



AnywhereUSB[®]

Models 2/5/5M/14/TS44

User Guide

AnywhereUSB 2/5/5M/14/TS44 User Guide

(Part number 90001085 K)

Revision	Date	Description
J	July 2014	Release to include model AnywhereUSB TS/44. This guide obsoletes 90001086.
K	November 2015	<ul style="list-style-type: none">• Added set realportusb command description• Added AnywhereUSB encryption• Updated to match latest firmware release• General editorial updates and content corrections• Updated template

Trademarks and copyright

AnywhereUSB, Watchport, Digi, Digi International, and the Digi logo are trademarks or registered trademarks in the United States and other countries worldwide. All other trademarks mentioned in this document are the property of their respective owners.

© 2015 Digi International. All rights reserved.

Disclaimers

Information in this document is subject to change without notice and does not represent a commitment on the part of Digi International. Digi provides this document “as is,” without warranty of any kind, expressed or implied, including, but not limited to, the implied warranties of fitness or merchantability for a particular purpose. Digi may make improvements and/or changes in this manual or in the product(s) and/or the program(s) described in this manual at any time.

Warranty

View the product warranties online: <http://www.digi.com/howtobuy/terms>

Customer support

If you need assistance, contact Digi Technical Support:

Telephone (8:00 am — 5:00 pm U.S. Central Time):

866.765.9885 toll-free U.S.A. and Canada

801.765.9885 Worldwide

Online: www.digi.com/support/eservice

Mail:

Digi International

11001 Bren Road East

Minnetonka, MN 55343

USA

Contents

Introduction

Product overview	7
AnywhereUSB hardware components	8
AnywhereUSB/2	8
AnywhereUSB/5 (G2 and M models)	9
AnywhereUSB/5 (first generation)	10
AnywhereUSB/TS44	11
AnywhereUSB/14	12
Features	13
User interfaces	13
IP address assignment	13
Security features	13
Configuration management	13
RealPort software	14

Getting started

What's in the box?	15
Connect the hardware	15
Install the driver software	15

Initial AnywhereUSB configuration

Configure the IP address	17
AnywhereUSB/5 (first generation)	17
AnywhereUSB (second generation)	18
Configure AnywhereUSB encryption	19
Create and validate the CA certificate	19
Install the CA certificate on the AnywhereUSB device	20
Enable the Encrypted AnywhereUSB network service	20
Install the CA certificate on the host computer	21

Connect a host computer to AnywhereUSB

Connect to the AnywhereUSB	22
----------------------------------	----

AnywhereUSB Remote Hub Configuration Utility

Start the AnywhereUSB Remote Hub Configuration Utility	24
Remote Hub Configuration Utility window	25
Menu options	26
File menu: Preferences	26
Edit menu: Connection List	26
Edit menu: Discovery List	27
Command menu: Configure	28
Command menu: Connect	28
Command menu: Web UI	28
View menu: Driver Information	29
View menu: Refresh (F5)	29

Discover AnywhereUSB devices on other subnets

Adding IP addresses to the Discovery List	30
---	----

Multi-host connections

Configure groups	31
Dynamic group assignment	33
Host computer configuration	34

Configure from the web UI

Home page	36
Applying and saving changes	37
Canceling changes	37
Restoring the AnywhereUSB to factory defaults	37
Online help	37
Configuration	37
Network settings	37
Serial port settings (AnywhereUSB/14 and AnywhereUSB TS44 only)	40
System settings	43
Security settings	44
Applications (AnywhereUSB/5M and AnywhereUSB/14)	45
Management	45
Administration	46
X.509 Certificate and Key Management	46
Backup/restore settings	47
Update firmware	47
Factory default settings	48
System information	49
Reboot the AnywhereUSB	50

Configure from the command line

Access the command line interface	51
Supported commands	52

Hardware specifications

AnywhereUSB/2	53
Dimensions	53

Environmental	53
Power requirements	53
Hardware interface features	54
Network interface features	54
AnywhereUSB/5 (G2), AnywhereUSB/5 M	54
Dimensions	54
Environmental	54
Power requirements	54
Hardware interface features	55
Network interface features	55
AnywhereUSB/5 (first generation)	55
Dimensions	55
Environmental	55
Power requirements	55
AnywhereUSB TS44	56
Dimensions	56
Environmental	56
Power requirements	56
Hardware interface features	56
Serial interface features	56
Serial port pinouts	57
Network interface features	57
AnywhereUSB/14	57
Dimensions	57
Environmental	57
Power requirements	57
Hardware interface features	58
Network interface features	58

Regulatory and safety information

GOST certification	59
Safety information	59
Transitional CoC No + issuing/expiration dates	59
Address and phone of service facility	59

Troubleshooting

Basic troubleshooting steps	60
AnywhereUSB error when connecting on a virtual machine	60
AnywhereUSB USB device compatibility list	61
Compatible USB devices	61
Limited support USB devices	62
Incompatible USB devices	62
USB modems	62
No remote hubs found	62
USB license dongle cannot be found	63
Connecting to this computer message	64
Firewall software	64
Windows New Hardware Wizard	64
AnywhereUSB is connected to a different computer	64
Check the network configuration	65
Reinstall the AnywhereUSB software	65

Appendix A: AnywhereUSB permitted device list

About the permitted device list	66
Examples	66
Configure the permitted device list	67

Appendix B: Understanding hubs

About hubs	69
Upstream and downstream ports	69
Power requirements	69
Series limits	70

Appendix C: Firewall support

Configure for firewall support	71
--------------------------------------	----

Introduction

Product overview

The AnywhereUSB is the first remote networking solution to utilize USB over IP® technology. Since the host computer or server may be located remotely, you can deploy AnywhereUSB devices in harsh or non-secure environments, making it ideal for point-of-sale, kiosks, surveillance, industrial automation, or any mission-critical enterprise application. This Ethernet-attached solution provides two, four, five, or fourteen USB ports to connect peripheral devices such as USB license dongles, barcode scanners, receipt printers, as well as Digi Watchport® /V2 or Watchport® / V3 USB Camera and Watchport Sensors.

The AnywhereUSB product line consists of the following models:

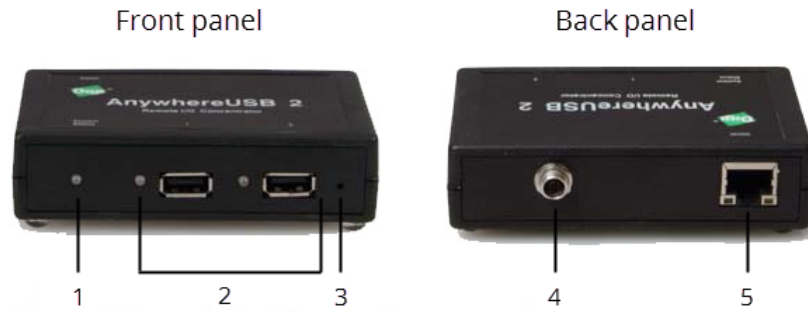
- AnywhereUSB/5 (first generation)
- Second generation AnywhereUSB models:
 - AnywhereUSB/2
 - AnywhereUSB/5 (G2)
 - AnywhereUSB/5M
 - AnywhereUSB/14
 - AnywhereUSB/TS44

The second generation AnywhereUSB devices provide a built-in web server and a command line interface (CLI) for additional configuration options.

AnywhereUSB hardware components

The AnywhereUSB models have the following controls, ports, and connectors.

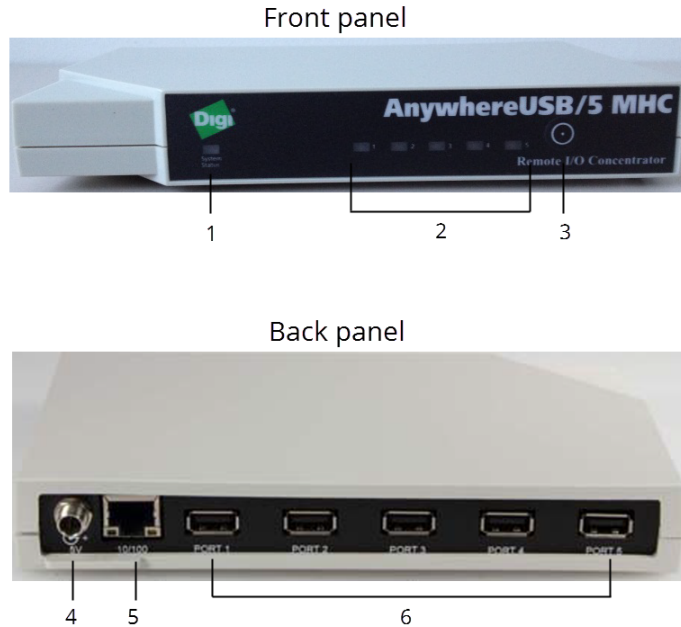
AnywhereUSB/2



Item	Name	Description
1	System Status LED	When the device is powered on and during normal operation, the System Status LED blinks slow green. If the System Status light blinks red for an extended period of time, contact Digi Technical Support.
2	USB LEDs and ports	Two USB ports with two USB LEDs. The USB LEDs are solid green when any of the USB ports are connected to a host computer. The USB LEDs are off when any of the USB ports are not connected to a host computer.
3	Reset button	Use this button to either restart the device or reset its configuration to factory defaults.
4	Power connector	Use the included power adapter.
5	Ethernet connector	The left Ethernet LED is green when connected to a network and the right Ethernet LED blinks orange when there is data transmission activity on the port. Use a standard Ethernet cable.

AnywhereUSB/5 (G2 and M models)

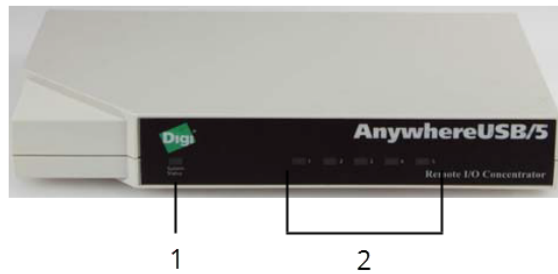
The AnywhereUSB/5 (G2) and AnywhereUSB/5 M models have the same controls, ports, and connectors, as shown in the following image of an AnywhereUSB/5 M.



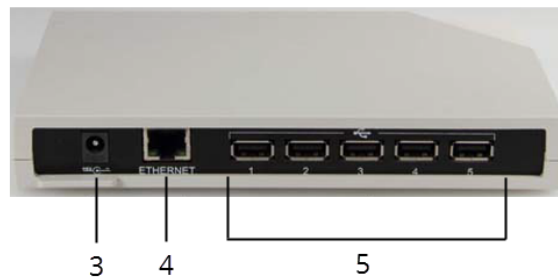
Item	Name	Description
1	System Status LED	When the device is powered on and during normal operation, the System Status LED blinks slow green. If the System Status light blinks red for an extended period of time, contact Digi Technical Support.
2	USB LEDs	Five USB LEDs. A USB LED is solid green when its USB port is connected to a host computer. A USB LED is off when its USB port is not connected to a host computer.
3	Reset button	When pressed, the Reset button either restarts the device or resets its configuration to factory defaults.
4	Power connector	Use the included power adapter. Note The second generation AWUSB/5 (G2 and M) uses an improved center-positive power supply with a locking barrel connector, which is different than first generation AWUSB/5 devices. Power-supplies are NOT interchangeable; use only the power supply provided with the device.
5	Ethernet connector	The left Ethernet LED is green when connected to a network and the right Ethernet LED blinks orange when there is data transmission activity on the port. Use a standard Ethernet cable.
6	USB ports	Five USB ports to connect USB devices.

AnywhereUSB/5 (first generation)

Front panel



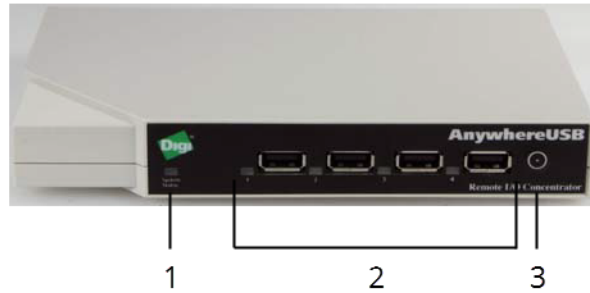
Back panel



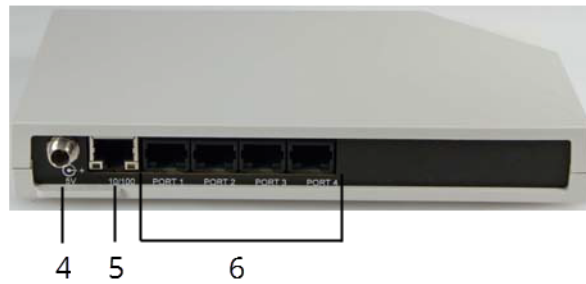
Item	Name	Description
1	System Status LED	On initial power-up, the System Status LED is orange for two seconds while the system initializes and then blinks slow green. If DHCP is enabled and the device is booting up, the System Status LED will be orange while the AnywhereUSB searches for a DHCP server. If it cannot find a DHCP server, it will return to the default configuration to allow the Configuration Utility to assign a static IP address. If the System Status remains red for an extended period of time, contact Digi Technical Support.
2	USB LEDs	Five USB LEDs; note the following LED patterns: <ul style="list-style-type: none"> • Green hunting pattern across all 5 USB LEDs: Not connected to a host computer. • Orange alternating on ports 1-3-5 and 2-4: Updating image in Flash. Do not remove power from AnywhereUSB while flash is being updated. Doing so will damage your AnywhereUSB. • Solid green: The USB ports are connected to a host computer. • Green over red hunting pattern: Contact Digi Technical Support.
3	Power connector	Use the included power adapter. Note The first generation AWUSB/5 uses a center-negative power supply which is different than the newer AWUSB/5 (G2) and AWUSB/5 M devices. Power-supplies are NOT interchangeable; use only the power supply that is provided with the device.
4	Ethernet connector	The left Ethernet LED is green when connected to a network and the right Ethernet LED blinks orange when there is data transmission activity on the port. Use a standard Ethernet cable.
5	USB ports	Five USB ports to connect USB devices.

AnywhereUSB/TS44

Front panel



Back panel



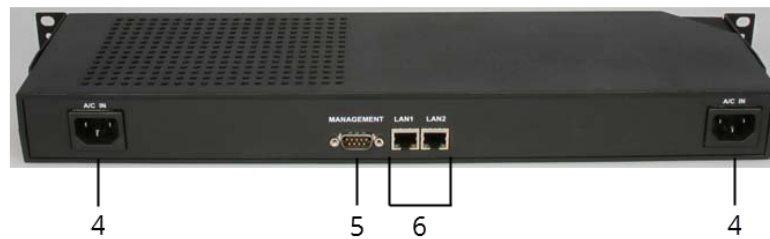
Item	Name	Description
1	System Status LED	When the device is powered on and in normal operation, the System Status LED blinks green. If the System Status light blinks red for an extended period of time, contact Digi Technical Support.
2	USB LEDs and ports	Four USB ports and corresponding LEDs. A USB LED is solid green when its USB port is connected to a host computer. A USB LED is off when its USB port is not connected to a host computer.
3	Reset button	Use this button to either restart the device or reset its configuration to factory defaults.
4	Power connector	Use the included power adapter.
5	Ethernet connector	The left Ethernet LED is green when connected to a network and the right Ethernet LED blinks orange when there is data transmission activity on the port. Use a standard Ethernet cable.
6	RS-232 RJ45 serial ports	Use these serial ports when using RealPort or for console access to the AnywhereUSB device.

AnywhereUSB/14

Front panel



Back panel



Item	Name	Description
1	System Status LED	When the device is powered on and in normal operation, the System Status LED blinks slow green. If the System Status light blinks red for an extended period of time, contact Digi Technical Support.
2	USB LEDs and ports	14 USB ports with corresponding LEDs. A USB LED is solid green when a USB port is connected to a host computer. A USB LED is off when a USB port is not connected to a host computer.
3	Reset button	Use this button to either restart the device or reset its configuration to factory defaults.
4	Power connector	The AnywhereUSB/14 has two power connectors. When using only one power cable, you can use either of the power connectors. Use the included power cables.
5	RS-232 DB9 serial port	Use these serial ports when using RealPort or for console access to the AnywhereUSB device.
6	Ethernet connector	<p>The AnywhereUSB/14 has two Ethernet connectors for redundancy. The left Ethernet LED is green when connected to a network and the right Ethernet LED blinks orange when there is data transmission activity on the port.</p> <p>Use the ports as follows:</p> <ul style="list-style-type: none"> • LAN1 is the primary Ethernet port. Use this port when connecting only one Ethernet cable or as the main Ethernet connection when connecting both Ethernet ports. • LAN2 is the secondary Ethernet port and is used only for redundancy. Only connect an Ethernet cable to this port when you are already using LAN1. <p>Use a standard Ethernet cable.</p>

Features

Following is an overview of configurable features of the AnywhereUSB/2, AnywhereUSB/5 (G2), AnywhereUSB/5 M, AnywhereUSB TS44, and the AnywhereUSB/14 models.

