4GHz frequency band, and support data rates of up to 150 Mbps. The EX2-8 features advanced networking and management capabilities including WEP/WPA/WPA2 security, WMM QoS, and NAT Routing. The versatile multi-mode unit can be configured as an Access Point (AP) or Customer Premise Equipment (CPE), and supports both WDS AP Repeater and WDS Bridge modes.



The compact EX2-8 design features an integrated 8dBi directional panel antenna and a high performance radio with up to +26dBm output power. An N-Type connector is also available for applications requiring an external antenna. The all-in-one design comes complete with a passive PoE injector and DC adaptor, requiring a single CAT5 cable for power and data for a quick and easy installation. The EX2-8 also features a weather-resistant enclosure that is compliant with the IP65 environmental standards, which makes it suitable for outdoor deployments. The EX2-8 is backed by Tranzeo's 1-Year Parts and Labor Warranty and Lifetime Technical Support.

Chapter 2 Preparation before Installation

This chapter describes safety precautions and product information that you should know before starting the installation. Please read this chapter before installing the EX2-8.

Professional Installation Required

Please seek assistance from a professional installer who is well trained in the installation of RF equipment and knowledgeable with local regulations.

Safety Precautions

For personal safety and proper installation, please read and follow these safety precautions.

1. If you are installing the EX2-8 for the first time, please seek assistance from a professional installer who has received safety training.
2. Keep safety as well as performance in mind when selecting your installation site, especially where there are electric power and phone lines.
3. When installing the EX2-8, please note the following:
 - ◆ Do not use a metal ladder;
 - ◆ Do not work on a wet or windy day;
 - ◆ Wear shoes with rubber soles and heels, rubber gloves, long sleeved shirt or jacket.

Installation Precautions

For proper installation and worry-free operation, please read and follow these installation precautions:

1. The use of appropriate surge arrester with the EX2-8 is highly recommended to protect against lightening strikes. **DAMAGE DUE TO LIGHTENING IS NOT COVERED UNDER WARRANTY.**
2. Only use the POE injector and power adapter supplied with the EX2-8 radio. Otherwise, the product may be damaged and will not be covered under warranty.
3. The EX2-8 must be powered down before connecting an external antenna. Do not switch from built-in antenna to the external antenna via the web interface before the external antenna has been physically attached to the unit. Otherwise, the product may be damaged.

Product Package

The product package you have received should contain the following items. If any of these items is not included or damaged, please contact your local dealer for support.

EX2-8 Radio	× 1
Pole Mounting Ring	× 1
PoE Injector	x1
12VDC Power Adapter	× 1
Quick Installation Guide	× 1



Note:

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- Please visit our website at www.tranzeo.com to download the User Manual.
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EX2-8 Radio



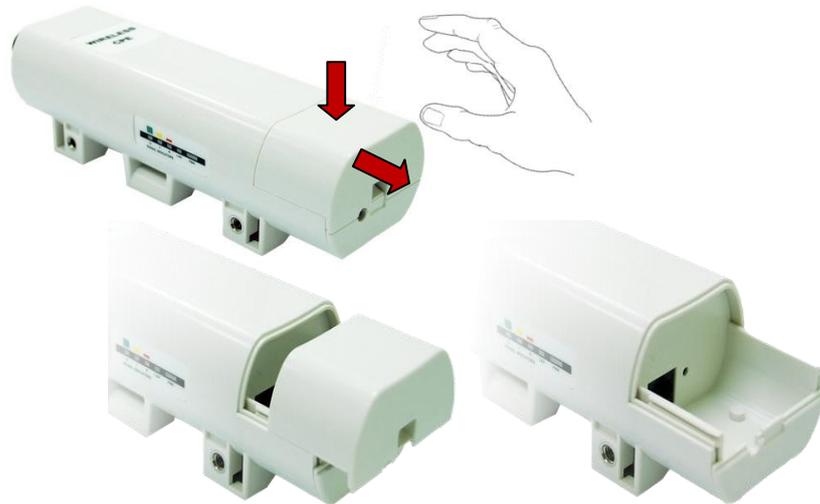
POE Injector & 12VDC Power Adapter



Pole Mounting Ring

Chapter 3 System Installation

1. Remove the bottom cover by firmly pressing down and sliding it off with your hand.



2. Plug the CAT5 Ethernet cable into the RJ-45 port.



 **Note:**

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- The cable and RJ-45 connectors should be wired following the EIA/TIA T568B standard.
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5. Fit the radio to the pole by firmly tightening the ring clamp.



