



Tranzeo WiFi

TR-Series Quick Configuration Guide

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Preface

This guide provides all the information you need to manage the Tranzeo TR Series Devices with AirSync. This document is intended for system administrators who are familiar with fundamentals of WLAN (Wireless Local Area Networks) technology and already have already installed AirSync server and AirConsole.

Document Revision Level





Revision	Date	Description
Version 1.0.0	October 2008	Preliminary Release
Version 1.0.1	November 2008	Cosmetics changes

Document Conventions

This guide uses the following typographic conventions:

Convention	Description
Bold	Text on a window, other than the window title, including menus, menu options, buttons, and labels.
<i>Italic</i>	Variable.
screen/code	Text displayed or entered on screen or at the command prompt.
boldface screen font	Information you must enter is in boldface screen font.
< italic screen >	Variables appear in italic screen font between angle brackets.
[]	Default responses to system prompts are in square brackets.

This guide uses icons to draw your attention to certain information. Warnings are the most critical.

Icon	Meaning	Description
	Note	Notes call attention to important and/or additional information.
	Tip	Tips provide helpful information, guidelines, or suggestions for performing tasks more effectively.
	Caution	Cautions notify the user of adverse conditions and/or consequences (e.g., disruptive operations).
	WARNING	Warnings notify the user of severe conditions and/or consequences (e.g., destructive operations).

1 Quick Configuration

1.1 Step 1: Access to the device

The TR Series Devices has a default, static IP address configured on its Ethernet (eth0) interface with web access enabled. This IP address is printed on the packaging in which the TR Series device was provided. We will use 169.254.253.253 as the default IP address the device has been configured to use in this document. Web access should be used for initial configuration of each TR series device, using the default address specified on the TR Series device packaging.

To connect to the TR Series Device, first configure your PC Ethernet interface to share the same subnet with the TR Series device. Next, connect the computer's Ethernet cable to the "PC" port on the TR Series Device PoE injector.

Now we can access the TR Series device's web interface. Open a web browser on the PC and enter this address directly in to the web browser, for example to 169.254.253.253. A login window such as shown below will open. Use the default login of *admin* with password *default*:

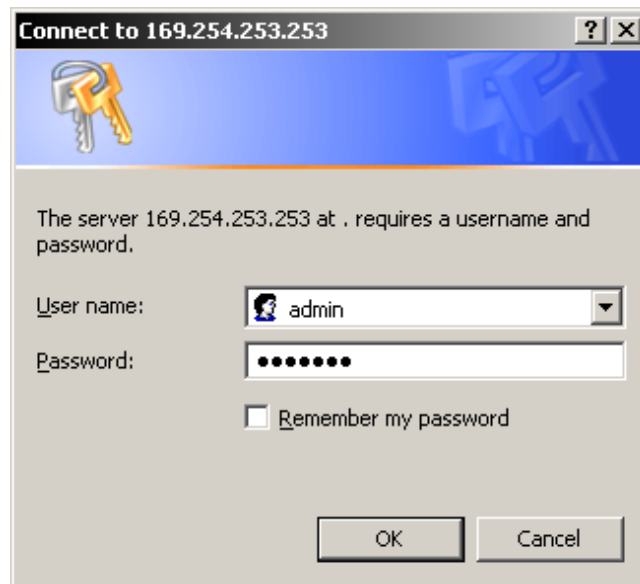


Figure 1. Login page.

1.2 Step 2: Network Configuration

After login via the webgui, click on the Network Configuration tab as illustrated below:

The screenshot shows the TR6 Configuration web interface in Microsoft Internet Explorer. The browser address bar shows <http://localhost:8585/frameset.html>. The page title is "TR6 Configuration - Microsoft Internet Explorer". The main content area is titled "Network Configuration". On the left, there is a sidebar with the "TRANZEO" logo and various configuration links. The main area has two tabs: "Bridge" (selected) and "Router". Under the "Bridge" tab, there are sections for "MTU(bytes)", "Allow", "Access to Web Server", "MAC Address", "Cloning into", "WAN", "IP Mode", "IP Address", "Subnet Mask", "Gateway", "DNS1", "DNS2", "Domain Name", "Routing", "NAT", "QoS", "Static Routes", "Port Management", "Port Filter", "Port Forwarding", "Ethernet (wired) Port A", "Speed (Mbs), Duplex", and "Ethernet (wired) Port B", "Speed (Mbs), Duplex". Under the "Router" tab, there are sections for "DHCP Server", "IP Address", and "Subnet Mask". The "Apply" button is at the bottom of the main content area.

Figure 2. Network Configuration page.

Set the appropriate parameters in the Network Configuration page. Especially: Bridge or Router mode, WAN or LAN mode, IP address, net mask (set Gateway and DNS if you selected LAN mode). To save the settings click the **Apply** button.

1.3 Step 3: Wireless Settings

Next, enter the Wireless Settings page:

TR6 Configuration - Microsoft Internet Explorer

Address: http://localhost:8585/frameset.html

Wireless Settings

802.11a (5 GHz)
TR6 Router with
External 15 dBi Antenna

AP Setup Menu
Wireless Settings
Administrative Settings
WDS
Security
Basic
WPA
Access Control
Status
Stations List
ARP Table
Statistics
System Performance
Network Configuration
802.11h
DFS/TPC
Log Off

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Wireless Mode
☐ Infrastructure Station
☒ Access Point

SSID
TR5aN

Visibility Status
☒ Visible ☐ Invisible

Location
Outdoor

Channel Width
Full (20MHz)

Channel
CH 149 - 5745/20 MHz

Supported Tx Rates
* indicates basic rates. All basic rates supported by the AP must also be supported by the STA or it will prevent association.