User interfaces

There are several user interfaces for configuring and monitoring the AnywhereUSB family, including:

- Digi Device Discovery Utility, used to configure IP settings
- Web user interface (UI) for advanced configuring, monitoring, and administration
- AnywhereUSB command line interface (CLI)
- Simple Network Management Protocol (SNMP)
- AnywhereUSB Configuration Utility, used to connect/disconnect host computers

IP address assignment

There are several ways to assign an IP address to an AnywhereUSB:

- Static IP: Assign a specific IP address to a device, through the Digi Device Discovery Utility, the web UI, or the CLI.
- Dynamic Host Configuration Protocol (DHCP): This is enabled by default. Use DHCP to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters, such as the subnet mask and default gateway, and to provide other configuration information.
- Auto Private IP Addressing (APIPA), also known as Auto-IP: A standard protocol that will automatically assign an IP address from a reserved pool of standard Auto-IP addresses to the computer on which it is installed. The device is set to obtain its IP address automatically from a DHCP server. But if the DHCP server is unavailable or nonexistent, Auto-IP will assign the device an IP. If DHCP is enabled or responds later or you use ADDP, both will override the Auto-IP address previously assigned.

Security features

Security-related features in AnywhereUSB include:

- Secure access and authentication to the web UI and CLI.
- One password, one permission level.
- Selectively enable and disable network services such as ADDP, HTTP/HTTPS, SSH, SNMP, and telnet.
- Encrypted AnywhereUSB traffic: An optional setting that allows a host computer to confirm the AnywhereUSB device authenticity and to encrypt USB-over-IP traffic.

Configuration management

After an AnywhereUSB is configured and running, periodically perform any necessary configuration-management tasks, such as:

- Upgrade firmware
- Upgrade device driver
- Back up device configuration
- Reset to factory default settings
- Restart the device

RealPort software

The AnywhereUSB TS44 and AnywhereUSB/14 use RealPort COM port redirection for Microsoft Windows environments. RealPort software provides a virtual connection to serial devices, no matter where they reside on the network. The software is installed directly on the host computer and allows applications to talk to devices across a network as though the devices were directly attached to the host. Actually, the devices are connected to a Digi device somewhere on the network.

RealPort is unique among COM port re-directors because it is the only implementation that allows multiple connections to multiple ports over a single TCP/IP connection. Other implementations require a separate TCP/IP connection for each serial port. Unique features also include full hardware and software flow control, as well as tunable latency and throughput.

Encrypted RealPort

AnywhereUSB/14 and AnywhereUSB TS 44 supports RealPort software with encryption. Encrypted RealPort offers a secure Ethernet connection between the COM port and an AnywhereUSB device. Encryption prevents internal and external snooping of data across the network by encapsulating the TCP/IP packets in a Secure Sockets Layer (SSL) connection and encrypting the data using Advanced Encryption Standard (AES), one of the latest, most efficient security algorithms.

The Digi RealPort with encryption driver has earned Microsoft's Windows Hardware Quality Lab (WHQL) certification.

Drivers are available for a wide range of operating systems. It is ideal for financial, retail/point-of-sale, government or any application requiring enhanced security to protect sensitive information.

You can enable or disable access to the Encrypted RealPort service.

For details, visit the Digi Support site at www.digi.com/resources and search for the RealPort Installation User's Guide.

Getting started

This chapter explains what comes with each AnywhereUSB model, how to connect the hardware, and installing the necessary software.

What's in the box?

All AnywhereUSB models include the following hardware in the box:

- AnywhereUSB device
- Power supply*

*AnywhereUSB/14 domestic orders include two power cords.

Connect the hardware

You need a standard Ethernet cable, your AnywhereUSB device and power supply to complete these steps.

- 1 Connect a standard Ethernet network cable to the Ethernet port on the back of the AnywhereUSB device and the other end to the Ethernet port on a switch.
- 2 Connect the power supply or power cord (AnywhereUSB/14) to the power connector on the back of the AnywhereUSB device and the other end into a power outlet.

For the AnywhereUSB/14, you can use either power connector on the back on the device.

Before using the AnywhereUSB, you need to install the driver software, configure the IP address, and set up security (optional).

Install the driver software

You need a Microsoft Windows computer (host computer) to download and install the AnywhereUSB driver software from the Digi International Support website. The driver software includes the AnywhereUSB Remote Hub Configuration Utility.

- 1 Visit www.digi.com/support/product-support.
- 2 Find and select **AnywhereUSB** from the product list.
- 3 Select your **AnywhereUSB** model.

- 4 Download the appropriate driver software for your operating system.
- 5 Install the AnywhereUSB driver on the host computer.
- 6 Repeat this process for each host computer.

Note “Host computer” refers to a Microsoft Windows-based computer that you use to connect to the AnywhereUSB. In a virtual environment, the host computer is the Windows-based virtual machine. You do not need to install the AnywhereUSB drivers on the physical server running the virtual machine (sometimes called host).

After the driver software installs, the AnywhereUSB Remote Hub Configuration Utility opens. The utility automatically discovers AnywhereUSB devices on the local subnet and displays configuration information, including the DHCP address for a device.

Initial AnywhereUSB configuration

After connecting the hardware and installing the software, you can connect the device to the network and configure additional options, such as a static IP address, USB port groups, and encryption.

Configure the IP address

When successfully connected to a network, each AnywhereUSB device gets an IP address. The first generation AnywhereUSB/5 model has a default static IP address and the second generation AnywhereUSB/2/5/5M/14/TS44 models have dynamic IP addresses. You can make changes to the IP address, such as assigning a static IP. Make sure you follow the instructions for your AnywhereUSB model.

Note The host computer running Digi Device Discovery Utility and the AnywhereUSB device must be on the same subnet.

AnywhereUSB/5 (first generation)

By default, first generation AnywhereUSB/5 models support DHCP, but have static IP addresses.

Default IP address configuration:

- IP address: 192.168.254.222
- Subnet mask: 255.255.0.0

To configure a static IP address:

- 1 Open the **AnywhereUSB Remote Hub Configuration Utility**, which is included in the driver software you previously downloaded and installed. See [Install the driver software](#) on page 15.
- 2 Select your **AnywhereUSB/5** from the list on the left.
- 3 Click **Configure**.
- 4 Type the IP address, subnet mask, and default gateway.
- 5 Click **Update**.

AnywhereUSB (second generation)

DHCP is enabled by default on all second generation AnywhereUSB models.

The host computer connects only by using the AnywhereUSB IP address. If the AnywhereUSB IP address changes, the connection is lost. We recommend assigning a static IP address to make sure your device always has the same IP address and remains connected to the host computer. You can use either the web UI or the Digi Device Discovery Utility to configure the IP address.

Second generation AnywhereUSB models include:

- AnywhereUSB/2
- AnywhereUSB/5 (G2)
- AnywhereUSB/5 M
- AnywhereUSB TS44
- AnywhereUSB/14

Configure the IP address with Digi Device Discovery Utility

Use the Digi Device Discovery Utility to:

- See the IP address of an AnywhereUSB device.
- Configure a static IP address when the AnywhereUSB does not obtain an IP address from a DHCP server (such as when there is no available DHCP server).

Note You must run the Digi Device Discovery Utility from a computer on the same subnet as the AnywhereUSB. If discovery fails, make sure that the Microsoft Windows Firewall is off. For additional troubleshooting help, visit the Digi Knowledge Base at knowledge.digi.com.

To configure a static IP address using the Digi Device Discovery Utility:

- 1 Download and install the Digi Device Discovery Utility:
 - a Visit www.digi.com/support/product-support.
 - b Find and select **Device Discovery** from the product list.
 - c Download the utility for your operating system and install it.
- 2 Open the **Digi Device Discovery Utility**.
- 3 Right-click your AnywhereUSB device and select **Configure network settings**.
- 4 Type the IP address, subnet mask, and default gateway.
- 5 Click **Save**.

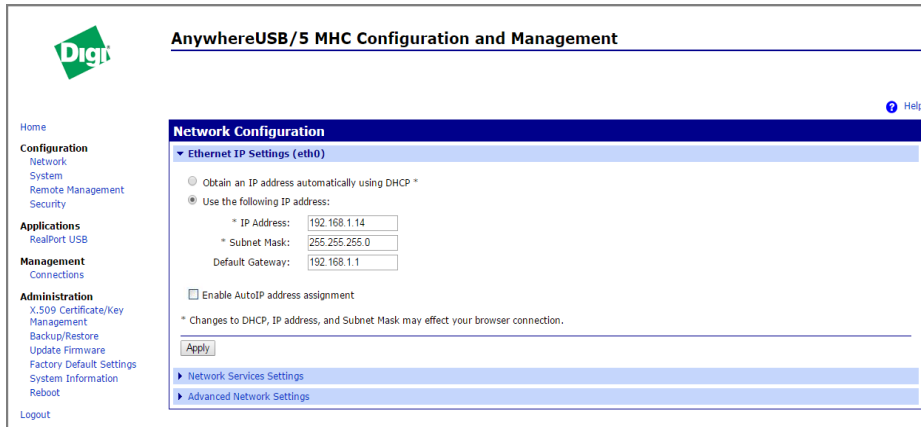
Configure the IP address with the web UI

Use the AnywhereUSB Configuration and Management web UI to configure the AnywhereUSB with a static IP address.

To configure a static IP address using the web UI:

- 1 Open a web browser and type the AnywhereUSB IP address in the URL field. If you do not know the device IP address, use the Digi Device Discovery Utility or the AnywhereUSB Remote Hub Configuration Utility to get the IP address or connect directly to the web UI.

- 2 Select **Configuration > Network**.
 - a Select **Use the following IP address**.
 - b Type the IP address, subnet mask, and default gateway.
- 3 Clear the **Enable AutoIP address assignment** check box.
- 4 Click **Apply**. The network settings are updated and the web UI refreshes.



Note You can also use the AnywhereUSB CLI as an alternative to the web UI. For details, see [Configure from the command line](#) on page 51).

Configure AnywhereUSB encryption

You can encrypt AnywhereUSB traffic by installing a digital certificate on the device. This is an optional setting that allows a host computer to confirm the AnywhereUSB device authenticity and to encrypt USB-over-IP traffic. This digital certificate must be signed by a Trusted Certificate Authority (CA). Since an AnywhereUSB is not publicly accessible, an enterprise CA can self-sign the digital certificate.

To configure and enable encryption, you need to:

- 1 Create and validate the CA certificate.
- 2 Install the CA certificate on the AnywhereUSB device.
- 3 Enable the encrypted AnywhereUSB network service.
- 4 Install the CA certificate on the host computer.

Create and validate the CA certificate

Use OpenSSL tools to generate a CA certificate and then use it to sign device certificates.

- 1 Download the OpenSSL command line app from [openssl.org](https://www.openssl.org).
- 2 Create a CA certificate (cacert.crt) and its private 2048-bit RSA key (cakey.pem) and store cakey.pem in a safe place.

```
openssl req -nodes -new -newkey rsa:2048 -x509 -extensions v3_ca -keyout cakey.pem -out cacert.crt -days 3650 -subj "[your email information]"
```

Use the following email information string as an example: /C=US/ST=MN/L=Townname/O=Companyname/OU=Department/emailAddress=email@company.com/

You will install cacert.crt on your host computer in a following step.

- 3 Generate a private 2048-bit RSA key for the server and store server.key in a safe place.

```
openssl genrsa -out server.key 2048
```

- 4 Generate a Certificate Signing Request file server.csr. For example:

```
openssl req -new -key server.key -out server.csr -subj "[your email information]"
```

- 5 With server.csr, generate the actual certificate (server.crt).

```
openssl x509 -req -days 3650 -CA cacert.crt -CAkey cakey.pem -set_serial 001 -in server.csr -out server.crt
```

- 6 Now validate the certificates to each other. If this command is successful, the server.crt: OK message appears. If this command fails, an error message appears.

The private CA key is not used in this step.

```
openssl verify -CAfile cacert.crt server.crt
```

- 7 After successfully completing certificate validation in the previous step, concatenate server.crt and server.key to create server.pem.

```
copy server.crt server.pem
```

```
type server.key >> server.pem
```

Install the CA certificate on the AnywhereUSB device

Upload the CA certificate to the AnywhereUSB device using the AnywhereUSB web UI:

- 1 Open the AnywhereUSB web UI with a web browser.
- 2 Select **Administration > X.509 Certificate/Key Management**.
- 3 Click **Secure Sockets Layer (SSL)/Transport Layer Security (TLS) Certificates**.
- 4 Click **Identity Certificates and Keys**.
- 5 Click the **Choose File** and browse to of **server.pem** file.
- 6 Click **Upload**.

Enable the Encrypted AnywhereUSB network service

You must enable the encrypted AnywhereUSB network service:

- 1 Open the **AnywhereUSB web UI** with a web browser.
- 2 Select **Configuration > Network**.
- 3 Click **Network Services Settings**.
- 4 Select the **Enable Encrypted AnywhereUSB** check box.
- 5 Clear the **Enable AnywhereUSB** check box, if it is selected.

Note Enable AnywhereUSB is enabled by default. Make sure to enable only the Encrypted AnywhereUSB network service. If both of the AnywhereUSB network services are enabled, you risk having unencrypted connections on the device.

- 6 Click **Apply**.

Install the CA certificate on the host computer

Use the AnywhereUSB Remote Hub Configuration Utility to install the CA certificate on the host computer.

- 1 Open the AnywhereUSB Remote Hub Configuration Utility.
- 2 Select your AnywhereUSB device.
- 3 Click **Configure**.
- 4 Select the **Encrypt Connection** check box.

Note Tunnel connections is automatically selected when you select Encrypt connection.

- 5 Browse to or type the path of the CA certificate (cacert.crt) in the Digital Certificate field.
- 6 Click **Update**.

Connect a host computer to AnywhereUSB

This chapter explains how to configure the host computer to establish a connection to the AnywhereUSB device using the AnywhereUSB Remote Hub Configuration Utility.

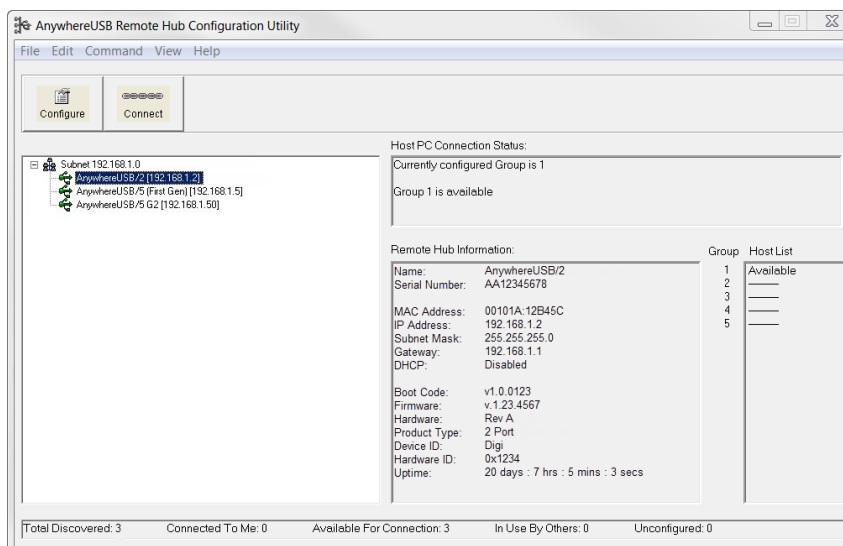
Connect to the AnywhereUSB

To use the USB devices that are attached to the AnywhereUSB, the host computer must first establish a connection to the AnywhereUSB.

Note For AnywhereUSB/5M and AnywhereUSB/14 multi-host models, assign groups before connecting to the host computer through the AnywhereUSB web UI. For details, see [Multi-host connections](#) on page 31.

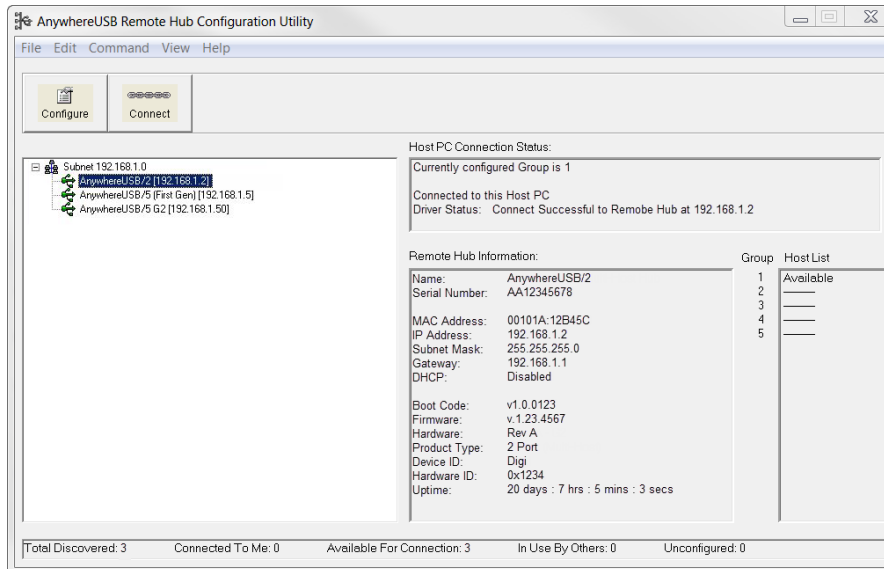
- 1 Log in to a Microsoft Windows computer with an account that has administrative privileges.
- 2 Select **Start > Programs > AnywhereUSB > AnywhereUSB Remote Hub Configuration Utility**.

The utility displays a list of all AnywhereUSB devices on your local subnet and on any subnet configured in the Discovery List.



- 3 Select an AnywhereUSB device from the device list in the AnywhereUSB Remote Hub Configuration Utility and then either click **Connect** or right-click and connect to a group. The host computer then attempts to connect to the AnywhereUSB.

The Connection Status now says **Connected to this Host PC**.



For details about the AnywhereUSB Remote Hub Configuration Utility, see [AnywhereUSB Remote Hub Configuration Utility](#) on page 24.