6. If an external antenna is not attached, then ensure that the connector is protected with the rubber cap for maximum environmental protection.



Connecting the Radio

1. Connect the Cat 5 cable from the radio into the RJ-45 jack marked “POE” on the POE injector.
2. Connect the power adapter to the POE adapter and plug the other end to a power outlet. We recommend connecting the power adapter to an outlet with surge suppression capability with an uninterruptible power supply (UPS) for reduced outages.



To configure the EX2 Series radio, connect an Ethernet cable to the LAN port on the POE adapter and to a computer. Ensure that the distance between the POE and the radio does not exceed 150ft (45m) when using the supplied 12VDC adapter. Use Tranzeo’s standard 18VDC adapter (purchased separately) when connecting up to 300ft Ethernet cable. If connecting to a hub or switch, a crossover cable may be required.

Warning:

- Only Tranzeo approved POE injector and power adapter for this product. Otherwise, the product may be damaged and will not be covered under warranty.

Note:

- The POE injector is not weather-proof and should be installed indoors.

Connecting an External Antenna

The EX2-8 is equipped with an internal 8dBi panel antenna; however, an external N-type male connector is also available for applications requiring an external antenna. Please note that the internal antenna will be bypassed when the external antenna is enabled via the web interface. Please follow these steps for connecting an external antenna:

1. Make sure that the radio is powered down.
2. Remove the protective rubber cap to expose the N-type male connector.
3. Carefully attach the antenna or antenna cable to the N-type connector, and tightly wrap the connection with self-sealing weatherproof tape for maximum environmental protection.
4. Refer to User Manual for instructions on how to enable the external antenna.



Warning:

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- To avoid damage to the radio, the device must be power down before connecting the external antenna. Otherwise, the radio might be damaged.
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Note:

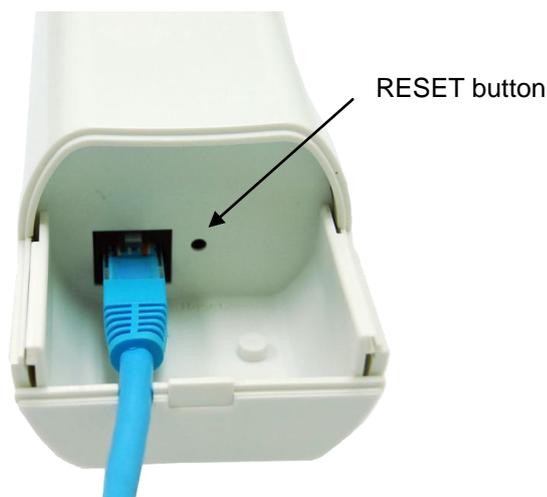
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- If an external antenna is not attached, then ensure that the connector is protected with the rubber cap, and is tightly wrapped with self-sealing weatherproof tape for maximum environmental protection.
-

Polarity

For maximum environmental protection, the Ethernet port cover should always be placed such that the cable runs straight towards the ground. In this position, the internal antenna polarization is vertical.

Restore Factory Defaults

To restore factory defaults, press and hold the RESET button for 10 seconds or until the PWR LED turns yellow, then release. The radio will then reset its parameters to factory defaults including the IP address and password. This process will take about 30 seconds to complete, after which the radio will automatically reboot and ready to be reconfigured.