Using Tx Rate
36Mbps

RTS Threshold (0-3000)
3000

Fragmentation Threshold (256-2346)
2346

Link Distance
0 km

ACK Timeout Tuning (~100 - 100 μs)
100

Beacon Interval (ms)
0

DTIM Interval
0

Burst Time
0

802.11d Enabled
☐

PXP Mode Enabled
☐

PXP MAC Address
000000000023

Block Inter-client Traffic
☐

Power Cap (dBm)
7.0

Select Country
USA: FCC US

Antenna Gain (0 - 100 dBi)
15.0

Preamble
AUTO

Apply Back to Information Page

Figure 3. Wireless Settings page.

Set the appropriate parameters in the Wireless Settings page. Especially: Wireless Mode, SSID, Channel, Tx Rate, Beacon Interval. To save the settings click the **Apply** button.

Now the TR Series device is ready to use with AirSync and as a WiFi Access Point in our network.

2 Using AirSync with TR Series Devices

2.1 AirSync supported functionality

TR Series Devices are supported by AirSync in the following ways:

- Manual device registration – ability to manually register and then support a device in AirSync system.
- Configuration management – ability to configure interface parameters from AirConsole.
- Network monitoring – ability to observe on AirConsole charts with historical or current traffic and radio parameters on interfaces and specific connections.

2.2 Registration process and device detail view

To maintenance and monitor TR Series Devices in a managed network, first register each device in AirSync. Each TR Series device must be manually registered with AirSync. To accomplish this first enter AirConsole end enter the Devices tab.

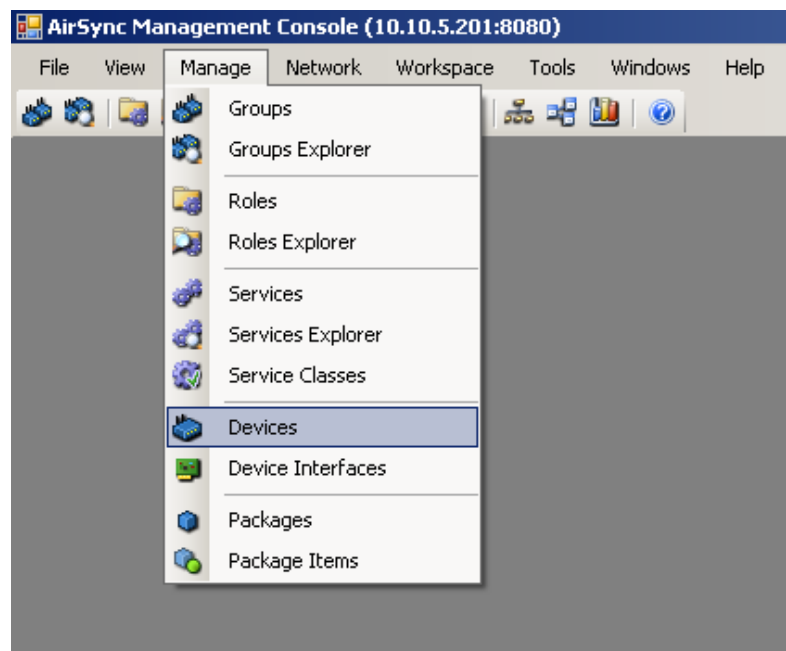


Figure 4. The Manage ribbon tab.

To register each TR Series Device click the **Add Device** button, set the proper values (especially Device Type, User Name and Password) within each empty white field, and click **Save**.

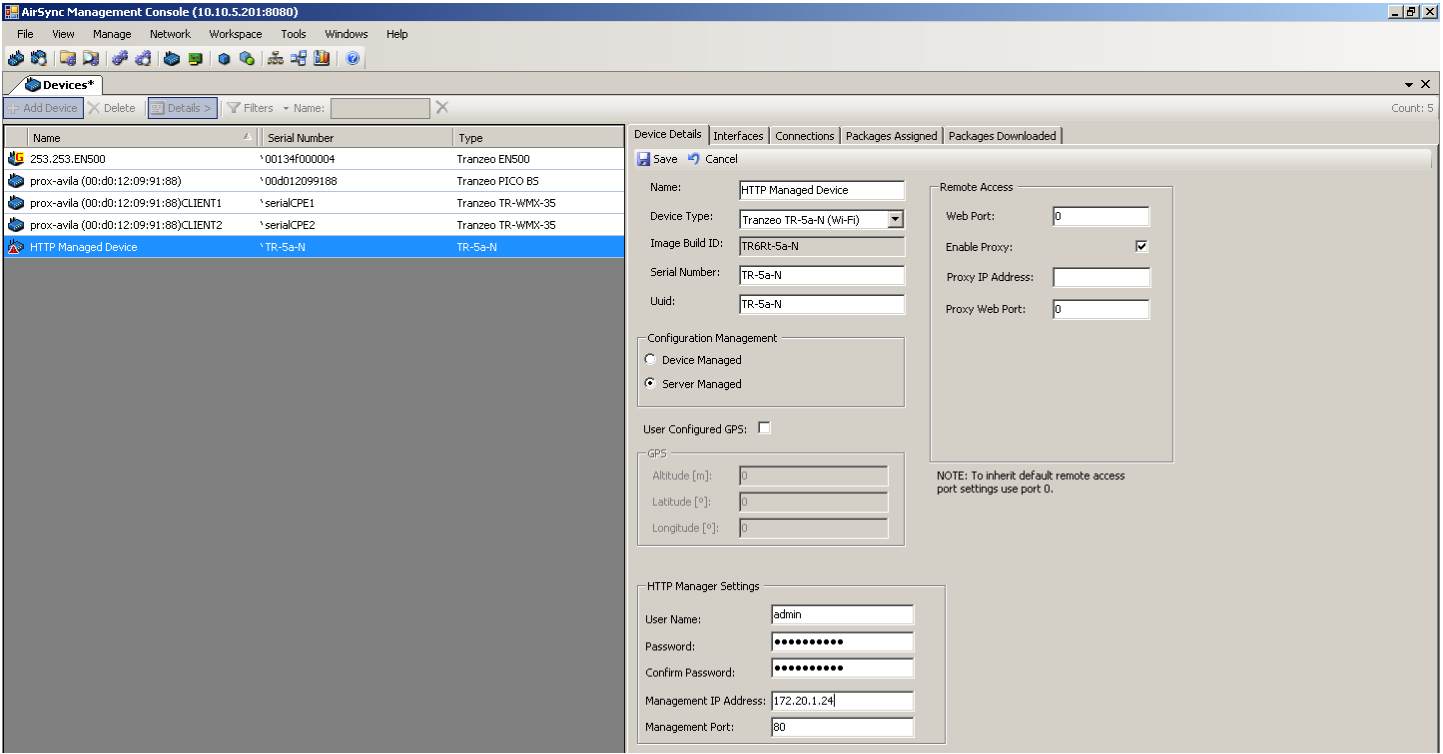


Figure 5. Add Device.