AnywhereUSB Remote Hub Configuration Utility

This chapter explains how to use the AnywhereUSB Remote Hub Configuration Utility.

Start the AnywhereUSB Remote Hub Configuration Utility

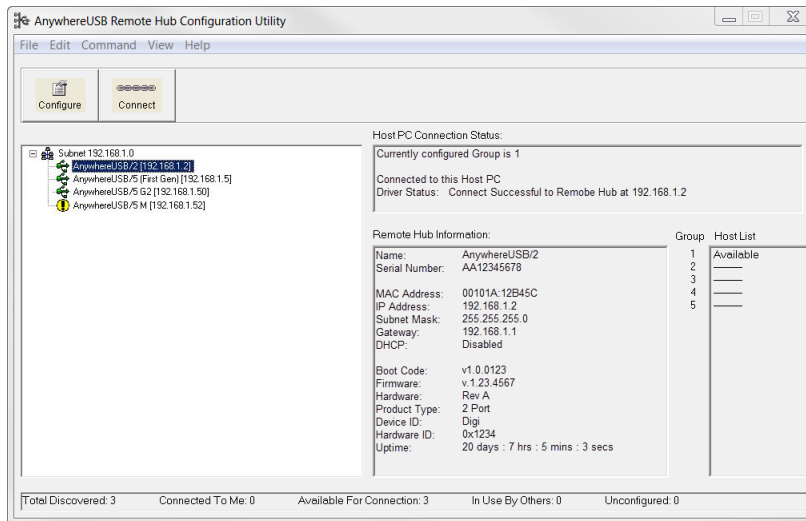
To start the AnywhereUSB Remote Hub Configuration Utility:

- 1 Log in to a Microsoft Windows computer with an account that has administrative privileges.
- 2 Select **Start > Programs > AnywhereUSB > AnywhereUSB Remote Hub Configuration Utility**.

After the AnywhereUSB Remote Hub Configuration Utility has been started, it remains in the Windows system tray. You can open the utility from the system tray by double clicking its icon.

Remote Hub Configuration Utility window

The AnywhereUSB Remote Hub Configuration Utility displays AnywhereUSB devices grouped by their subnet addresses. The utility automatically discovers AnywhereUSB devices on the local subnet. To discover devices on other subnets, add those subnet addresses to the Discovery List (see [Discover AnywhereUSB devices on other subnets](#) on page 30).

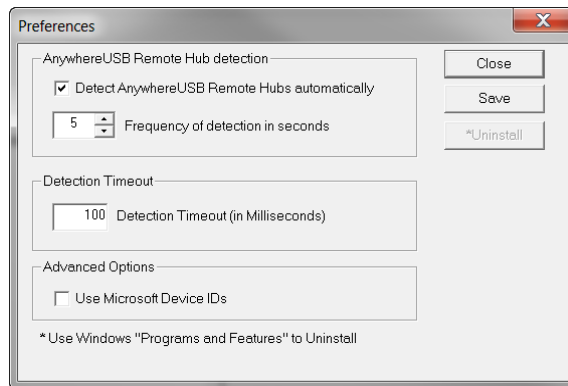


Icon Color Legend:

Icon	Description
	Green: Available for connection.
	Gray with bold text: Connected to this computer.
	Gray: In use by another host computer.
	(AnywhereUSB/5 first generation only) Red: Updating firmware.
	Warning: The IP address is not configured, or this is a multi-host connections-enabled device that is configured to connect to a non-existent Group.

Menu options

File menu: Preferences



Detect AnywhereUSB Remote Hubs automatically and **Frequency of detection in seconds**: Configure how often to query the network for AnywhereUSB devices.

Note AnywhereUSB devices are automatically detected when you open the AnywhereUSB Remote Hub Configuration Utility. Enabling this setting will make the AnywhereUSB Remote Hub Configuration Utility re-scan the network for newer AnywhereUSB devices at the configured frequency.

Detection Timeout: configures how long the Remote Hub Configuration Utility will wait to hear from all the AnywhereUSB devices before the Remote Hub Configuration Utility updates the list of devices in the Main Window.

Use Microsoft Device IDs: changes how the AnywhereUSB software creates the device ID for attached USB devices. A device ID consists of three parts: the name of the bus driver, the Product Identifier, and a unique serial number. For example, a Digi Edgeport USB to Serial converter that is plugged directly into the USB port of a computer would have a Device ID similar to (where **USB** indicates the Microsoft USB bus driver):

```
USB\VID_1608&PID_0215\A20299384
```

When attaching devices to an AnywhereUSB device, the bus driver name is **AWUSB**. Therefore the same device plugged into an AnywhereUSB device would have a Device ID of:

```
AWUSB\VID_1608&PID_0215\A20299384
```

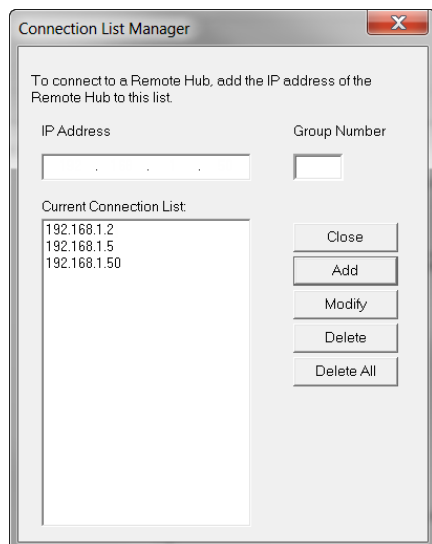
Some USB class drivers expect to see the bus driver name as “USB”, and as a result will not operate unless the **Use Microsoft Device IDs** checkbox is checked.

Edit menu: Connection List

The **Connection List** displays the IP addresses of the AnywhereUSB device to which the host computer will try to connect. When an IP address is added to this list, the host computer immediately tries to connect to the AnywhereUSB device. If an IP Address is deleted from the **Connection List**, the AnywhereUSB device will disconnect from the host computer and return to an “Available for Host Connection” state.

Selecting an AnywhereUSB and clicking **Connect** adds the selected AnywhereUSB IP address to the Connection List. Although we advise to connect using this method, you can also manually add the AnywhereUSB IP address to the Connection List. Use the manual method when the AnywhereUSB device has a known IP address but is not discoverable or when the AnywhereUSB is behind a router or firewall.

If an AnywhereUSB is behind a router or firewall, and port forwarding is being used, add the router's public-facing IP address to the Connection List. Port 3422 TCP (or port 3423 for encrypted connections) should be used for port forwarding.

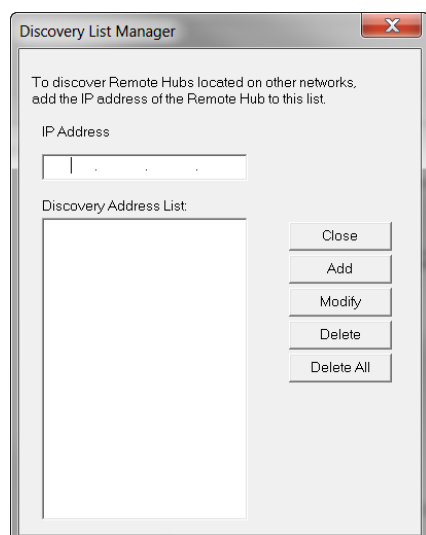


Note Use Group 0 when manually adding an AnywhereUSB device that does not support multi-host connections.

Edit menu: Discovery List

The **Discovery List Manager** displays a list of subnet addresses of remote networks or IP addresses of individual devices where the Remote Hub Configuration Utility will search for AnywhereUSB devices.

For details, see [Discover AnywhereUSB devices on other subnets](#) on page 30.



Command menu: Configure

The options in the Configure dialog depend on the model of the selected AnywhereUSB device.

AnywhereUSB/5 (first generation)

The **Remote Hub** field at the top-left is the friendly name for the first generation AnywhereUSB/5 that appears on the left side of the AnywhereUSB Remote Hub Configuration Utility.

For the first generation AnywhereUSB/5, you can configure IP address settings in this window only.

AnywhereUSB/2 and AnywhereUSB/5 (G2) and AnywhereUSB TS 44

Use the Configure button to enable encryption for these AnywhereUSB models.

- For details about configuring AnywhereUSB IP settings, see [Configure the IP address](#) on page 17.
- For details about AnywhereUSB encryption, see [Configure AnywhereUSB encryption](#) on page 19.
- For details about configuring the AnywhereUSB device name, see [System settings](#) on page 43.

AnywhereUSB/5 M and AnywhereUSB/14

For the multi-host capable AnywhereUSB models, use the Configure button to configure the Group Number that the host computer should connect to.

For details about multi-host connections, see [Multi-host connections](#) on page 31.

- For details about configuring AnywhereUSB IP settings, see [Configure the IP address](#) on page 17.
- For details about AnywhereUSB encryption, see [Configure AnywhereUSB encryption](#) on page 19.
- For details about configuring the AnywhereUSB device name, see [System settings](#) on page 43.

Command menu: Connect

Use the Connect command to add the IP address of the selected AnywhereUSB device to the Connection List.

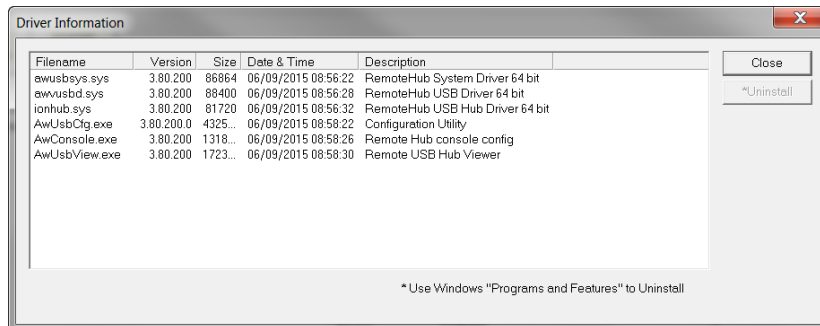
Command menu: Web UI

The web UI command opens the web page of the selected device.

Note The first generation AnywhereUSB/5 does not have a web UI.

View menu: Driver Information

Use the Driver Information window to see AnywhereUSB driver version numbers and to uninstall older AnywhereUSB drivers. To uninstall current AnywhereUSB drivers, use Microsoft Windows Programs and Features.



View menu: Refresh (F5)

The **Refresh** command updates information for discovered AnywhereUSB devices listed in the utility's main window.

Discover AnywhereUSB devices on other subnets

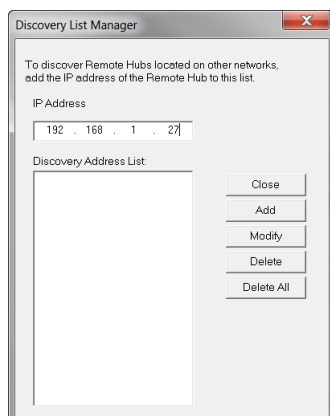
This chapter explains how to enable the AnywhereUSB Remote Hub Configuration Utility to discover AnywhereUSB devices on additional IP subnets.

Adding IP addresses to the Discovery List

By default, the AnywhereUSB Remote Hub Configuration Utility scans the local subnet for AnywhereUSB devices. To discover AnywhereUSB devices on other subnets, add their IP address or subnet to the Discovery List in the Discovery List Manager Dialog box.

- 1 Select **Edit > Discovery List**.
- 2 Type the subnet address or the IP address of the individual device in the IP Address field.
For example, to add the Class C network 192.168.2.x, enter 192.168.2.255. For a Class B network 145.75.x.x, enter 145.75.255.255 (configure the router to forward subnet broadcasts).
- 3 Click **Add**.
- 4 Click **Close** to get back to the AnywhereUSB Remote Hub Configuration Utility main window.
- 5 Select **View > Refresh**. The device appears in the AnywhereUSB Remote Hub Configuration Utility device list.

Note If discovery fails, make sure that the Microsoft Windows firewall is off. For additional help, see [No remote hubs found](#) on page 62.



Multi-host connections

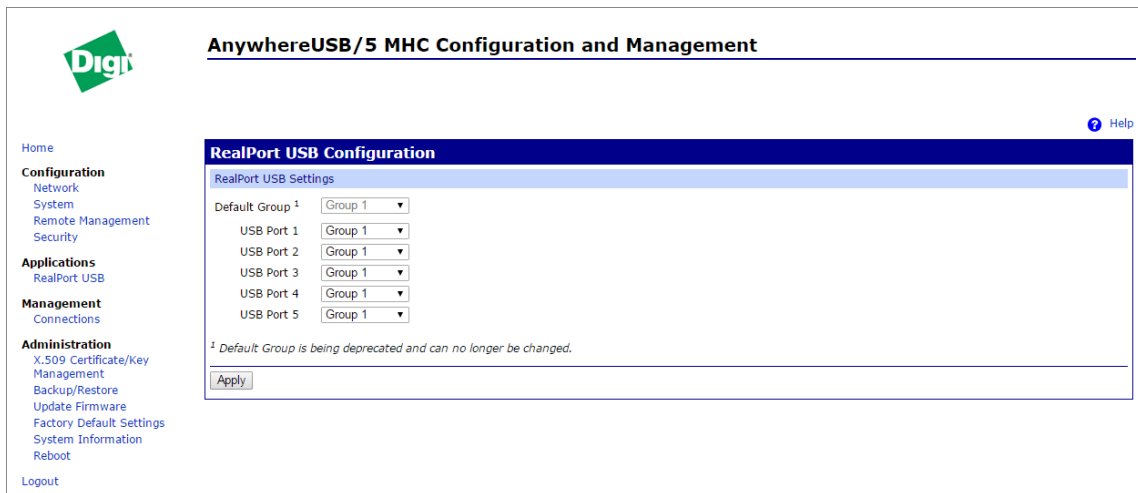
This chapter describes the multi-host connections feature exclusively available on the AnywhereUSB/14 and AnywhereUSB/5 M models. The multi-host connections feature allows multiple host computers to establish concurrent connections with the AnywhereUSB device. Each host computer requests a different group of USB ports, where the group assignments have been previously configured on the AnywhereUSB device.

Requirement: Older AnywhereUSB driver and firmware versions may not support multi-host connections.

Configure groups

To assign the AnywhereUSB device's physical USB port to groups:

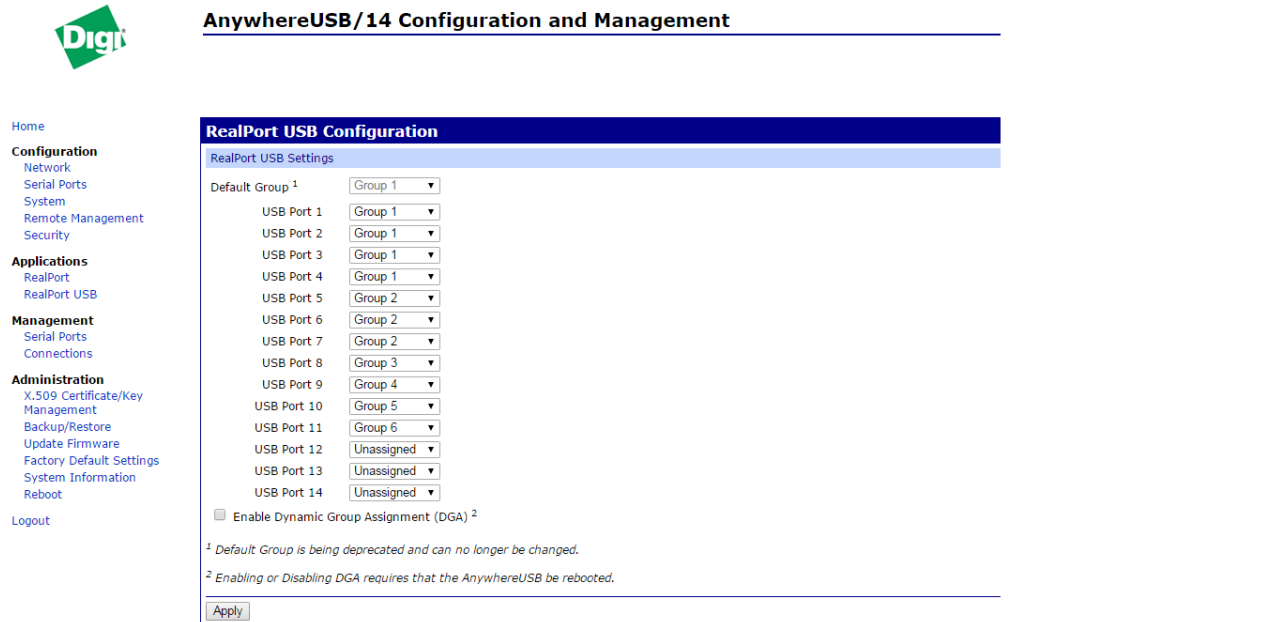
- 1 Open the web UI for your device and select **RealPort USB**.



- 2 Click **Apply** and reboot the AnywhereUSB for group configuration changes to take effect.

The options on this page allows the user to select which physical USB ports on the AnywhereUSB device are assigned to which group. By default, all the USB Ports are assigned to Group 1. Therefore, a host computer requesting Group 1 takes ownership of all of the physical USB ports on the AnywhereUSB device.

In the AnywhereUSB/14 configuration example below, a host computer requesting Group 1 is granted access only to physical USB ports 1 through 4. A host computer requesting Group 2 is granted access to physical USB ports 5 through 7. A host computer requesting Group 6 is given access to physical USB port 11, and so on. The USB ports 12 through 14 are unassigned, and as a result do not support any attached USB devices.