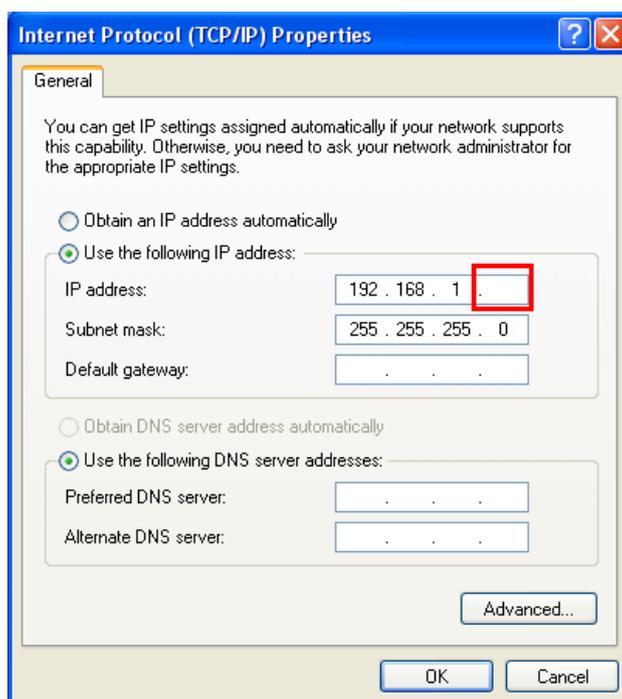
 **Note:**

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- The default IP address is **192.168.1.1**, and the default password is **password**.
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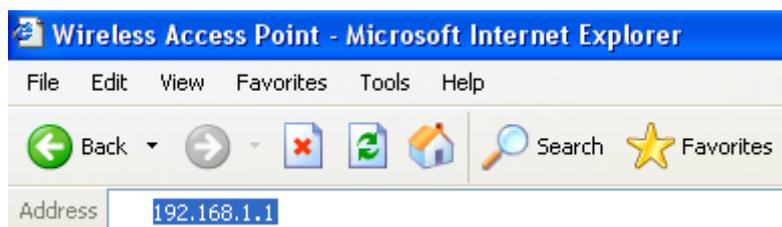
Configuration

The EX2-8 radio can be configured through an HTML configuration interface, accessible using any Internet browser. The configuration interface allows you to define and change settings, and also provides information about the performance of the device.

1. Before accessing the configuration interface, you have to change the network connection settings in your computer to be on the same subnet as the radio. Assign a static IP address to your PC with the same network subnet as the EX2-8. The default IP address of the EX2-8 is 192.168.1.1, so you may enter 192.168.1.2 to 192.168.1.254, then click **OK**.



2. Open the web browser on your PC, and type in the default IP address (192.168.1.1) of the EX2-8 in the address bar, and then press enter.



- In the login dialog, enter the default user name and password, and then click **Login**. The default user name and password are **admin** and **password**, respectively. Please note that the username and password are case-sensitive.

- The Information screen will be displayed after successfully logging into the unit, which shows a summary of the current device status and settings.

Information

This page shows the current status and some basic settings of the device.

System Information

Model Name	EX2-S
Device Name	ap27ebd9
MAC Address	00:19:70:27:eb:d9
Country/Region	United States
Firmware Version	2.0.11(TZ)6

LAN Settings

IP Address	192.168.1.2
Subnet Mask	255.255.255.0
Gateway IP Address	0.0.0.0
MAC Address	00:19:70:27:eb:d9

Wireless Settings

Operation Mode	Bridge
Wireless Mode	802.11b/g/n
Channel	6
WLAN Encryption Method	Open System
TX Rate	Auto
ACK Timeout	64 microsecond
WMM Enable	ON

Interface Status

Interface	Status	Channel	Rate
LAN	Down	N/A	N/A
WLAN	Up	6	Auto

Refresh

5. Choose **System** → **Basic Settings** to configure the basic network settings. Select Bridge or Router network mode and enter a unique device name, then press **Apply** to save settings.