Next you must add the device interface.

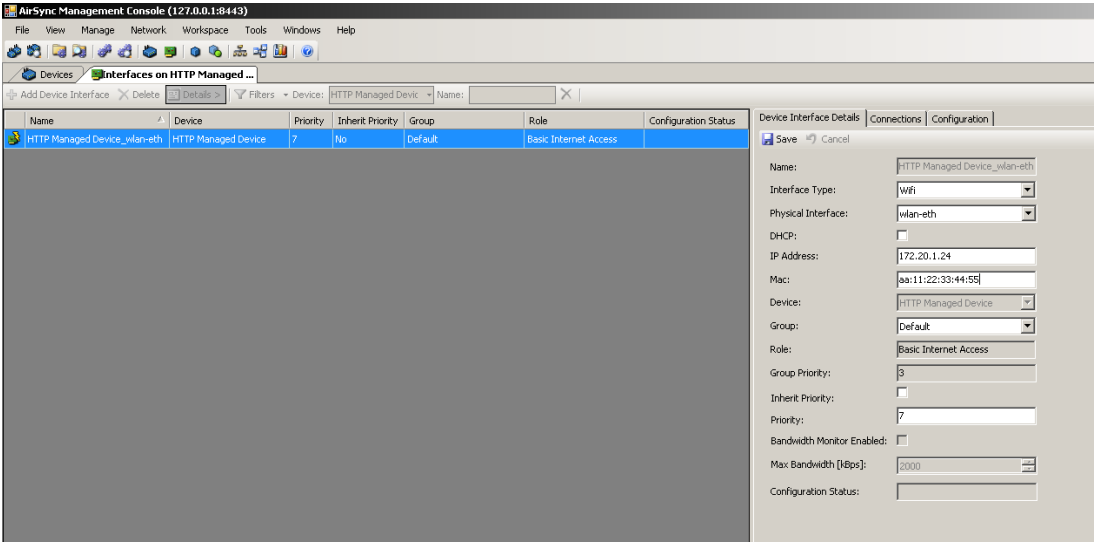


Figure 6. Add Device Interface.

Set proper values in the Device Interface page (especially IP Address) and click the **Save** button. If everything was set properly, the TR Series Device will be added to the list and its status will be shown in AirConsole, as illustrated in the following figure.

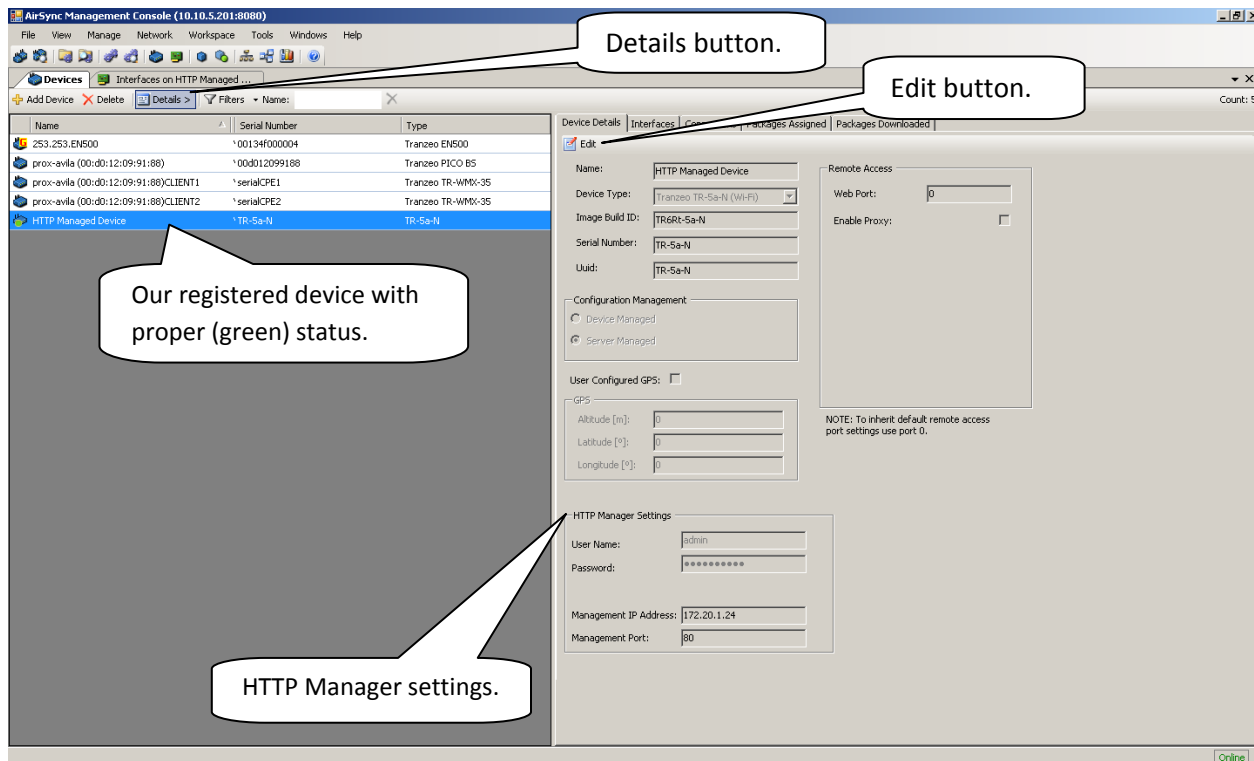


Figure 7. Device Tab, details view.