AnywhereUSB/14 Configuration and Management

Home

Configuration

- Network
- Serial Ports
- System
- Remote Management
- Security

Applications

- RealPort
- RealPort USB

Management

- Serial Ports
- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

RealPort USB Configuration

RealPort USB Settings

Default Group ¹ Group 1 ▼

USB Port 1 Group 1 ▼

USB Port 2 Group 1 ▼

USB Port 3 Group 1 ▼

USB Port 4 Group 1 ▼

USB Port 5 Group 2 ▼

USB Port 6 Group 2 ▼

USB Port 7 Group 2 ▼

USB Port 8 Group 3 ▼

USB Port 9 Group 4 ▼

USB Port 10 Group 5 ▼

USB Port 11 Group 6 ▼

USB Port 12 Unassigned ▼

USB Port 13 Unassigned ▼

USB Port 14 Unassigned ▼

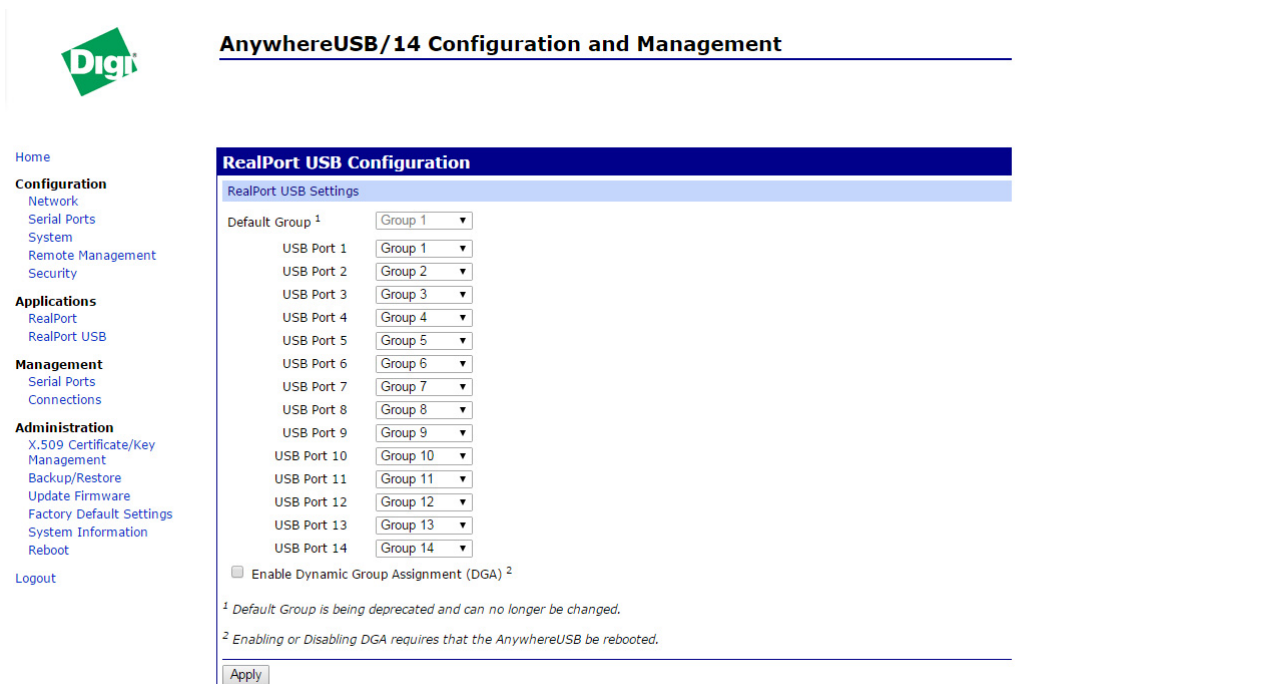
Enable Dynamic Group Assignment (DGA) ²

¹ Default Group is being deprecated and can no longer be changed.

² Enabling or Disabling DGA requires that the AnywhereUSB be rebooted.

Apply

In the example below, the AnywhereUSB/14 device has been configured to have 14 groups, each providing access to a single physical USB port.



AnywhereUSB/14 Configuration and Management

Home

Configuration

- Network
- Serial Ports
- System
- Remote Management
- Security

Applications

- RealPort
- RealPort USB

Management

- Serial Ports
- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

RealPort USB Configuration

RealPort USB Settings

Default Group ¹ Group 1 ▼

USB Port 1 Group 1 ▼

USB Port 2 Group 2 ▼

USB Port 3 Group 3 ▼

USB Port 4 Group 4 ▼

USB Port 5 Group 5 ▼

USB Port 6 Group 6 ▼

USB Port 7 Group 7 ▼

USB Port 8 Group 8 ▼

USB Port 9 Group 9 ▼

USB Port 10 Group 10 ▼

USB Port 11 Group 11 ▼

USB Port 12 Group 12 ▼

USB Port 13 Group 13 ▼

USB Port 14 Group 14 ▼

Enable Dynamic Group Assignment (DGA) ²

¹ Default Group is being deprecated and can no longer be changed.

² Enabling or Disabling DGA requires that the AnywhereUSB be rebooted.

Apply

Dynamic group assignment

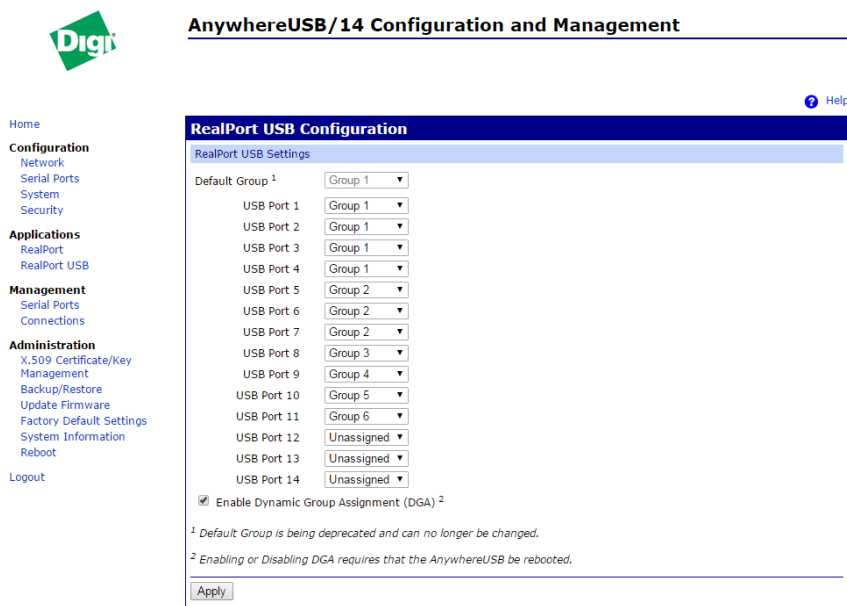
The AnywhereUSB/14 device allows you to change group assignments without restarting the device using Dynamic Group Assignment (DGA). Making group changes using DGA does not disrupt unaffected USB ports. For example, if you enable DGA and make changes to USB ports 1, 2 and 3, then USB ports 4-14 remain connected without any interruption.

To enable DGA and make group changes:

- 1 Select the **Enable Dynamic Group Assignment (DGA)** check box.
- 2 Click **Apply** and restart the device.

Note Enabling or disabling DGA requires you to restart the device.

- 3 Open the web UI and click **RealPort USB**.
- 4 Change groups for USB ports as needed.
- 5 Click **Apply**. Group changes take effect immediately.



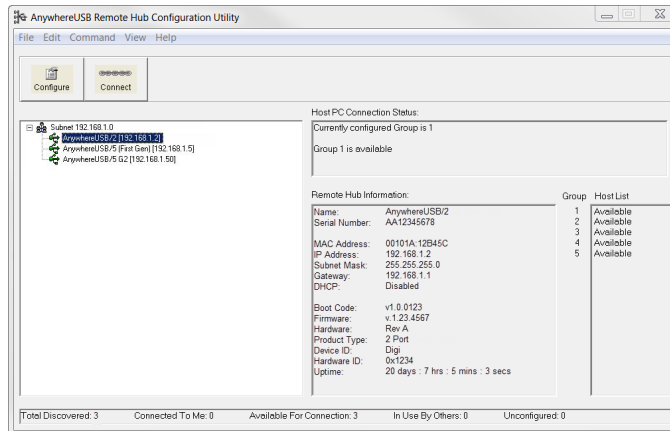
The screenshot shows the web UI for 'AnywhereUSB/14 Configuration and Management'. The main content area is titled 'RealPort USB Configuration' and contains a section for 'RealPort USB Settings'. A 'Default Group' dropdown is set to 'Group 1'. Below this, a list of USB ports (1 through 14) is shown, each with a dropdown menu for group assignment. The assignments are: USB Port 1-4 to Group 1, USB Port 5-7 to Group 2, USB Port 8 to Group 3, USB Port 9 to Group 4, USB Port 10 to Group 5, USB Port 11 to Group 6, and USB Port 12-14 to Unassigned. At the bottom of the settings section, the checkbox 'Enable Dynamic Group Assignment (DGA)' is checked. A footer note states: '1 Default Group is being deprecated and can no longer be changed. 2 Enabling or Disabling DGA requires that the AnywhereUSB be rebooted.' An 'Apply' button is located at the bottom left of the configuration area.

Host computer configuration

In the AnywhereUSB Remote Hub Configuration Utility, you must specify the group number that each host computer should connect to. Each host computer may only connect to one group. When the host computer connects to the AnywhereUSB, it takes ownership of the associated USB ports.

The following example shows an AnywhereUSB/5 M device that has five groups configured, each group provides access to a single physical USB port on the AnywhereUSB device.

In the Host List column is on the right, “available” indicates that the Group is associated with one or more USB ports and there are no host computers currently connected to that Group.

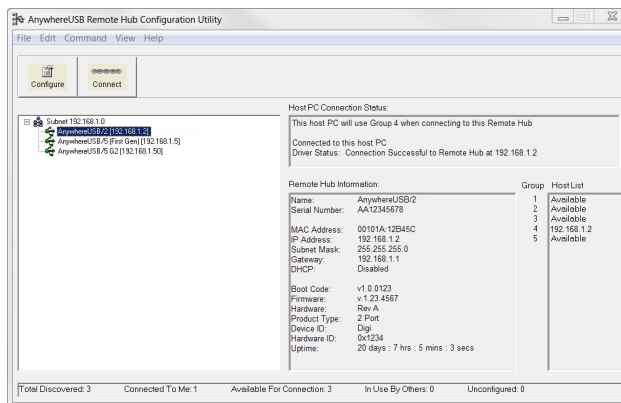


To connect an AnywhereUSB device to the host computer:

- 1 Log in to a Microsoft Windows computer with an account that has administrative privileges.
- 2 Select **Start > Programs > AnywhereUSB > AnywhereUSB Remote Hub Configuration Utility**.
- 3 Select your device from the list and click **Connect** or right-click and click **Connect**.

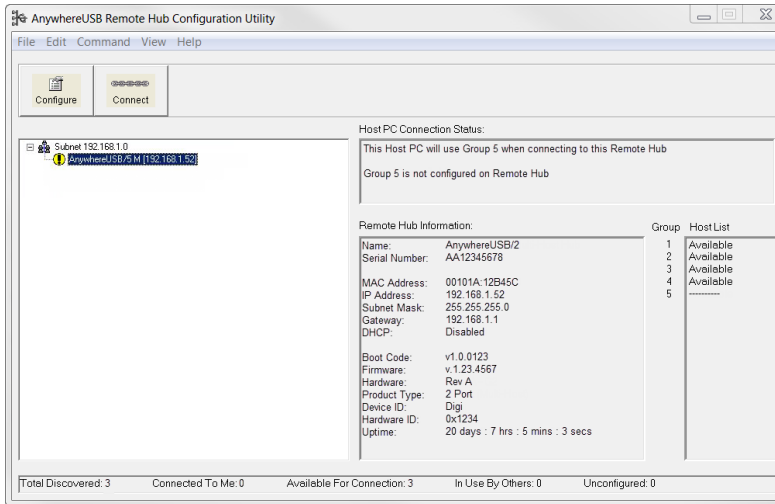
For example, the following image shows a host computer that connects to Group 4 on the AnywhereUSB device. Clicking **Connect** initiates the connection process between the host computer and the selected AnywhereUSB/5 M device.

After the connection process completes, the AnywhereUSB Remote Hub Configuration Utility updates its Connection Status information.



Note The Host PC Connection Status now says “Connected to this Host PC,” and the host computer's IP address is listed in the Host List column for Group 4.

In the event the host computer requests a group that is not configured on the AnywhereUSB device, the Host PC Connection Status displays something similar to the following image indicating that the selected Group is not configured on the given AnywhereUSB device.



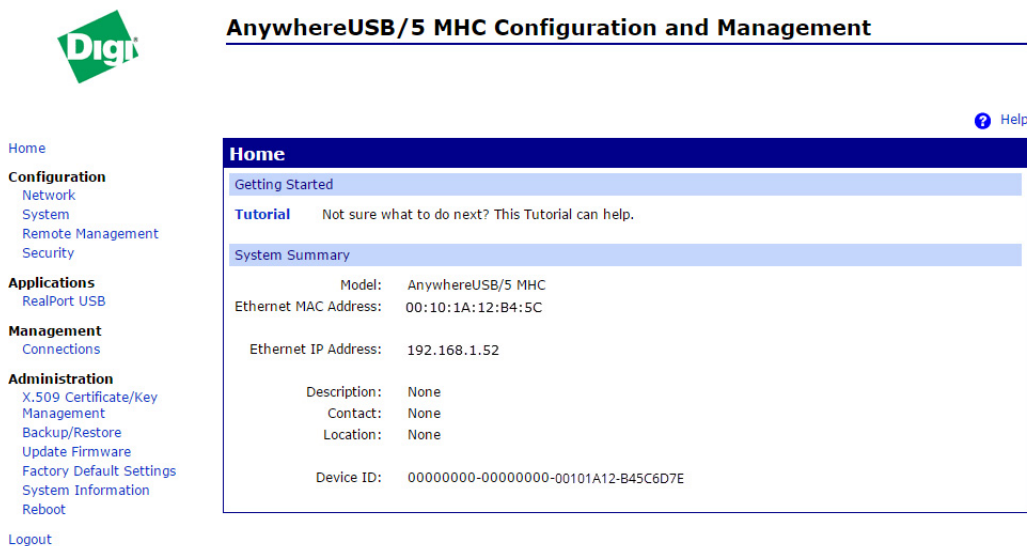
In the above example, the Host List column on the far right indicates that groups 1 through 4 are associated with one or more USB ports, and there are no host computers currently connected with one or more of these groups. Group 5 is not associated with any USB port, therefore it is not possible for a host computer to connect to it. When a host computer is configured to connect to a group that is not associated with any USB ports on an AnywhereUSB device, a yellow warning symbol appears next to the AnywhereUSB device in the Remote Hub Configuration Utility and a message appears in the Host PC Connection Status area.

Configure from the web UI

This chapter describes using the web UI Configuration, Management, and Administration sections and their sub-menus. With the exception of the title of the specific Configuration and Management screens, menus and sub-menus for both models remain the same. This feature is not available on the first generation AWUSB/5 model.

Home page

The home page appears when the web UI is opened.



The screenshot shows the web UI interface for 'AnywhereUSB/5 MHC Configuration and Management'. On the left is a navigation menu with categories: Home, Configuration (Network, System, Remote Management, Security), Applications (RealPort USB), Management (Connections), and Administration (X.509 Certificate/Key Management, Backup/Restore, Update Firmware, Factory Default Settings, System Information, Reboot). The main content area has a 'Home' header and a 'Getting Started' section with a 'Tutorial' link. Below that is a 'System Summary' table showing device details.

System Summary	
Model:	AnywhereUSB/5 MHC
Ethernet MAC Address:	00:10:1A:12:B4:5C
Ethernet IP Address:	192.168.1.52
Description:	None
Contact:	None
Location:	None
Device ID:	00000000-00000000-00101A12-B45C6D7E

The left side of the home page has a list of choices that display pages for configuration, applications, management, and administration tasks, and to logout of the web UI. Clicking Logout disconnects the configuration and management session with an AnywhereUSB. It does not close the browser window, but displays a logout window. To finish logging out of the web UI and prevent access by other users, close the browser window. Or, log back on to the device by clicking the link on the screen. After 5 minutes of inactivity, the idle timeout also automatically performs a user logout.

Applying and saving changes

The web UI runs locally on the device, which means that the interface always maintains and displays the latest settings for the connected AnywhereUSB device.

Canceling changes

To cancel changes to configuration settings, click **Refresh** or **Reload** in the web UI. This causes the browser to reload the page. Any changes made since the last time the Apply button was clicked are reset to their original values.

Restoring the AnywhereUSB to factory defaults

You can reset the device configuration to factory defaults as needed during the configuration process.

Online help

Online help is available for all screens of the web UI, and for common configuration and administration tasks. There is also tutorial available on the Home page.

The Getting Started section has a link to a tutorial on configuring and managing the AnywhereUSB.

The System Summary section notes all available device-description information.

Configuration

The configuration section of the web UI consists of sub-menus that are specific to the particular model of the AnywhereUSB device being configured. These configuration options may include: Network, Serial Ports (AnywhereUSB/14 and AnywhereUSB TS44 only), System, Remote Management, and Security.

Network settings

View and change IP settings

The Ethernet IP Settings page shows IP address settings for the: DHCP or static IP address, subnet mask, default gateway. Contact your network administrator for more information about these settings, and see the online help.