The screenshot shows the 'Basic Settings' page of the Tranzeo Wireless Broadband Access Point. The page has a blue header with the Tranzeo logo and 'Wireless Broadband Access Point' text. Below the header is a navigation bar with tabs for 'Status', 'System', 'Wireless', 'Management', and 'Tools'. The 'System' tab is active, and the 'Basic Settings' sub-tab is selected. The main content area is titled 'Basic Settings' and contains the following fields:

- Ethernet DataRate: Auto (dropdown)
- Network Mode: Bridge (dropdown)
- Device Name: ap27ebd9 (text input, max. 15 characters and no spaces)
- Country/Region: United States (dropdown)
- Spanning Tree (STP): Enabled (radio button selected, Disabled is also present)
- STP Forward Delay: 1 (text input, 1-30 seconds)

At the bottom of the form are 'Apply' and 'Cancel' buttons.

6. Choose **IP Settings (Bridge)** to configure Bridge IP settings, when in Bridge mode. Specify a unique IP address if **Use Fixed IP Address** is selected or choose **Obtain IP Address Automatically**, then press **Apply** to save settings.

The screenshot shows the 'Bridge IP Settings' page of the Tranzeo Wireless Broadband Access Point. The page has a blue header with the Tranzeo logo and 'Wireless Broadband Access Point' text. Below the header is a navigation bar with tabs for 'Status', 'System', 'Wireless', 'Management', and 'Tools'. The 'System' tab is active, and the 'IP Settings(Bridge)' sub-tab is selected. The main content area is titled 'Bridge IP Settings' and contains the following information:

Use this page to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet mask, DHCP.

IP Address Assignment

- Obtain IP Address Automatically (radio button)
- Use Fixed IP Address (radio button selected)

Below the radio buttons are the following fields:

- IP Address: 192.168.1.2 (text input)
- Subnet Mask: 255.255.255.0 (text input)
- Gateway Ip Address: 0.0.0.0 (text input)
- DNS 1: 0.0.0.0 (text input)
- DNS 2: 0.0.0.0 (text input)

At the bottom of the form are 'Apply' and 'Cancel' buttons.

Using Victor to change IP address:

The EX2 series of products also support Tranzeo's Victor Program, which is a utility that allows users to quickly locate and change the IP address of Tranzeo radios. It sends out a broadcast on the network and displays a list of other Tranzeo radios connected, and from which you can configure the IP address for your device. Please refer to the User Manual for instructions on how to use Victor. **You can download the latest version of Victor from the Tranzeo Support Website.**

- Choose **IP Settings (Router)** to configure Router IP settings, when in Router mode. Specify IP settings for both WAN and LAN interfaces, then press **Apply** to save settings.

The screenshot shows the configuration interface for a Tranzeo Wireless Broadband Access Point. The page title is "Router IP Settings". Below the title, there is a brief instruction: "Use this page to configure the parameters for accessing to the Internet. Here you may change the access method to Static IP, DHCP, PPPoE." The interface is divided into two main sections: WAN Settings and LAN Settings.

WAN Settings:

- WAN Access Type: DHCP Client (dropdown menu)
- Host Name: ap27ebd9 (text input field)

LAN Settings:

- IP Address: 192.168.1.2 (text input field)
- Subnet Mask: 255.255.255.0 (text input field)
- DHCP Server: Disabled (dropdown menu)
- DHCP IP Address Range: 0.0.0.0 - 0.0.0.0 (two text input fields)
- Lease Time: 0 (text input field) (15-44640 Minutes)

At the bottom of the form, there are two buttons: "Apply" and "Cancel".

Note: The Tranzeo Victor Program cannot locate radios through routers.

- Choose **Wireless → Basic Settings** to configure the basic wireless settings.

The screenshot shows the configuration interface for a Tranzeo Wireless Broadband Access Point. The page title is "Wireless Basic Settings". Below the title, there is a brief instruction: "Use this page to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless mode as well as wireless network parameters." The interface is divided into two main sections: a left sidebar with navigation options and a main content area with various settings.