Figure 7 illustrates how AirConsole's details view shows the status of each device. This view is accessible using the **Details** button in AirConsole. The details view provides basic information about each device such as the device: Name, Image Build ID, Uuid etc. Within this view you can edit and change device specific information. To do this, use the **Edit** button on Device details tab. You can change such field as Name, Remote Access IP Address, HTTP management option and GPS parameters. After any changes, you must save (use the **Save** button). You can always cancel any changes and leave edit mode using the **Cancel** button.

2.3 Configuration manager and interface detail view

To change interface parameters first we need to open the interface tab. There are a few different ways to do this and one of them is to choose **Device interface** from the manage tabs ribbon (for details see Figure 4. The Manage ribbon tab.).

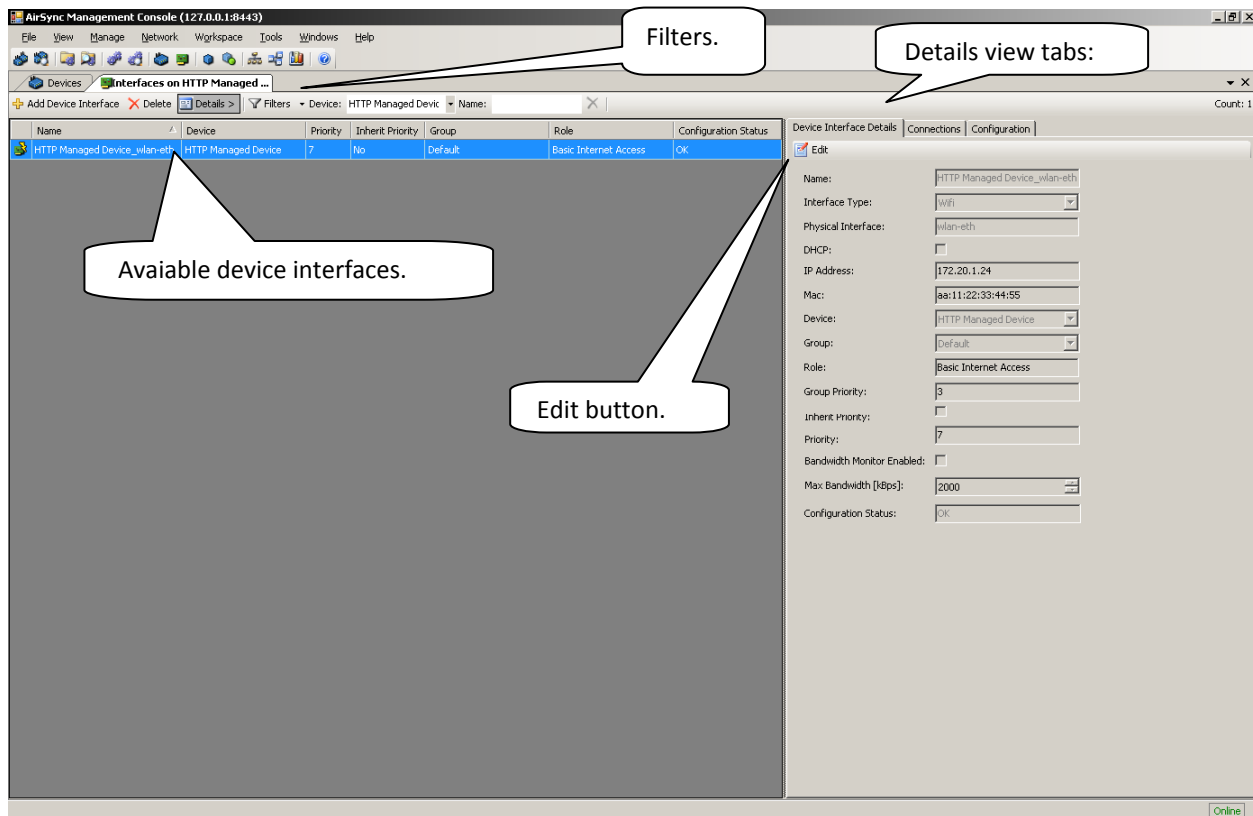


Figure 8. Interface tab, details view.

Here we have the available list of interfaces for of all devices available in AirSync (in this figure filtered by device). Use the **Filter** button to filter interfaces by device (other option are also available). Use the **Details** button to see more details and hidden subtabs. Now we can see additional information about the interface we chose from the list (Figure 8. Interface tab, details view.). Using the **Edit** button you can change some basic information about the interface.

Choose the interface and enter the "Configuration" tab on the interface details view to see the Configuration Manager.