AnywhereUSB/5 MHC Configuration and Management

Home

Configuration

- Network
- System
- Remote Management
- Security

Applications

- RealPort USB

Management

- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

Network Configuration

Help

Ethernet IP Settings (eth0)

- Obtain an IP address automatically using DHCP *
- Use the following IP address:
 - * IP Address: 192.168.1.52
 - * Subnet Mask: 255.255.255.0
 - Default Gateway: 192.168.1.1
- Enable AutoIP address assignment

* Changes to DHCP, IP address, and Subnet Mask may effect your browser connection.

Apply

- ▶ Network Services Settings
- ▶ Advanced Network Settings

Enabling and disabling network services

The Network Services page shows a set of common network services that are available for the AnywhereUSB, and the network port on which the service is running.

Several services have a setting for whether TCP keep-alives are sent for the network services. You can configure TCP keep-alives in more detail on the Advanced Network Settings page.

Service	Enabled	Port	Enable TCP Keep-Alive
Enable Device Discovery (ADDP)	<input checked="" type="checkbox"/>	TCP Port: 3423	<input type="checkbox"/>
Enable Encrypted AnywhereUSB	<input checked="" type="checkbox"/>	TCP Port: 3422	<input type="checkbox"/>
Enable AnywhereUSB	<input type="checkbox"/>	TCP Port: 3422	<input type="checkbox"/>
Enable Network Management Protocol (SNMP)	<input checked="" type="checkbox"/>	UDP Port: 161	<input type="checkbox"/>
Enable Secure Shell Server (SSH)	<input type="checkbox"/>	TCP Port: 22	<input type="checkbox"/>
Enable Telnet Server	<input checked="" type="checkbox"/>	TCP Port: 23	<input type="checkbox"/>
Enable Web Server (HTTP)	<input checked="" type="checkbox"/>	TCP Port: 80	<input type="checkbox"/>
Enable Secure Web Server (HTTPS)	<input checked="" type="checkbox"/>	TCP Port: 443	<input type="checkbox"/>

You can enable or disable the common network services and configure the TCP port on which the network service listens. You can disable services for security purposes so the device runs only those services specifically needed. To improve device security, disable non-secure services such as telnet.

Enable or disable the following network services:

- Device Discovery (ADDP): This service controls use of Advanced Device Discovery Protocol. If it is disabled, you can no longer use Digi Device Discovery utility to locate the device.
- AnywhereUSB and Encrypted AnywhereUSB: These services enable or disable the ability for a host computer to connect with your AnywhereUSB device. You must enable only one of these options. Disabling both of these options disconnects your AnywhereUSB device from the host computer. Use these options as follows:
 - AnywhereUSB: Enable this to allow host computer connections to your AnywhereUSB device without encrypting network traffic.
 - Encrypted AnywhereUSB: Enable this option to allow host computer connections to your AnywhereUSB device and to encrypt network traffic.

Note The TCP Port numbers for AnywhereUSB and Encrypted AnywhereUSB are static and cannot be changed.

- Network Management Protocol (SNMP): Enables or disables the use of SNMP. If disabled, SNMP services such as traps and device information are not used.
- Secure Shell Server (SSH): Enables or disables the SSH server service. If disabled, users cannot make a Secure Shell connection to the device.
- Telnet Server: Enables or disables the telnet service. If disabled, users cannot telnet to the device.
- RealPort or Encrypted RealPort: These services control use of COM port redirection. If disabled, COM port redirection cannot be used for the device. (Applicable to AnywhereUSB/14 and AnywhereUSB TS44).
- Web Server (HTTP) or Secure Web Server (HTTPS): These services control the use of the web UI. If you disable them, device users cannot use the web UI or Java applet to configure, monitor, and administer the device.

Port numbers for network services

For each network service, the Port field shows the port on which the service is running. It is usually best to use the default TCP port numbers for these services because they are well known by most applications.

IP network failover settings (AnywhereUSB/14 only)

The IP Network Failover feature allows the AnywhereUSB/14 to recover from an Ethernet failure. The failover conditions are configurable, and once the AnywhereUSB/14 determines that the primary Ethernet link has failed, it automatically routes the Ethernet traffic to the secondary Ethernet link.

Ethernet port use:

- LAN1 is the primary Ethernet port. Use this port when connecting only one Ethernet cable or as the main Ethernet connection when connecting both Ethernet ports.
- LAN2 is the secondary Ethernet port and is used only for redundancy. Only connect an Ethernet cable to this port when you are already using LAN1.

For more information about this feature on the AnywhereUSB/14 device, visit the Digi Knowledge Base at knowledge.digi.com.

Advanced network settings

Use the Advanced Network Settings to further define the network interface.



AnywhereUSB/5 MHC Configuration and Management

Home

Configuration

- Network
- System
- Remote Management
- Security

Applications

- RealPort USB

Management

- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

? Help

Network Configuration

- ▶ Ethernet IP Settings (eth0)
- ▶ Network Services Settings
- ▼ **Advanced Network Settings**

The following settings are advanced settings used to fine tune the network connection and network interfaces. The default settings will typically work in most situations.

IP Settings

Host Name:

Static Primary DNS:

Static Secondary DNS:

DNS Priority: Static + Ethernet +

Ethernet Interface (eth0)

Eth0 Speed: Auto Duplex Mode: Full-Duplex

TCP Keep-Alive Settings

Idle Timeout: hrs mins secs (10 secs - 24 hrs)

Probe Interval: secs (10-75)

Probe Count: probes (5-30)

Settings include:

- Host Name is placed in the DHCP Option 12 field. This is an optional setting which is only used when DHCP is enabled.
- Static Primary/Secondary DNS are the IP addresses of Domain Name Servers (DNS) used to resolve computer host names to IP addresses. Static DNS servers are specified independently of any network interface and its connection state. An IP address of 0.0.0.0 indicates no server is specified.
- DNS Priority is a list of DNS servers in the order they are used to resolve computer host names. Each type of server is tried, starting with the first in the list. For each server type, the primary server is tried first. If no response is received, then the secondary server is tried. If it cannot contact either server, it tries the next server type in the list. A network interface may obtain a DNS server from DHCP or other means when it is connected. If an interface does not obtain a DNS server, it will be skipped and the next server in the priority list will be tried. To change the priority order, select an item from the list and press the up or down arrow.
- Ethernet Interface permits the configuration of Ethernet speed and duplex settings.
- TCP Keep Alive Settings include an Idle Timeout which specifies the period of time that a TCP connection is idle before a keep-alive is sent, a Probe Interval in seconds between each keep-alive probe, and a Probe count which is the number of times TCP probes the connection to determine if it is alive after the keep-alive options has been activated. The connection is assumed lost after sending this number of keep-alive probes.

Serial port settings (AnywhereUSB/14 and AnywhereUSB TS44 only)

Configure serial port

The Serial Ports page configures the serial port settings for the management port on the rear of the AnywhereUSB/14 and the four serial ports on the rear of the AnywhereUSB TS44.

Serial port configuration

Use the Serial Port Configuration page to establish a port profile for the serial port of the AnywhereUSB TS44. The Serial Port Configuration page includes the currently selected port profile for the serial port, detailed configuration settings for the serial port, dependent on the port profile selected, and links to Basic Serial Settings and Advanced Serial Settings.

AnywhereUSB TS44 Configuration and Management

Home

Configuration

- Network
- Serial Ports**
- System
- Remote Management
- Security

Applications

- RealPort USB

Management

- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

Serial Port Configuration

Port	Description	Profile	Serial Configuration	Action
Port 1	None	Custom	9600 8N1	Copy...
Port 2	None	Custom	9600 8N1	Copy...
Port 3	None	Custom	9600 8N1	Copy...
Port 4	None	Custom	9600 8N1	Copy...

About port profiles

Port profiles simplify serial port configuration by displaying only those items that are relevant to the currently selected profile. There are several port profile choices, but not all port profiles are supported in all products. Support of port profiles varies by product. If a profile listed in this description is not available on the page, it is not supported.

If a port profile has already been selected, it is shown at the top of the screen. You can change the profile, or retain it and adjust individual settings.

Everything displayed on the Serial Port Configuration screen between Port Profile Settings and the links to the Basic Serial Settings and Advanced Serial Settings depends on the port profile selected.

When using serial ports for the terminal emulator's host or keyboard connections, you must configure those ports for the Custom port profile.

Select and configure a port profile:

- 1 To configure any profile, select **Serial Ports**.
- 2 Click the port to configure.
- 3 Click **Change Profile**.
- 4 Select the appropriate profile and click **Apply**.
- 5 Enter the appropriate parameters for each profile; descriptions of each profile follow.
- 6 Click **Apply** to save the settings.

A list of the ports available on the Digi device server along with a summary of each port's current configuration is displayed when you select Serial Ports under the Configuration heading.

Edit port settings

Click the port's link under the Port heading.

Port profile

A port profile allows you to easily configure a serial port based on how you will be using that port. By selecting one of the predefined profiles, the configuration options are focused only on the settings required for that particular profile.

For situations that do not fit into one of the predefined port profiles, select the Custom profile option. All of the port options are available in the custom profile.

Port profile options:

- **RealPort:** Use this option to map a COM port to the serial port. You must have the RealPort driver installed on the host computer. See the RealPort Installation User's Guide for more information.
- **Local Configuration:** Use this option to connect standard terminals or terminal emulation programs to the serial port. This allows the serial port to act as a console to access the CLI.
- **Custom:** Use this for advanced configuration options.

Digi **AnywhereUSB/14 Configuration and Management** Help

Home

Configuration

- Network
- Serial Ports
- System
- Remote Management
- Security

Applications

- RealPort
- RealPort USB

Management

- Serial Ports
- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

Select Port Profile...

Profiles allow you to easily configure serial ports by only displaying those items that are relevant to the current profile. Select the profile below that best matches your configuration.

RealPort
The RealPort Profile allows you to map a COM or TTY port to the serial port. [More...](#)

Local Configuration
The Local Configuration Profile allows you to connect standard terminals or terminal emulation programs to the serial port in order to use the serial port as a console to access the command line interface. [More...](#)

Custom
The Custom Profile is an advanced option to allow full configuration of the serial port. [More...](#)

Basic serial settings

The screenshot shows the Digi AnywhereUSB TS44 Configuration and Management web interface. The main content area is titled "Serial Port Configuration - Port 1" and includes a "Help" icon. The interface is divided into a left sidebar and a main configuration panel. The sidebar contains a navigation menu with sections: Configuration (Network, Serial Ports, System, Remote Management, Security), Applications (RealPort USB), Management (Connections, Serial Ports), and Administration (X.509 Certificate/Key Management, Backup/Restore, Update Firmware, Factory Default Settings, System Information, Reboot), and a Logout link. The main configuration panel is titled "Serial Port Configuration - Port 1" and has navigation links: "Return to Serial Ports", "Previous", and "Next". It is divided into "Port Profile Settings" and "Basic Serial Settings". The "Basic Serial Settings" section includes a "Description" text input field, and dropdown menus for "Baud Rate" (9600), "Data Bits" (8), "Parity" (None), "Stop Bits" (1), and "Flow Control" (Software). An "Apply" button is located below these settings. Below the "Basic Serial Settings" is a link for "Advanced Serial Settings".

Description

The Description specifies an optional character string that to use for identifying the device connected to the port.

- Baud Rate
- Data Bits
- Parity
- Stop Bits
- Flow Control

The basic serial port settings must match the serial settings of the connected device. If you do not know these settings consult the documentation that came with your serial device. These serial settings may be documented as 9600 8N1, which means that the device is using a baud rate of 9600 bits per second, 8 data bits, no parity, and 1 stop bit.

When using RealPort (COM port redirection) or RFC 2217, these settings are supplied by applications running on the computer or server and you do not need to change the default values on your Digi device server.

Advanced serial settings

The advanced serial settings rarely change.

System settings

The System Configuration page configures system settings, including device description information, such as the device name, contact, and location, and whether SNMP is enabled or disabled and the SNMP traps that are enabled.

AnywhereUSB/5 MHC Configuration and Management

Home ? Help

Configuration

- Network
- System**
- Remote Management
- Security

Applications

- RealPort USB

Management

- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

System Configuration

▼ **Device Identity Settings**

Description:

Contact:

Location:

Device ID:

▶ Simple Network Management Protocol (SNMP) Settings

Configure device description information

A device description is a system description of the AnywhereUSB name, contact, and location. Use the device description for identifying a specific AnywhereUSB when working with a large number of devices in multiple locations.

Note The information in the description field represents the “friendly” name of the AnywhereUSB device that appears on the left side of the AnywhereUSB Remote Hub Configuration Utility.

Configure SNMP

Use the Simple Network Management Protocol (SNMP) protocol to manage and monitor network devices. Configure Digi devices to use SNMP features, or disable SNMP for security reasons. To configure SNMP settings, click the SNMP Settings link at the bottom of the System Configuration page.

AnywhereUSB/5 MHC Configuration and Management

Home ? Help

Configuration

- Network
- System**
- Remote Management
- Security

Applications

- RealPort USB

Management

- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

System Configuration

▶ Device Identity Settings

▼ **Simple Network Management Protocol (SNMP) Settings**

Enable Simple Network Management Protocol (SNMP)

Public community:

Private community:

Allow SNMP clients to set device settings through SNMP

Enable Simple Network Management Protocol (SNMP) traps

Trap Destinations:

Primary: (Name or IP address)

Secondary: (Name or IP address)

Generate authentication failure traps

Generate login traps

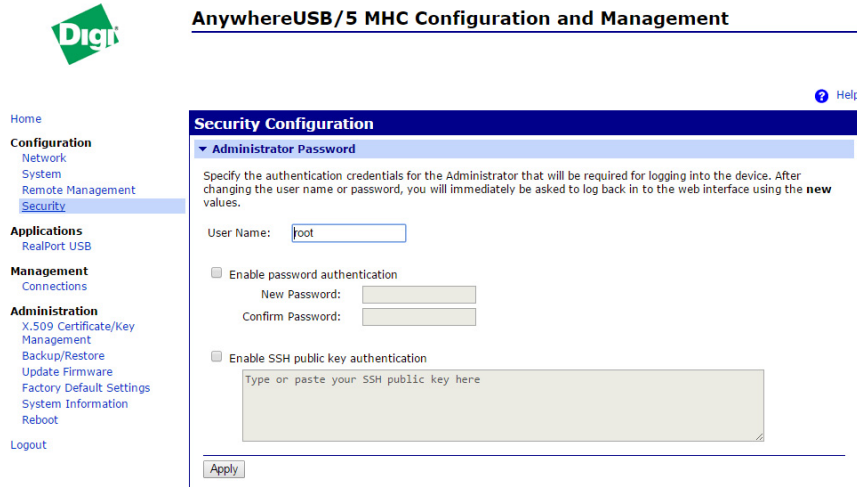
Generate cold start traps

SNMP settings include:

- Enable Simple Network Management Protocol (SNMP): This checkbox enables or disables the use of SNMP.
- The Public community and Private community fields specify passwords required to get or set SNMP-managed objects. Changing public and private community names from their defaults is recommended to prevent unauthorized access to the device.
 - Public community: The password required to get SNMP managed objects. The default is public.
 - Private community: The password required to set SNMP managed objects. The default is private.
- Allow SNMP clients to set device settings through SNMP: This checkbox enables or disables the capability for users to issue SNMP “set” commands use of SNMP read-only for the AnywhereUSB.
- Enable Simple Network Management Protocol (SNMP) traps: Enables or disables the generation of SNMP traps. Find checkboxes at the bottom of the page for the SNMP traps: authentication failure, login, cold start, and link up traps.

Security settings

On the Security page, you can specify the authentication information required for logging into the AnywhereUSB web UI or CLI.



AnywhereUSB/5 MHC Configuration and Management

Home

Configuration

- Network
- System
- Remote Management
- Security**

Applications

- RealPort USB

Management

- Connections

Administration

- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

Security Configuration

Administrator Password

Specify the authentication credentials for the Administrator that will be required for logging into the device. After changing the user name or password, you will immediately be asked to log back in to the web interface using the **new** values.

User Name:

Enable password authentication

New Password:

Confirm Password:

Enable SSH public key authentication

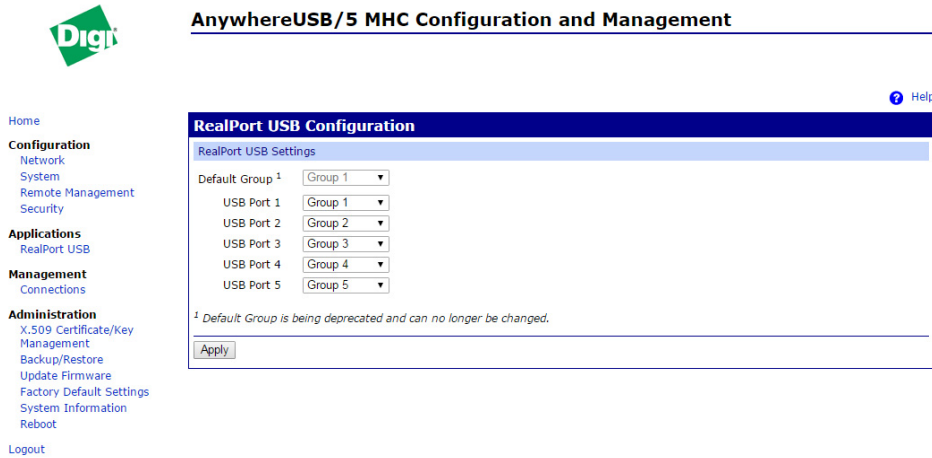
Type or paste your SSH public key here

By default there is no password authentication. If you are using the AnywhereUSB CLI or the web UI, there is no login prompt.

If desired, you can enable password authentication. After changing the user name or password, you will immediately be asked to log back in to the web UI using the new values.