Left Sidebar:

- Basic Settings >>
- Security Settings
- Advanced Settings
- Access Control
- WDS Settings

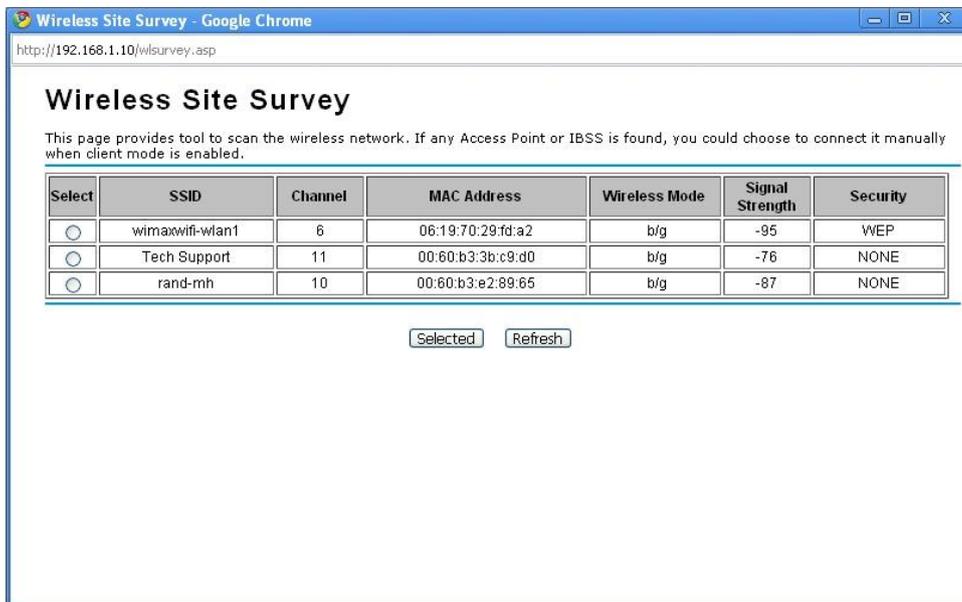
Main Content Area:

- Disable Wireless LAN Interface
- Wireless Mode: AP (dropdown menu) Site Survey (button)
- Wireless Network Name(SSID): Wireless (text input field)
- Broadcast SSID: Enabled Disabled
- 802.11 Mode: 802.11b/g/n (dropdown menu)
- HT protect: Enabled Disabled
- Channel Number: 6 (dropdown menu)
- Antenna: Internal (8 dBi) External (N-Type)
- Output Power: Full (dropdown menu)
- Data Rate: Auto (dropdown menu)
- Channel mode: 20MHZ (dropdown menu)
- Extension channel protection mode: None (dropdown menu)

At the bottom of the form, there are two buttons: "Apply" and "Cancel".

- Set wireless mode to AP, Wireless Client (CPE), Bridge, or AP Repeater, and specify a unique Wireless Network Name (SSID), if AP or AP Repeater mode is selected.

- In CPE mode (Wireless Client), click **Site Survey** to scan for available wireless access points. Select the wireless access point that you wish to connect to, then press **Selected**. Press **Refresh** to update list.



- Click **Apply** on the **Wireless Basic Settings** page to establish connection. If the AP that you are connecting to requires authentication or password, then choose the **Security Settings** page and specify the appropriate settings.



Chapter 4 Troubleshooting

1. The login dialog doesn't appear after typing the default IP address 192.168.1.1 in the address bar of the web browser?

A: Make sure that the EX2-8 is correctly connected to your PC and is running. Then make sure that the IP address of your PC is set in the same subnet as the EX2-8, which means that the IP address of your PC should be between 192.168.1.2 and 192.168.1.254. You may need to reset the radio to factory defaults in order to restore the default IP address.

2. In the CPE mode, the quality of the connection is bad or unstable after selecting an access point from the Site Survey?

A: Ensure proper antenna alignment between the AP and CPE for optimum signal strength. Ensure that you have sufficient link margin by checking the signal strength in the **Site Survey**. You may need to relocate the AP or CPE to improve link quality.