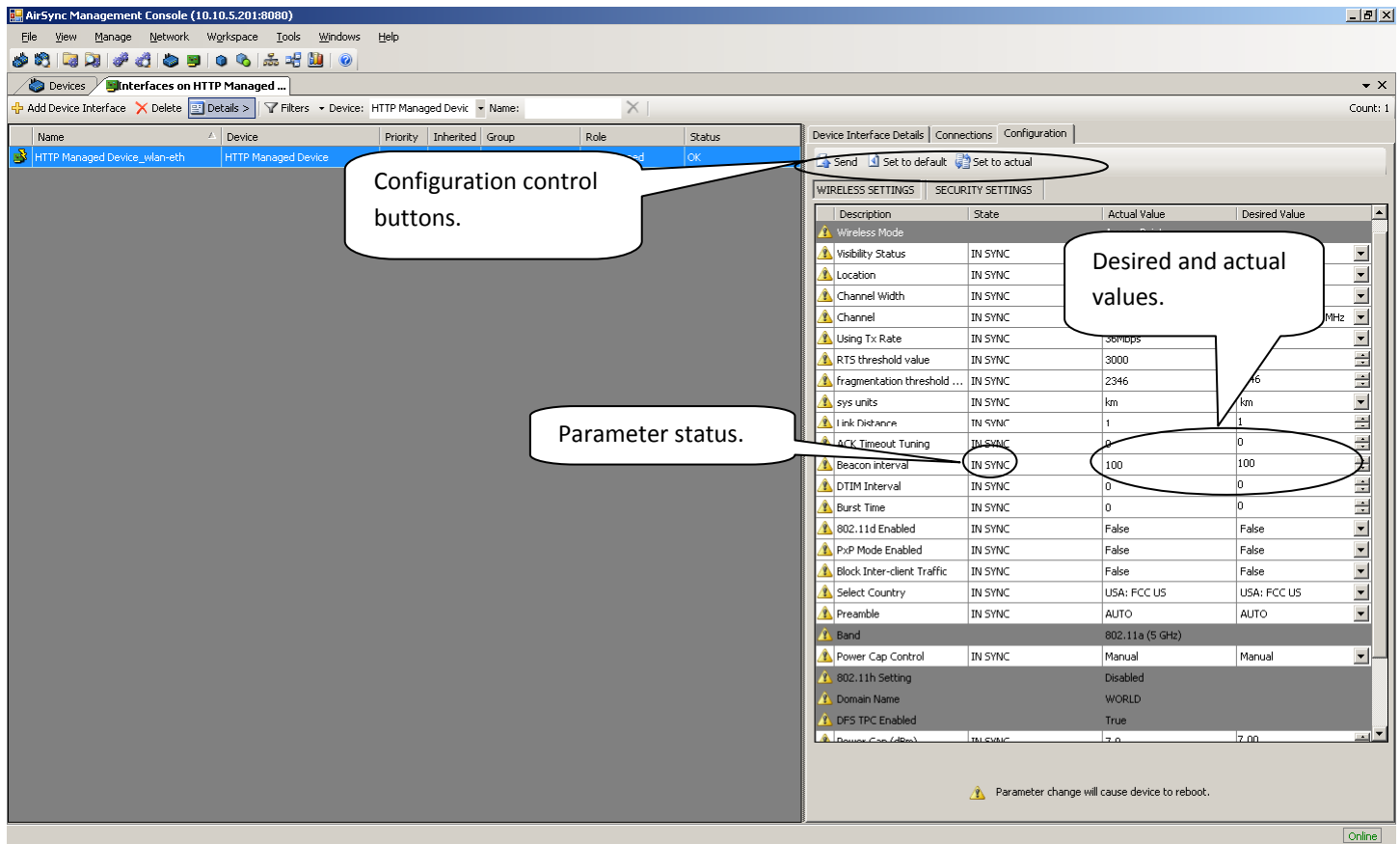


Figure 9. Configuration manager.

The configuration manager for the wlan-eth interface is split in to 2 columns:

- **WIRELESS SETTINGS**, where you can set radio settings such as wireless mode, channel or SSID;
- **SECURITY SETTINGS**, where you can set security settings such as security mode, authentication method or WEP keys.

Each parameter has its own status, actual value (that is set on device) and desired value (that we can change manually in AirConsole) (see Figure 9. Configuration manager.). The following synchronization states between the AirSync server and EnRoute devices are possible:

- **IN SYNC**: the actual value of parameter is equal to the desired value.
- **OUT OF SYNC**: the actual value is different than the desired value.
- **REQUESTED**: AirSync has just sent new desired values to the device.
- **IN PROGRESS**, the changing parameter process is in progress.

- **TIME OUT:** the changing parameter process didn't finish on time.

To modify parameters we need to use one of the configuration control buttons:

- **Send**, sends the “desired value” to each device;
- **Set to default**, sets the desired value of all parameters on the interface to the default values (remember to use the Send button after that action, to propagate all changes);
- **Set to actual**, sets the desired value of all parameters pertaining to the interface to their actual value as stored on the TR series device.

2.4 Statistics and monitoring

In the AirConsole application, the connection tab is separated into actual (white and blue background) and expired (red and pink background) connections. The connections tab is available in the device details view (for all devices) and in the interface detail view (only for the individual interfaces). This idea is illustrated in Figure 10. The connection tab.