Applications (AnywhereUSB/5M and AnywhereUSB/14)

The RealPort USB Configuration page under Applications allows you to configure the Groups feature for the multi-host devices (AnywhereUSB/5M and AnywhereUSB/14). You can assign each USB port of (AnywhereUSB/5M and AnywhereUSB/14) to a single group. You can connect only one host computer to a group. Unassigning a port makes it unavailable to any host computer. Use the RealPort USB Configuration page to configure groups.

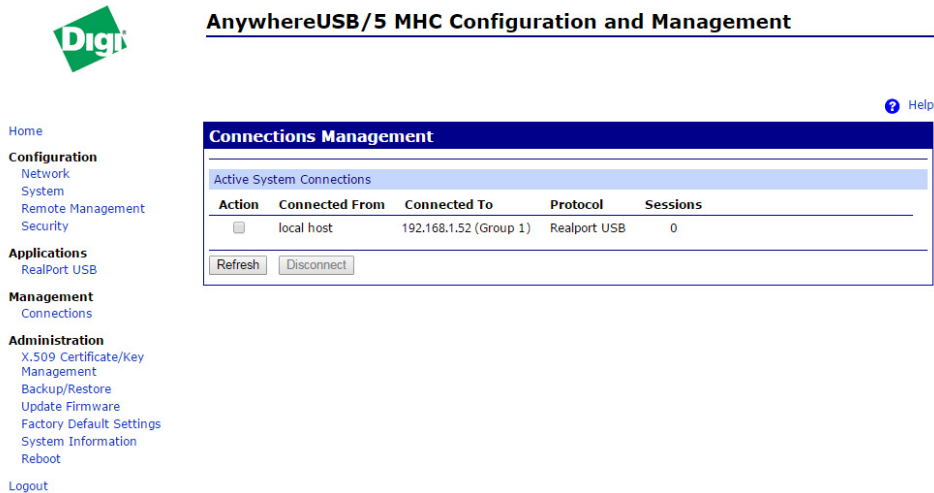


The screenshot shows the 'RealPort USB Configuration' page. On the left is a navigation menu with categories: Configuration (Network, System, Remote Management, Security), Applications (RealPort USB), Management (Connections), and Administration (X.509 Certificate/Key Management, Backup/Restore, Update Firmware, Factory Default Settings, System Information, Reboot). The main content area is titled 'RealPort USB Configuration' and contains 'RealPort USB Settings'. It features five dropdown menus for 'Default Group 1' through 'USB Port 5', all set to 'Group 1' through 'Group 5' respectively. A note below states: '1 Default Group is being deprecated and can no longer be changed.' An 'Apply' button is at the bottom.

Management

The Connection Management page displays additional information about the current connections to the AnywhereUSB.

The example below shows a USB connection to a host computer with an IP address of 192.168.1.52.



The screenshot shows the 'Connections Management' page. The navigation menu is similar to the previous screenshot. The main content area is titled 'Connections Management' and shows 'Active System Connections'. It contains a table with the following data:

Action	Connected From	Connected To	Protocol	Sessions
<input type="checkbox"/>	local host	192.168.1.52 (Group 1)	Realport USB	0

Below the table are 'Refresh' and 'Disconnect' buttons.

Note Clicking **Disconnect** will only temporarily disconnect the session. Since the connection request is driven by the host computer, the session will automatically get re-established.

Click **Disconnect** only for troubleshooting purposes, such as when instructed by Digi Technical Support.

If you need to disconnect the device from a host computer, use **Disconnect** in the AnywhereUSB Remote Hub Configuration Utility.

Administration

Administration tasks for the AnywhereUSB include certificate and key management, backing up and restoring device configurations, updating firmware, restoring the device configuration to factory defaults, viewing system information, and restarting the device. As with device configuration and monitoring, it covers performing administrative tasks through a variety of device interfaces.

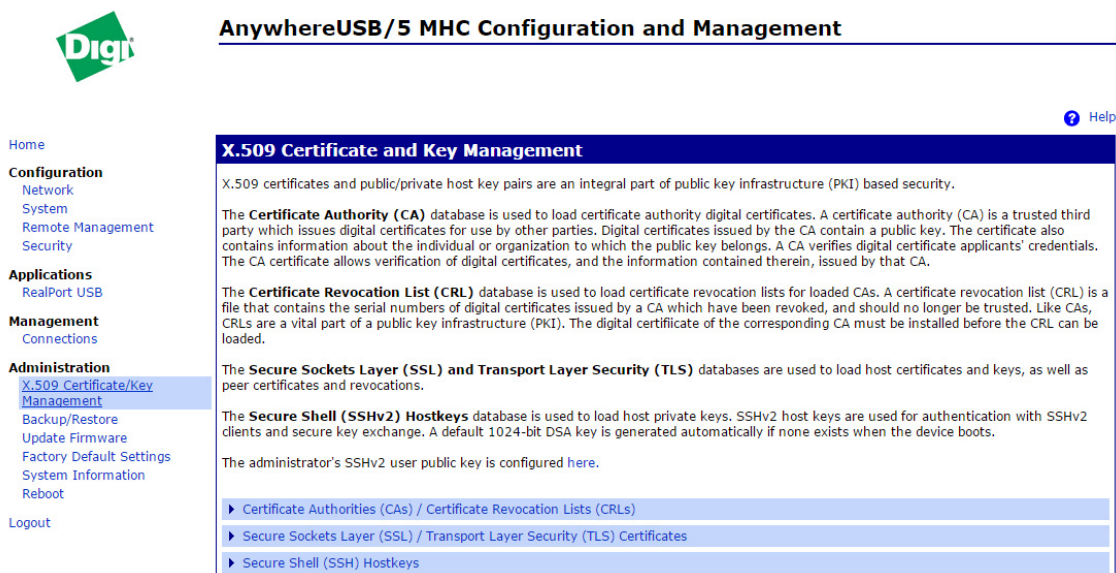
The Administration section of the web UI main menu provides the following menus:

- **X.509 Certificate and Key Management:** For configuring security.
- **Backup/Restore:** For backing up or restoring a device's configuration settings.
- **Update Firmware:** For updating firmware, including Boot code.
- **Factory Default Settings:** For restoring a device to factory default setting.
- **System Information:** For displaying general system information for the device and device statistics.
- **Reboot:** For restarting the device.

X.509 Certificate and Key Management

The AnywhereUSB devices use X.509 certificates and public/private host key pairs as part of their public key infrastructure (PKI) based security. Configure and install a digital certificate on the device to encrypt traffic to and from the device.

This is an optional setting that allows a host computer to confirm AnywhereUSB device authenticity and to encrypt USB-over-IP traffic. This digital certificate must be signed by a Trusted Certificate Authority (CA). Since an AnywhereUSB is not publicly accessible, an enterprise CA can self-sign the digital certificate.



AnywhereUSB/5 MHC Configuration and Management

X.509 Certificate and Key Management

X.509 certificates and public/private host key pairs are an integral part of public key infrastructure (PKI) based security.

The **Certificate Authority (CA)** database is used to load certificate authority digital certificates. A certificate authority (CA) is a trusted third party which issues digital certificates for use by other parties. Digital certificates issued by the CA contain a public key. The certificate also contains information about the individual or organization to which the public key belongs. A CA verifies digital certificate applicants' credentials. The CA certificate allows verification of digital certificates, and the information contained therein, issued by that CA.

The **Certificate Revocation List (CRL)** database is used to load certificate revocation lists for loaded CAs. A certificate revocation list (CRL) is a file that contains the serial numbers of digital certificates issued by a CA which have been revoked, and should no longer be trusted. Like CAs, CRLs are a vital part of a public key infrastructure (PKI). The digital certificate of the corresponding CA must be installed before the CRL can be loaded.

The **Secure Sockets Layer (SSL) and Transport Layer Security (TLS)** databases are used to load host certificates and keys, as well as peer certificates and revocations.

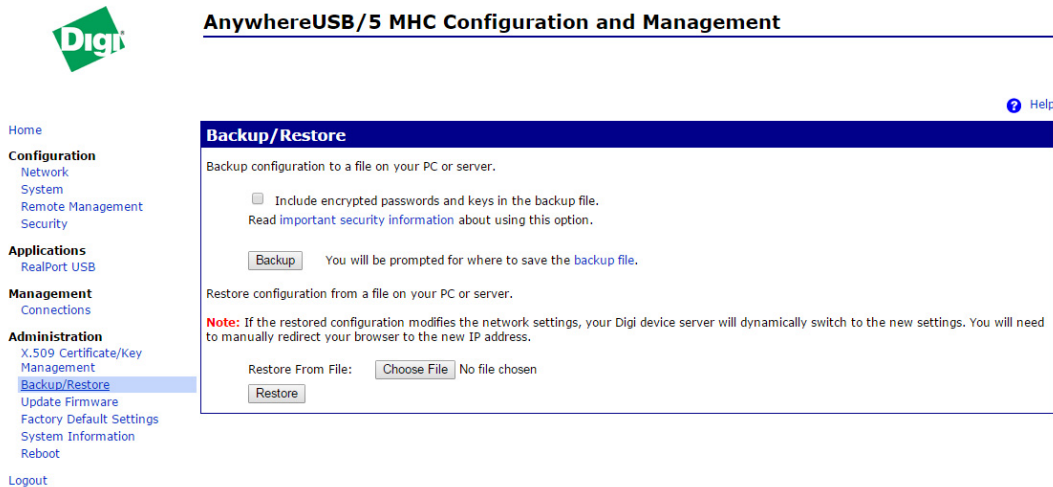
The **Secure Shell (SSHv2) Hostkeys** database is used to load host private keys. SSHv2 host keys are used for authentication with SSHv2 clients and secure key exchange. A default 1024-bit DSA key is generated automatically if none exists when the device boots.

The administrator's SSHv2 user public key is configured [here](#).

- ▶ Certificate Authorities (CAs) / Certificate Revocation Lists (CRLs)
- ▶ Secure Sockets Layer (SSL) / Transport Layer Security (TLS) Certificates
- ▶ Secure Shell (SSH) Hostkeys

Backup/restore settings

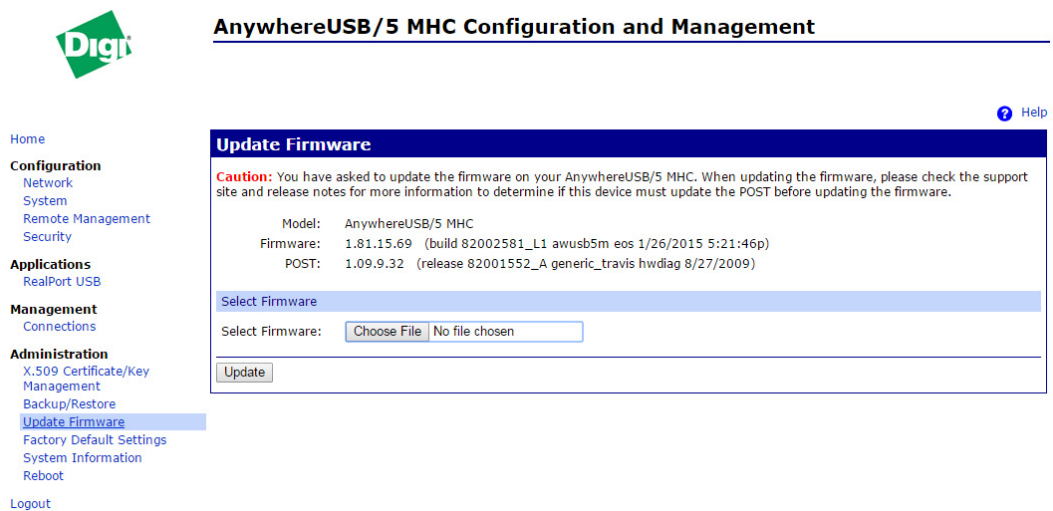
Once the AnywhereUSB is configured, backing up the configuration settings using the Backup/Restore page is recommended in case problems occur later, firmware is upgraded, or hardware is added. When configuring multiple devices, use the backup/restore feature as a convenience, where the first device's configuration settings are backed up to a file, and then the file is loaded onto the other devices.



The screenshot shows the 'Backup/Restore' page in the Digi AnywhereUSB/5 MHC Configuration and Management interface. The page title is 'Backup/Restore' and it includes a 'Help' link. The main content area is divided into two sections: 'Backup configuration to a file on your PC or server.' and 'Restore configuration from a file on your PC or server.' The backup section has a checkbox for 'Include encrypted passwords and keys in the backup file.' and a 'Backup' button. The restore section has a 'Restore From File:' label, a 'Choose File' button, and a 'Restore' button. A note states: 'Note: If the restored configuration modifies the network settings, your Digi device server will dynamically switch to the new settings. You will need to manually redirect your browser to the new IP address.'

Update firmware

From the Update Firmware page, update the firmware for the AnywhereUSB from a file on a computer.



The screenshot shows the 'Update Firmware' page in the Digi AnywhereUSB/5 MHC Configuration and Management interface. The page title is 'Update Firmware' and it includes a 'Help' link. A 'Caution' message states: 'Caution: You have asked to update the firmware on your AnywhereUSB/5 MHC. When updating the firmware, please check the support site and release notes for more information to determine if this device must update the POST before updating the firmware.' Below this, the current device information is displayed: Model: AnywhereUSB/5 MHC, Firmware: 1.81.15.69 (build 82002581_L1_awsb5m eos 1/26/2015 5:21:46p), and POST: 1.09.9.32 (release 82001552_A generic_travis hwdiag 8/27/2009). There is a 'Select Firmware' section with a 'Choose File' button and a 'No file chosen' label. An 'Update' button is located at the bottom of the form.

Update firmware from a file on a computer:

- 1 From the main menu, select **Administration > Update Firmware**. The Update Firmware page is displayed.
- 2 Enter the name of the firmware file in the **Select Firmware** field, or click **Browse** to locate and select the firmware file.
- 3 Click **Update**. DO NOT close the browser until the update is complete and a restart prompt appears.

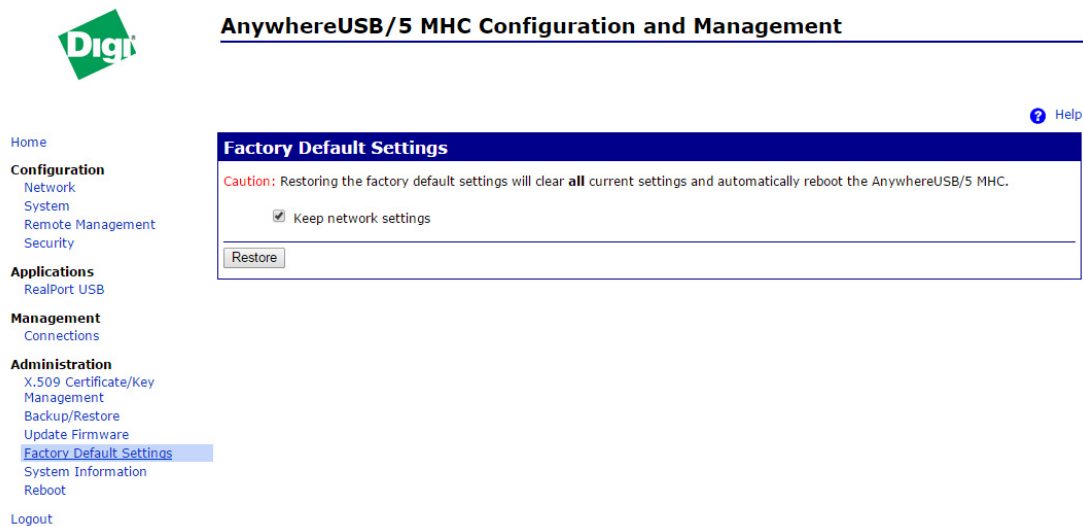
Factory default settings

There are several ways to reset the device configuration of an AnywhereUSB device to the factory default settings: from the web UI, using the boot command from the command line, and using the Reset button on the front panel.

The Reboot from the web UI and boot command are soft resets, while the Reset button/signal method is a hard reset.

Restoring the AnywhereUSB to its factory default settings clears all current configuration settings. In addition, any files loaded into the device through the File Management page are also removed. If the Keep network settings checkbox is checked, the network settings will not be reset.

Using the restore operation from the web UI is the best way to reset the configuration. Before performing the restore operation, back up the settings using the Backup/Restore operation to save the current configuration in case you want to restore it at a later time.



The screenshot shows the web UI for 'AnywhereUSB/5 MHC Configuration and Management'. On the left is a navigation menu with categories: Home, Configuration (Network, System, Remote Management, Security), Applications (RealPort USB), Management (Connections), and Administration (X.509 Certificate/Key Management, Backup/Restore, Update Firmware, Factory Default Settings, System Information, Reboot). The 'Factory Default Settings' option is highlighted. The main content area has a blue header 'Factory Default Settings' and a red 'Caution' message: 'Restoring the factory default settings will clear all current settings and automatically reboot the AnywhereUSB/5 MHC.' Below this is a checkbox labeled 'Keep network settings' which is checked, and a 'Restore' button.

Using the web UI

The Factory Default Settings operation from the web UI clears all current settings, resets the password for the administrative/root user, and restores the settings to the factory defaults.

- 1 Make a backup copy of the configuration using the **Backup/Restore** operation.
- 2 From the **Main** menu, click **Administration > Factory Default Settings**. The Factory Default settings page is displayed.
- 3 (Optional) Check the **Keep network settings** checkbox to keep the current network settings such as the IP address and host key settings. In addition, any files that were loaded into the device through the File Management page such as custom-interface files and applet files are retained.
- 4 Click **Restore**.

Using the boot command

For details, see [Configure from the command line](#) on page 51.