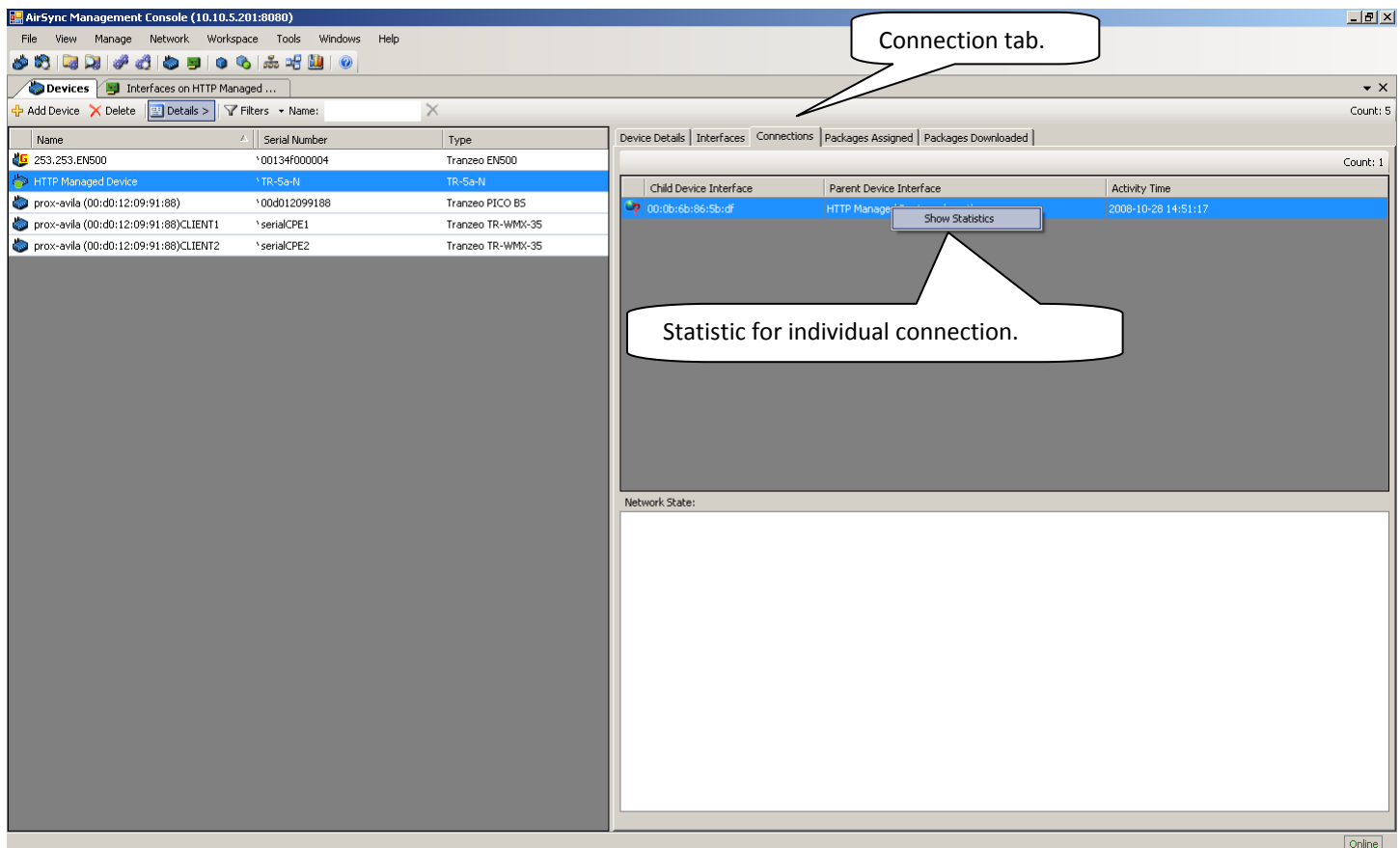


Figure 10. The connection tab.

AirSync has a built in statistic module, which can show statistics for each device, individual interface, or individual connection. The statistics menu can be opened from within the context menu of a device (see Figure 11. Statistics via device context menu.), interface (see Figure 12. Statistics via interface context menu.) or individual connection (see Figure 10. The connection tab.).

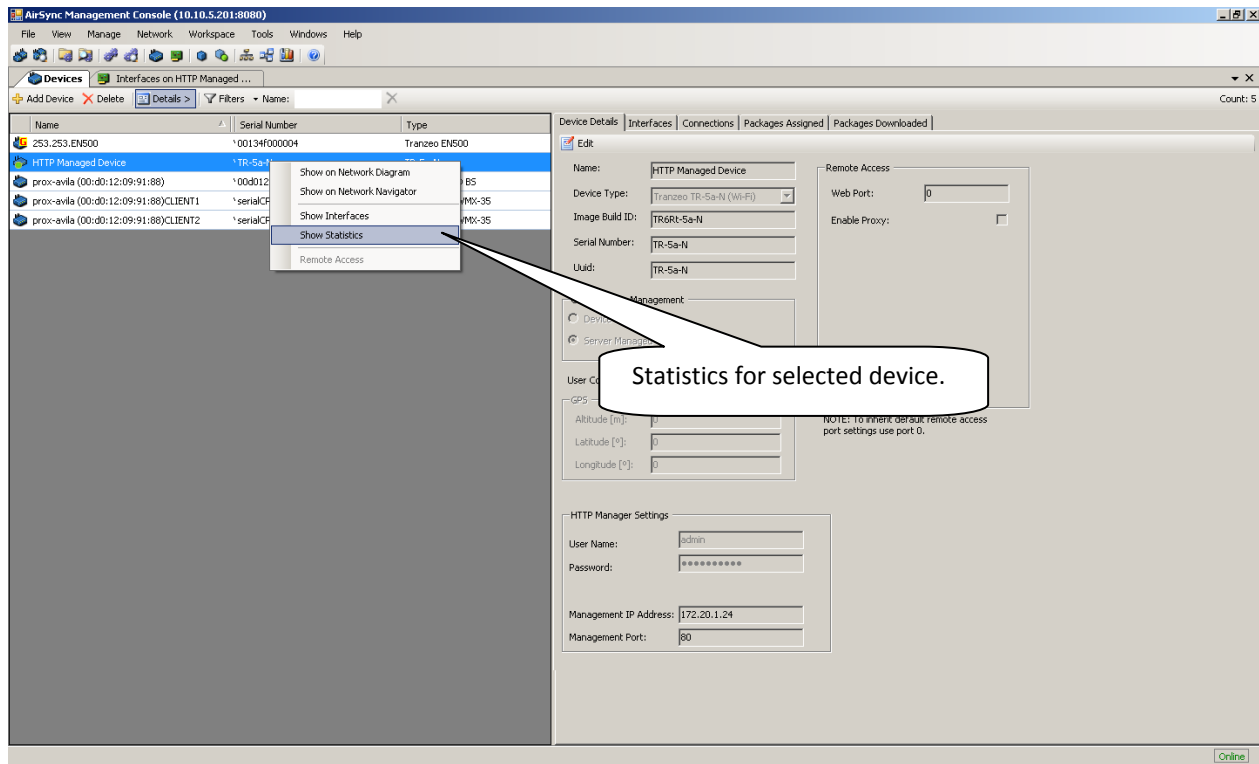


Figure 11. Statistics via device context menu.

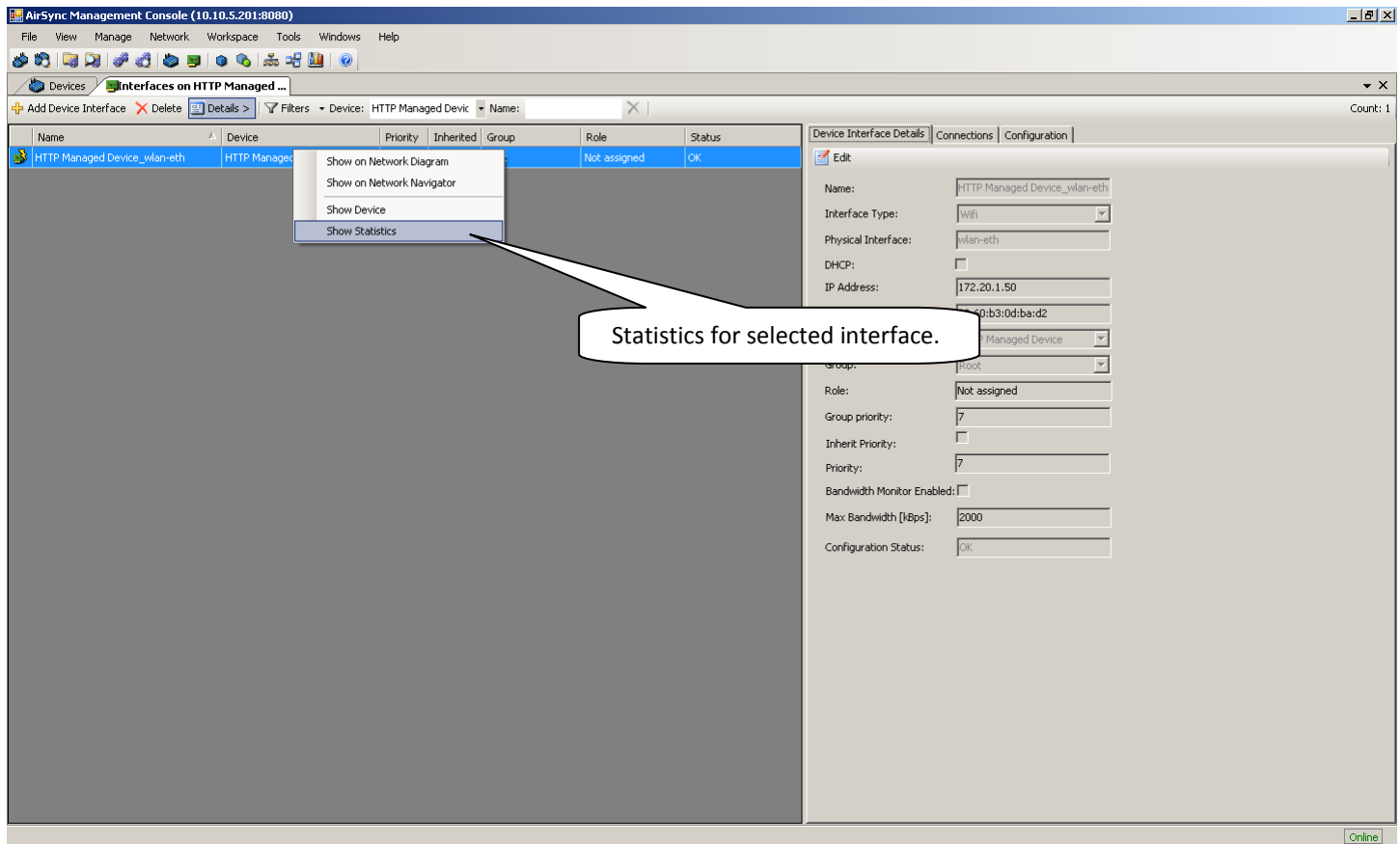


Figure 12. Statistics via interface context menu.

Each interface (device) statistics window we can show the transmitted bytes (TxBytes), transmitted frames (TxFrames), received bytes (RxBytes), received frames (RxFrames), and duplicate frames received (RxDuplicates) as shown in Figure 13. Device statistics.