From the command line, the boot action=factory command clears all current configuration settings, except the IP address settings, host key settings, and password for the administrative/root user; restores the settings to the factory defaults; then restarts the device.

#> boot action=factory

There are several other options for using the boot command to load configuration settings. Type **help** boot to see all command options.

Using the front panel Reset button

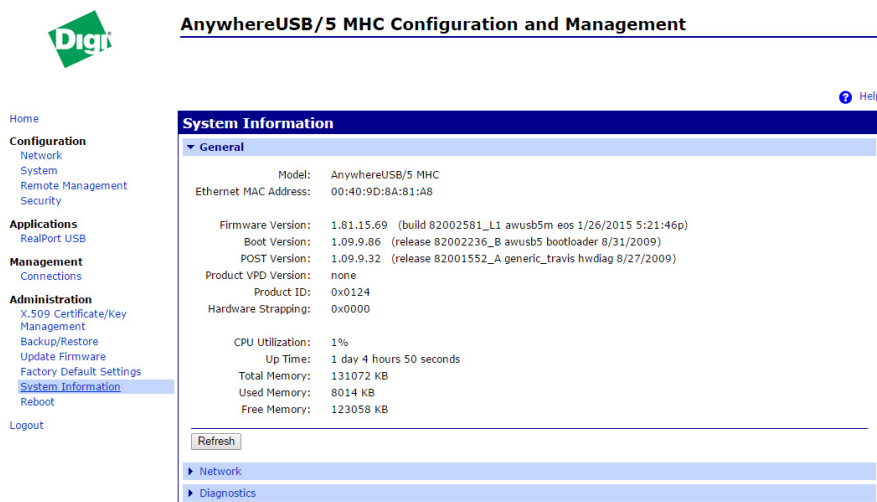
If the AnywhereUSB is not accessible from the web UI, restore the configuration to factory defaults using the Reset button.

- 1 Disconnect power from the AnywhereUSB.
- 2 Hold down the front panel **Reset** button.
- 3 While holding the **Reset** button down, connect power to the AnywhereUSB.
- 4 Wait about 10 seconds, until the System Status LED blinks a Red 1-5-1 code.
- 5 Release the **Reset** button.

System information

System information displays the model, MAC address, firmware version, and boot version of the AnywhereUSB device. It also displays memory statistics, CPU utilization, and how long the device has been running since the last power-on or restart.

From the web UI menu, select **Administration > System Information**. Select **General**, **Network**, or **Diagnostics** for the appropriate information.



The screenshot shows the web interface for 'AnywhereUSB/5 MHC Configuration and Management'. The left sidebar contains a navigation menu with categories: Configuration (Network, System, Remote Management, Security), Applications (RealPort USB), Management (Connections), and Administration (X.509 Certificate/Key Management, Backup/Restore, Update Firmware, Factory Default Settings, System Information, Reboot, Logout). The main content area is titled 'System Information' and has a 'Help' icon. Under the 'General' tab, the following information is displayed:

Model:	AnywhereUSB/5 MHC
Ethernet MAC Address:	00:40:9D:8A:81:A8
Firmware Version:	1.81.15.69 (build 82002581_L1 awusb5m eos 1/26/2015 5:21:46p)
Boot Version:	1.09.9.86 (release 82002236_B awusb5 bootloader 8/31/2009)
POST Version:	1.09.9.32 (release 82001552_A generic_travis hwdiag 8/27/2009)
Product VPD Version:	none
Product ID:	0x0124
Hardware Strapping:	0x0000
CPU Utilization:	1%
Up Time:	1 day 4 hours 50 seconds
Total Memory:	131072 KB
Used Memory:	8014 KB
Free Memory:	123058 KB

Below the table is a 'Refresh' button and a list of tabs: 'General' (selected), 'Network', and 'Diagnostics'.

Reboot the AnywhereUSB

Changes to some device settings require saving the changes and rebooting the AnywhereUSB.

To reboot the device from the web UI:

- 1 Select **Administration > Reboot**.
- 2 Click **Reboot**. Wait approximately 1 minute for the reboot to complete.

To reboot the device using the front panel Reset button:

- 1 Hold down the front panel **Reset** button for about 2 seconds, until the front panel LEDs start blinking an amber color.
- 2 Quickly release the **Reset** button then hold it down again.
- 3 Wait about 4 seconds, until the front panel LEDs flicker then turn off.
- 4 Release the **Reset** button.

Note This reboot procedure is only applicable when the AnywhereUSB is in a normal operational state, such as when the System Status LED is blinking green. If the System Status LED is repeatedly blinking red (instead of slow green), please contact Digi Technical Support at www.digi.com/support.

Configure from the command line

This chapter explains how to configure the AnywhereUSB from the command line interface (CLI). Configuring an AnywhereUSB through the CLI consists of entering a series of commands to set values in the device.

Note This feature is not available on the first generation AnywhereUSB/5.

Access the command line interface

To configure devices using commands:

- 1 Connect the AnywhereUSB to a computer.
- 2 Open a terminal program that can perform both telnet and SSH from a command prompt and connect to the device using the following settings:
 - **Connection Port:** Connect to the COM port associated with the serial port connected to the device.
 - **Baud rate or Bits per second:** 9600
 - **Data:** 8 bit
 - **Parity:** None
 - **Stop:** 1 bit
 - **Flow control:** Software

Note For AnywhereUSB/14 and AnywhereUSB TS44 models, you can use a null modem serial cable connected to a serial port on the device to console into the device.

- 3 Type **telnet ip-address** at the command prompt, where **ip-address** is the IP address of the AnywhereUSB, such as 192.168.1.0.

If the AnywhereUSB device requires a username and password, a login prompt is displayed. If the user name and password for the device are unknown, contact the system administrator who originally configured the device.

Supported commands

To verify whether an AnywhereUSB supports a particular command, online help is available. For example:

- Typing **help** or **?** displays all supported commands for a device.
- Typing **set ?** displays the syntax and options for the set command. Use this command to determine whether the device includes a particular “set” command variant to configure various features.
- Typing **help set** displays syntax and options for the set command.

The following table provides some common configuration commands for modifying settings on the AnywhereUSB.

To configure:	Use this command:
System-identifying information	set system
Host name	set host
Network options	set network
Network services	set service
Ethernet	set Ethernet
Users and passwords	set user and newpass

For more information about CLI commands, visit www.digi.com/resources and search for the Digi Connect Family Command Reference guide.

Hardware specifications

This section provides the physical dimensions, environmental, and power requirements of the AnywhereUSB.

AnywhereUSB/2

Dimensions

Length: 2.38 in (6.04 cm)

Width: 3.9 in (10 cm)

Height: 1.0 in (2.54 cm)

Weight: 5 oz. (142 g)

Environmental

Operating temperature: 32° F to 131° F (0° C to 55° C)

Relative humidity: 0% to 95% (non-condensing)

Power requirements

The AnywhereUSB uses a 120/230VAC 50/60Hz power adapter that supplies 5VDC to the device. It is recommended that only the enclosed power supply be used with the AnywhereUSB. However, power is supplied to the AnywhereUSB by a UL-Listed Direct Plug-In Power device or Information Technology Equipment Rated Power device rated 5VDC, at least 3.0 A, if used in the U.S. and Canada or a power supply with similar rating and approved by your local safety code if it is used elsewhere. For polarity, see the following diagram:



Hardware interface features

The device provides 2 USB ports (standard A-type receptacles). The downstream ports support Low, Full, and High Speed downstream devices.

Memory: 64MB RAM

Network interface features

Standards: IEEE 802.3, 802.3i (10Base-T), 802.3u (100Base-TX), 802.3x (full duplex and flow control), HP Auto-MDIX (auto-detection of straight-through or crossover cabling)

Physical layer: 10/100 Mbps in half- or full-duplex mode, with auto-negotiation of speed and duplex

Ethernet connector: RJ-45

AnywhereUSB/5 (G2), AnywhereUSB/5 M

Dimensions

Length: 4.35 in (11.05 cm)

Width: 7.20 in (18.29 cm)

Height: 1.03 in (2.61 cm)

Weight: 10.00 oz. (283.5g)

Environmental

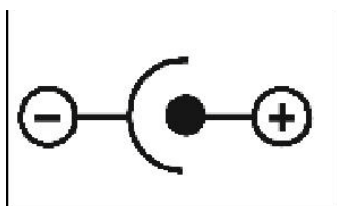
Operating temperature: 32° F to 131° F (0° C to 55° C)

Relative humidity: 0% to 95% (non-condensing)

Power requirements

The AnywhereUSB uses a 120/230VAC 50/60Hz power adapter that supplies 5VDC to the device. It is recommended that only the enclosed power supply be used with the AnywhereUSB. However, power is supplied to the AnywhereUSB by a UL-Listed Direct Plug-In Power device or Information Technology Equipment Rated Power device rated 5VDC, at least 3.0 A, if used in the U.S. and Canada or a power supply with similar rating and approved by your local safety code if it is used elsewhere.

For polarity, see the following diagram:



Note The power supplies between the AWUSB/5 first and second generation (G2) models are not interchangeable. Use the power supply provided with the device.

Hardware interface features

The device provides 5 USB ports (standard A-type receptacles). The downstream ports support Low, Full, and High Speed downstream devices.

Memory: 128MB RAM

Network interface features

Standards: IEEE 802.3, 802.3i (10Base-T), 802.3u (100Base-TX), 802.3x (full duplex and flow control), HP Auto-MDIX (auto-detection of straight-through or crossover cabling)

Physical layer: 10/100 Mbps in half- or full-duplex mode, with auto-negotiation of speed and duplex

Ethernet connector: RJ-45

AnywhereUSB/5 (first generation)

Dimensions

Length: 4.35 in (11.05 cm)

Width: 7.20 in (18.29 cm)

Height: 1.03 in (2.61 cm)

Weight: 10.00 oz. (283.5g)

Environmental

Operating temperature: 32° F to 131° F (0° C to 55° C)

Relative humidity: 0% to 95% (non-condensing)

Power requirements

Power to this product may be supplied by a UL Listed Direct Plug-In Power device marked "Class 2" or a UL listed power supply rated with a minimum rating of 5 V DC 2.5 A if used in the U.S. and Canada or a power supply with similar rating and approved by your local safety code if it is used elsewhere.

For polarity, see the following diagram:



Note The power supplies between the AWUSB/5 first and second generation (G2) models are not interchangeable. Use the power supply provided with the device.

AnywhereUSB TS44

Dimensions

Length: 4.35 in (11.05 cm)

Width: 7.20 in (18.29 cm)

Height: 1.03 in (2.61 cm)

Weight: 10.00 oz. (283.5g)

Environmental

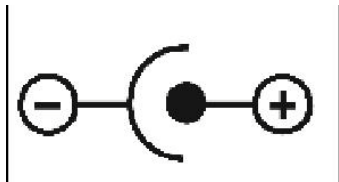
Operating temperature: 32° F to 131° F (0° C to 55° C)

Relative humidity: 0% to 95% (non-condensing)

Power requirements

The AnywhereUSB uses a 120/230VAC 50/60Hz power adapter that supplies 5VDC to the device. It is recommended that only the enclosed power supply be used with the AnywhereUSB. However, power is supplied to the AnywhereUSB by a UL-Listed Direct Plug-In Power device or Information Technology Equipment Rated Power device rated 5VDC, at least 3.0 A, if used in the U.S. and Canada or a power supply with similar rating and approved by your local safety code if it is used elsewhere.

For polarity, see the following diagram:



Hardware interface features

The device provides 4 USB ports (standard A-type receptacles) and 4 serial ports. The downstream ports support Low, Full, and High Speed downstream devices.

Memory: 128MB RAM

Serial interface features

- 10-pin serial ports
- EIA-232 interface
- Throughput up to 230,400 bps
- 5, 6, 7, 8 data bits
- 1, 1.5, 2 stop bits
- Mark/space/even/odd parity
- Hardware and Software Flow Control

Serial port pinouts

Pin Number	Signal
Pin 1	RI
Pin 2	DSR
Pin 3	RTS
Pin 4	Ground
Pin 5	TxD
Pin 6	RxD
Pin 7	Signal Ground
Pin 8	CTS
Pin 9	DTR
Pin10	DCD

Network interface features

- Standards: IEEE 802.3, 802.3i (10Base-T), 802.3u (100Base-TX), 802.3x (full duplex and flow control)
- Physical layer: 10/100 Mbps in half- or full-duplex mode, with auto-negotiation of speed and duplex
- Ethernet connector: RJ-45

AnywhereUSB/14

Dimensions

Length: 4.97 in (12.62 cm)

Width: 17.00 in (43.18 cm)

Height: 1.74 in (4.42 cm)

Weight: 40.00 oz. (1134g)

Environmental

Operating temperature: 32° F to 131° F (0° C to 55° C)

Relative humidity: 0% to 95% (non-condensing)

Power requirements

The AnywhereUSB/14 uses single or dual 120/230VAC 50/60Hz power input(s) through the rear IEC 60320 inlet(s). Redundant (dual) supply enables it to support mission critical applications where uninterrupted powering is a must. In case of redundant (dual) powering, both supplies provide power to the device. When one of the supplies fails the other will provide the complete power to the device. In case of single powering, use the left side inlet (rear view). The maximum power requirement of the AnywhereUSB/14 is 40W.

Hardware interface features

The device provides 14 USB ports (standard A-type receptacles). The downstream ports support Low Speed, Full Speed, and High Speed downstream devices.

The device supports two Ethernet connectors (dual RJ-45) LAN1 & LAN2 for mission critical applications (redundant Ethernet). The device can switch from LAN1 to LAN2 and vice-versa if any of them fails. The primary input is LAN1.

The device also provides an RS232 UART Management port via a DB9 connector at the rear next to the network connectors.

Network interface features

Standards: IEEE 802.3, 802.3i (10Base-T), 802.3u (100Base-TX), 802.3x (full duplex and flow control), HP Auto-MDIX (auto-detection of straight-through or crossover cabling)

Physical layer: 10/100 Mbps in half- or full-duplex mode, with auto-negotiation of speed and duplex

Regulatory and safety information

GOST certification

Safety information

Продукция соответствует требованиям нормативных документов:

ГОСТ Р МЭК 60950-1-2009, ГОСТ Р 51318.22-99, ГОСТ Р 51318.24-99, ГОСТ Р 51317.3.2-2006 (Разд. 6, 7), ГОСТ Р 51317.3.3-2008

Transitional CoC No + issuing/expiration dates

№ РОСС US.MH08.B02068

Срок действия с 14.02.2013 по 13.02.2014

Address and phone of service facility

Digi International Inc. 10000 West 76th Street, Eden Prairie, MN 55344, США



WARNING! For the AnywhereUSB/14 only: HAZARDOUS VOLTAGE INSIDE. Before servicing any device, make sure the power is disconnected.

Troubleshooting

The following information provides troubleshooting steps for the most common issues. To find information on other issues, visit our Knowledge Base at knowledge.digi.com.

Basic troubleshooting steps

Follow these basic troubleshooting steps first:

- Make sure you have the most current driver and firmware installed for your AnywhereUSB model and USB devices.
- Make sure each USB device has the most current drivers installed.
- Make sure the USB device works as expected using a native USB port by connecting the USB device directly to the computer instead of through an AnywhereUSB.
- Try the "Use Microsoft IDs" AnywhereUSB option, see the [Understanding the "Use Microsoft IDs" AnywhereUSB feature](#) Knowledge Base article.

AnywhereUSB error when connecting on a virtual machine

When the AnywhereUSB status says "Connected to this computer" but shows a warning icon with error code 39 in Device Manager, the virtual machine might be missing the necessary USB drivers.

The virtual machine must have a USBD.SY_ or usbd.sys file located in the ...\\system32\\drivers folder. If this file is missing, do the following:

- 1 Make sure Windows is configured to show file extensions.

Windows XP:

- a Open **My Computer**, select **Tools > Folder Options**, and click the **View** tab.
- b Scroll down and clear the **Hide extensions for known file types** check box and click **OK**.

For Windows 7 and Server 2008:

- a Open **Computer** and select **Organize > Folder and Search Options**.
- b Click the **View** tab.
- c Scroll down and clear the **Hide extensions for known file types** check box and click **OK**.

- 2 On the Windows virtual machine drive, search for the usbd.sys file.

The exact location of this file depends on the Windows operating system version:

- XP 32-bit: i386 folder
- XP 64-bit: IA64 folder
- Server 2003: i386 folder
- Server 2003 R2: i386\DRIVER.CAB
- Server 2008: sources\install.wim\5\Windows\System32\drivers\
- Vista: sources\install.wim\5\Windows\System32\drivers\
- Windows 7: sources\install.wim\4\Windows\System32\drivers\

Note For newer operating systems with the install.wim file, we recommend using software such as 7-Zip to browse the contents of the install.wim file to locate the USBD.SY_ or usbd.sys file.

- 3 Copy the USBD.SY_ or usbd.sys file and paste it in the ...system32\drivers folder on the virtual machine. If you are copying the USBD.SY_ file, rename it to usbd.sys. Make sure to paste it in the drivers subfolder, not system32.
- 4 Restart the virtual machine.
- 5 After Windows loads, the AnywhereUSB Host Controller(s) and AnywhereUSB/RealPortUSB Root Hub(s) component(s) should automatically install and appear in Device Manager.

AnywhereUSB USB device compatibility list

The AnywhereUSB is a network-attached USB 2.0 hub. While any USB device should work, there are some limitations. Use the following information to make sure your USB device is compatible with AnywhereUSB.