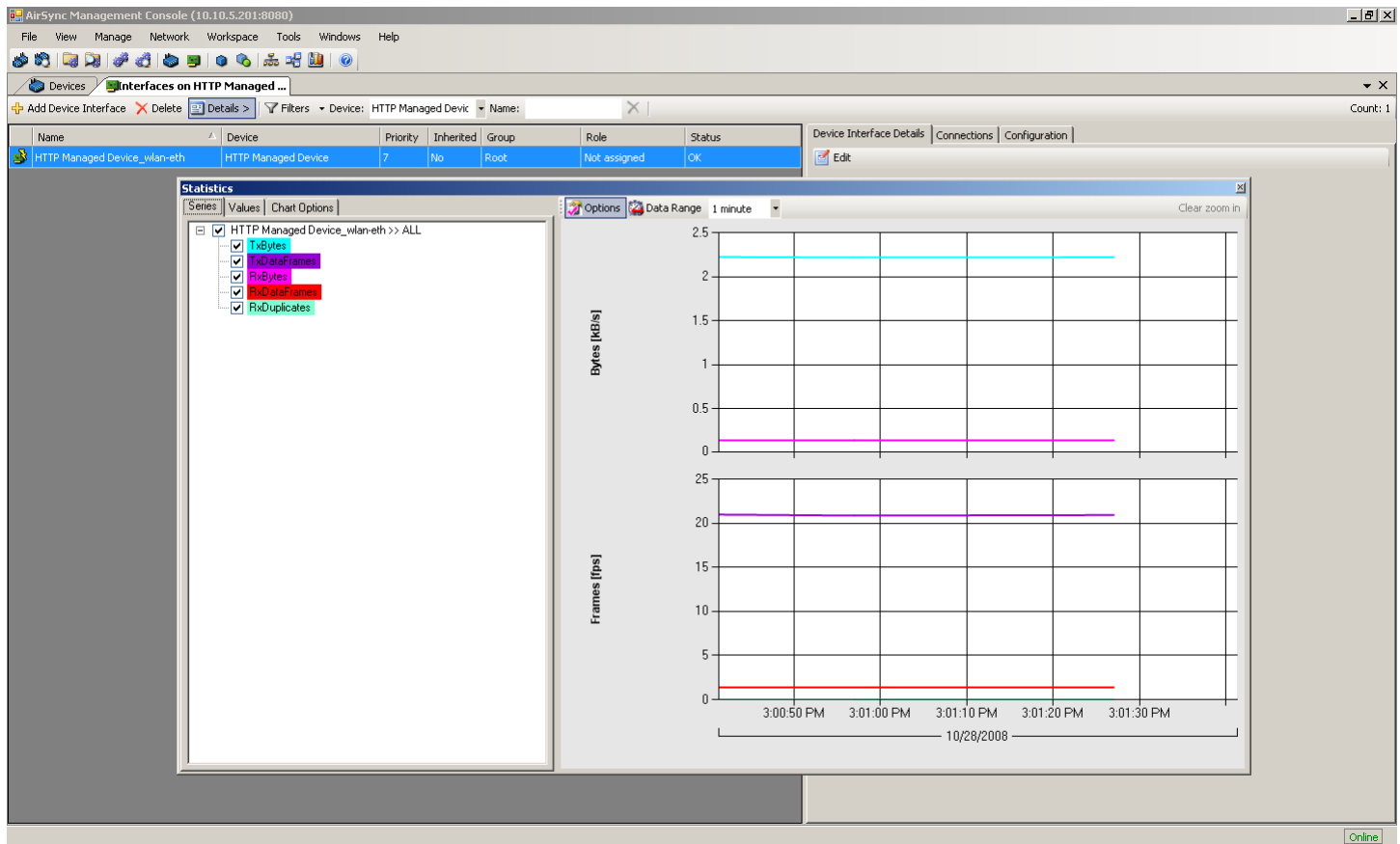


Figure 13. Device statistics.

For separated connection statistics the transmitted bytes (TxBytes), transmitted frames (TxFrames), received bytes (RxBytes), received frames (RxFrames), and duplicate frames received (RxDuplicates) are also available. In addition, for each individual connection we can also view the RSSI, SignalLevel and Rate (as is shown in Figure 14. Individual connection statistics.).

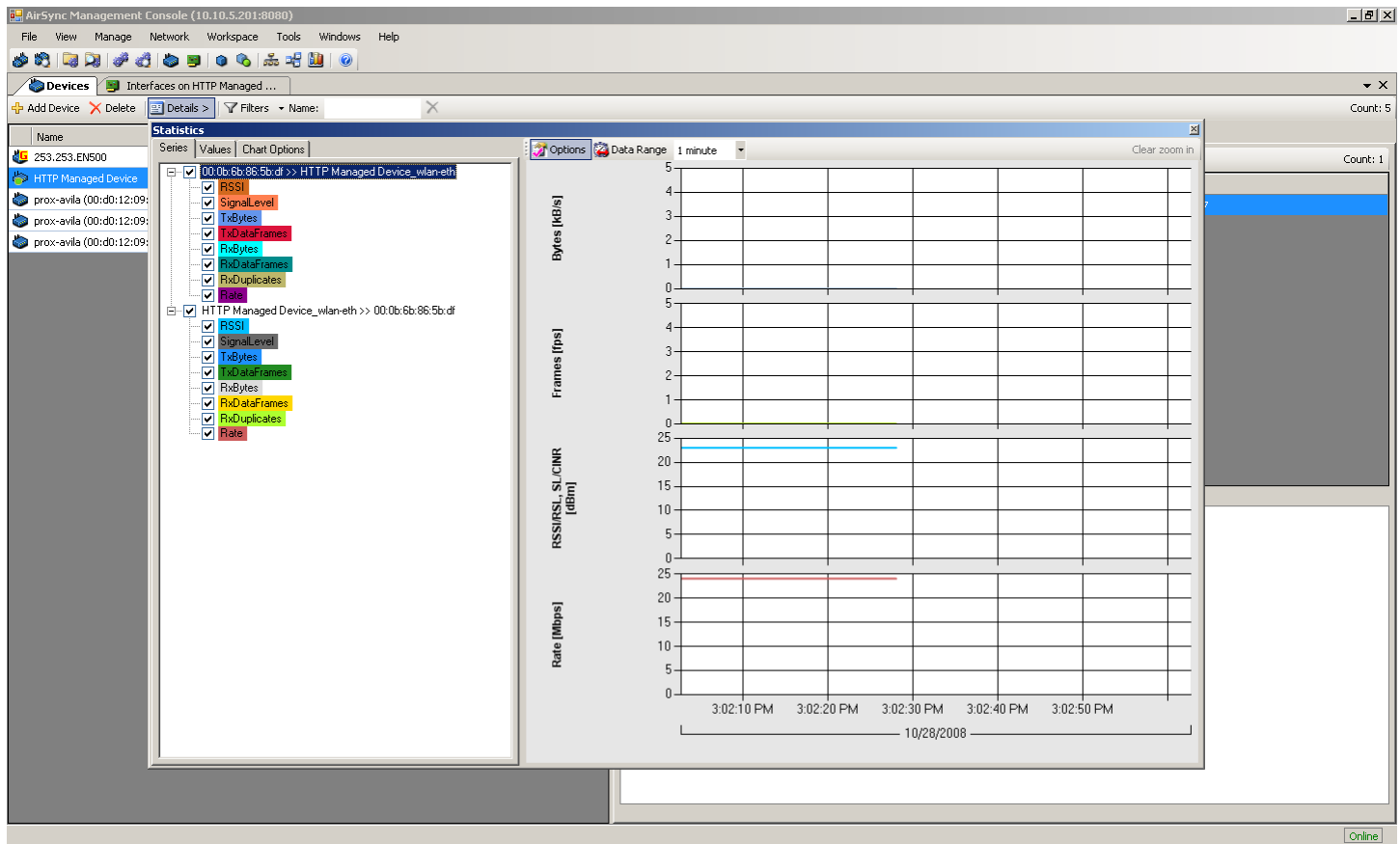


Figure 14. Individual connection statistics.

For more information, please visit www.tranzeo.com.