Note USB 2.0 support was introduced in AnywhereUSB firmware v1.51 for the AnywhereUSB/5 (G2), AnywhereUSB/5 M, AnywhereUSB/5 (G2) TS-44, and AnywhereUSB/14 models. The AnywhereUSB/2 model introduced USB 2.0 support in firmware v1.60. All previous firmware versions are USB 1.1. The first generation AnywhereUSB/5 supports only USB 1.1.

Compatible USB devices

The following list provides some of the USB devices that are compatible with the AnywhereUSB that we recommend and support, but it is not a complete list:

- USB license dongles, also known as security keys or license keys. All brands work, such as SafeNet, WIBU, Rockey4, Aladdin, HASP, and so on
- USB printers, scanners, or multi-function devices
- USB HID (human interface device), such as mice, keyboards, barcode scanners, and magnetic strip card readers
- USB hubs, such as the Digi Hubport product line
- USB-to-serial converters, such as the Digi Edgeport product line
- Digi Rapidport modem bank
- Digi Watchport USB cameras
- Other bulk or interrupt (per USB spec) type USB devices
- Lab style instruments
- Smartphones

Limited support USB devices

The following USB devices have limited support with the AnywhereUSB. We do not recommend using these devices, because they have limited testing. However, they may work for your application.

- USB mass storage devices, such as flash drives and hard drives

Note These devices should enumerate, possibly slower than expected, and might have a noticeable performance decrease compared to a native USB port. Expect transfer rates at about 4-6 Mbit/sec due to various considerations, such as network overhead.

Incompatible USB devices

The following USB devices are incompatible with the AnywhereUSB. We do not recommend or support using them:

- "Isochronous" (per USB spec) devices. Check the spec sheet of the USB device or contact the vendor to determine if a device uses the "isochronous" USB transfer type
- USB audio devices, such as sound cards
- Video streaming devices, such as webcams, except for the Digi Watchport USB cameras
- USB Modems, except for the Digi Rapidport modem bank

USB modems

If you need to use a USB modem, we suggest using a Digi Edgeport USB-to-serial converter with a RS-232 serial modem, which we have successfully tested. Although any serial modem should work, we specifically recommend MultiTech 5634ZBA, US Robotics 5686 based on positive feedback from customers. Some customers have also reported success with US Robotics USR5637 and Multi-Tech MT9234-CDC-XR USB modems, though they are not supported because Digi has not yet tested these devices.

No remote hubs found

The “No remote hubs found” message appearing on the left side of the AnywhereUSB Remote Hub Configuration Utility indicates that the host computer is unable to discover any AnywhereUSB devices on the network.

This message appears when firewall software blocks the port used for device discovery. Try the following:

- For firewall software, either disable it or add an exception for the port.
- Check for a link light on the AnywhereUSB Ethernet port. If the link light is not lit, connect all of the AnywhereUSB devices to switches using network cables.
- Connect the AnywhereUSB device directly to the host computer.
 - First generation AnywhereUSB/5: You must use a crossover network cable to connect first generation AnywhereUSB/5 devices to the host computer.
 - Second generation AnywhereUSB devices: Use the auto-sensing network interface on the second generation AnywhereUSB models to connect to the host computer,
- If the host computer has multiple network interfaces, disable the network interfaces that are not on the same network as the AnywhereUSB device. Then close and re-launch the AnywhereUSB Remote Hub Configuration Utility.

- By default, the AnywhereUSB Remote Hub Configuration Utility only searches the local subnet for AnywhereUSB devices. If the AnywhereUSB device is on a different subnet, you must configure the AnywhereUSB Remote Hub Configuration Utility to look on the other subnet:
 - a Use the **Device Discovery Utility** to determine the AnywhereUSB device IP settings (for all models except the first generation AnywhereUSB/5).
 - b In the AnywhereUSB Remote Hub Configuration Utility, click **Edit / Discovery List** and either add the AnywhereUSB IP address or add the other subnet in question, such as 192.168.1.255.
- Some anti-virus software might block the connection. You can either temporarily disable it or add an exception for the AnywhereUSB Remote Hub Configuration Utility executable:
 - For 32-bit operating systems, allow AwUsbCfg.exe.
 - For 64-bit operating systems, allow AwUsbCfg64.exe.
- For first generation AnywhereUSB/5 devices: If the System Status LED is solid orange and all five port LEDs are off, the device is configured with the DHCP client enabled and is unable to obtain an IP address. Perform a factory reset (see [AnywhereUSB factory reset procedure](#)).

USB license dongle cannot be found

Try these suggestions in the following order:

- 1 Make sure the license information on the dongle has not expired, contact the appropriate dongle/software vendor.
- 2 Make sure the USB license dongle is functioning correctly:
 - a Connect it directly to a physical computer (not to an AnywhereUSB device).
 - b Install the proper dongle driver and confirm that the dongle is installed properly by checking Windows Device Manager.
 - c If you have software to test the dongle, run the software to make sure the dongle is working properly. If the dongle does not work, it will likely not work with an AnywhereUSB device.
- 3 Make sure that another USB device works on the same AnywhereUSB port, such as a USB keyboard or mouse.
- 4 Make sure that you are running the most current AnywhereUSB driver and firmware versions on the host computer.
- 5 Make sure the computer has the most current dongle driver version.
- 6 Start the AnywhereUSB Remote Hub Configuration Utility and do the following:
 - a Select **File > Preferences**,
 - b Select the **Use Microsoft Device IDs** check box and click **Save**,
 - c Disconnect from the AnywhereUSB device then re-connect to the device.
- 7 If you are launching the protected software from a computer connected through a Windows Remote Desktop Session, you need to use the console option instead to connect directly to the computer and then run the software.
- 8 Add the dongle as a permitted device based on its PID/VID, as follows:
 - a Open the **AnywhereUSB Viewer Utility**,
 - b In the AnywhereUSB program group, select the USB device and make note of the VID (Vendor ID) and PID (Product ID) of that device. Each ID should be four characters, in HEX format, such as 0x1234. Ignore the leading 0x when taking note of the values.

- c** Using the Windows Registry Editor, go to HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ionhub.
 - d** With ionhub selected, select **Edit > New > Multi-String Value**.
 - e** Rename the new value to PermittedDevices (case sensitive).
 - f** Double-click **PermittedDevices** and in the Value data field, type Vid_1234&Pid_5678 (where 1234 is the Vendor ID and 5678 is the Product ID of the USB device).
 - g** Click **OK** and close Registry Editor.
 - h** Restart the host computer.
- 9** Disable Windows Data Execution Prevention.
- 10** If the parallel port is not used, disable it in the host computer's BIOS.

Note A virtual machine has a BIOS. When the computer running the virtual machine does not have a physical parallel port, the option might be in the BIOS of the virtual machine.

For details, see [Appendix A: AnywhereUSB permitted device list](#) on page 66.

Connecting to this computer message

When a device remains in the “Connecting to this computer” state in the AnywhereUSB Remote Hub Configuration Utility. The following are the most common causes.

Firewall software

Firewall software, such as Windows Firewall, may be blocking port 3422 TCP that the AnywhereUSB uses. Either add this port as an exception or disable the firewall software.

Windows New Hardware Wizard

The Windows New Hardware Wizard did not open when you connected the AnywhereUSB device. To resolve this issue:

- 1** Open **Device Manager** and find AnywhereUSB-related components that have a warning icon.
- 2** Right-click the components that have the warning icon and click **Update Driver**.
- 3** Complete the installation procedure.
- 4** Repeat this process as needed for all AnywhereUSB-related components in Device Manager that have warning icons.

AnywhereUSB is connected to a different computer

The AnywhereUSB may already be connected, or trying to connect, to a different computer. This applies only to AnywhereUSB models that connect all of the USB ports to a single host computer, such as legacy AnywhereUSB/5, AnywhereUSB/2, AnywhereUSB/5 (G2), and AnywhereUSB TS44 devices. To resolve this issue:

- 1** Open the **AnywhereUSB Remote Hub Configuration Utility**.
- 2** Select **Edit > Connect List**.
- 3** Delete the IP address of the affected AnywhereUSB device and close the Connection List.

- 4 Make note of the deleted device's status in the Host PC Connection Status window and do the following:
 - Status is "Connected to (IP address)": The AnywhereUSB is already connected to a different host computer. First, disconnect from the other host computer by removing the AnywhereUSB device's IP address from the Connection List. Then reconnect the device to the desired host computer.
 - Status is "Available for Host Connection": There is another issue that is causing the problem. Contact Digi Technical Support for assistance.

Check the network configuration

If the AnywhereUSB is configured with a static IP address (with the DHCP client disabled), check the following:

- Determine if the AnywhereUSB's Static IP address is in use by another device on the network by disconnecting the network cable from the AnywhereUSB device, then try to ping that same IP address from the host computer. If you get a ping reply, then another device on the network is using the same IP address.

Note Using ping may not provide reliable results because not all devices respond to this command. We recommend configuring the AnywhereUSB device with a different static IP address that is outside of the DHCP range if a DHCP server is on the network.

- Make sure the subnet mask is correct.
- Make sure the host computer's IP address is correct, especially when configured with a static IP address.
- Make sure the host computer's network configuration is properly configured so it communicates with the AnywhereUSB device. Also, make sure they are both on the same subnet.
- Ping the AnywhereUSB device. If you do not get a response, then you will not be able to connect to the device.

Reinstall the AnywhereUSB software

If none of the troubleshooting suggestions help, uninstall the AnywhereUSB software, reboot the host computer, reinstall the AnywhereUSB software (with admin privileges), and connect to the AnywhereUSB again.

Appendix A: AnywhereUSB permitted device list

About the permitted device list

An option has been added to the AnywhereUSB product that limits access to a set of select devices. This option allows an administrator to build a list of supported devices by adding specific Vendor ID/Product ID or Class values into the registry. The AnywhereUSB will compare the IDs of each USB device (when the USB device is connected), with the value(s) in the registry and if there is a match, the device will enumerate; otherwise an “unknown device” message will appear in the Notification Area.

The key is located in this location:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ionhub
```

The new key value is PermittedDevices. This Multi String value contains a list of devices that the AnywhereUSB will enumerate all other devices will show as "unknown device."

Examples

Following are some examples of values in the permitted device list:

- For a hub, use the value GENERICHUB (Class_09 is not supported).
- For a composite device, use the value COMPOSITE.
- For specific device, use Vid_xxxx&Pid_yyyy where xxxx and yyyy are the vendor id and product ID of the device.
- For a device class such as mass storage, use Class_xx where xx is the class of device. Classes are as follows:
 - Communications: 02
 - Human interface: 03
 - Printer: 07
 - Storage: 08
 - Vendor Specific: FF

Configure the permitted device list

To allow a specific USB device with an embedded hub, such as an Edgeport/8:

```
PermittedDevicesREG_MULTI_SZVid_1608&Pid_0215 GENERICHUB
```

To allow all human interface devices such as mouse or keyboard:

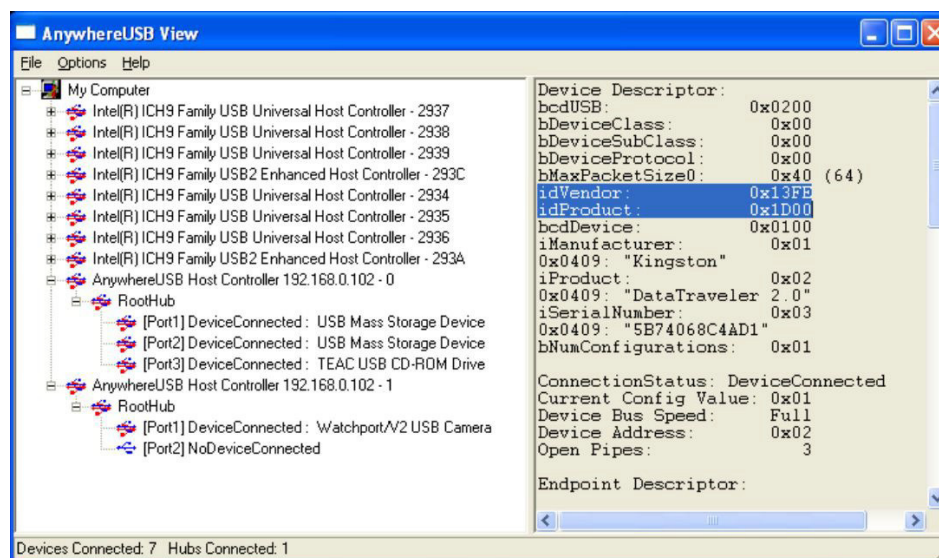
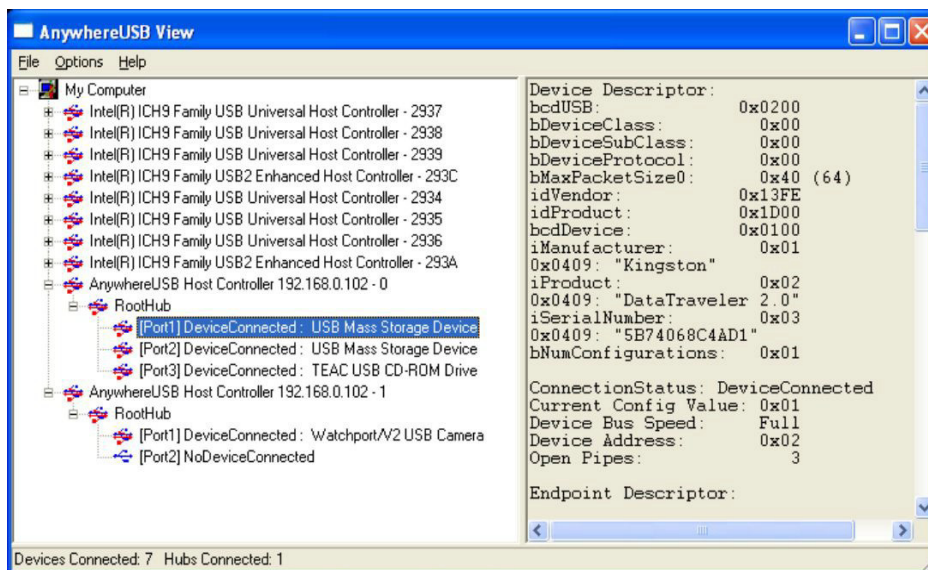
```
PermittedDevicesREG_MULTI_SZClass_03
```

To allow all mice and all printers:

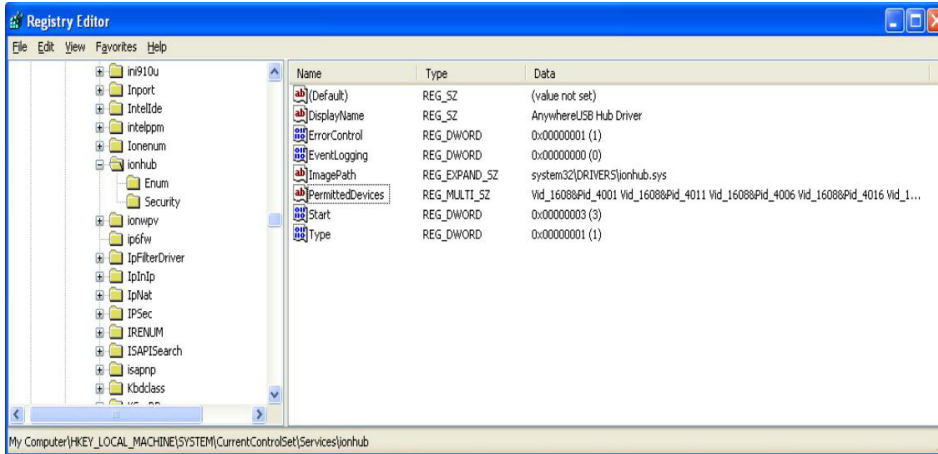
```
PermittedDevicesREG_MULTI_SZClass_03 Class_07
```

Use the AnywhereUSB View utility to see the USB device's Vid/Pid values. The fields are called idVendor and idProduct. In the following example, the highlighted USB flash drive has the following properties:

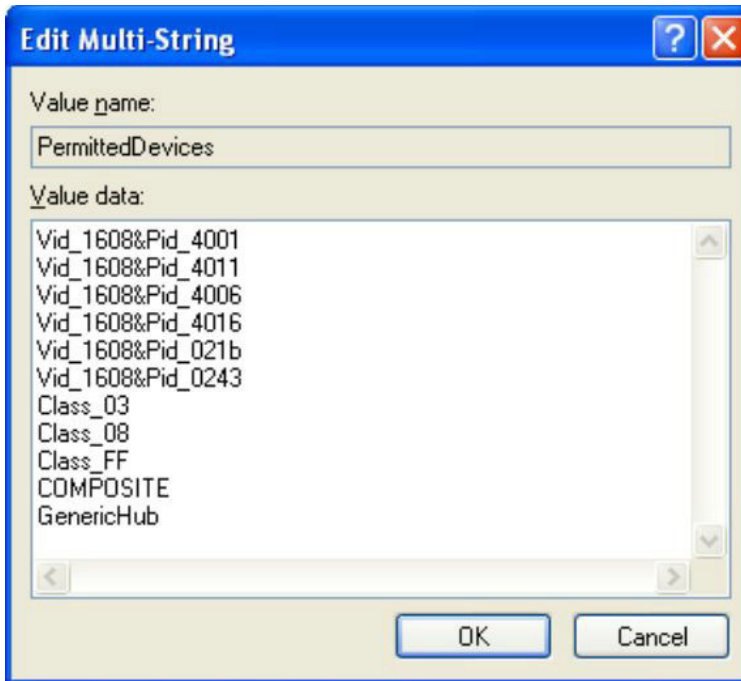
- idVendor:0x13FE
- idProduct:0x1D00



The following is a view of the registry with the new Key of "PermittedDevices":



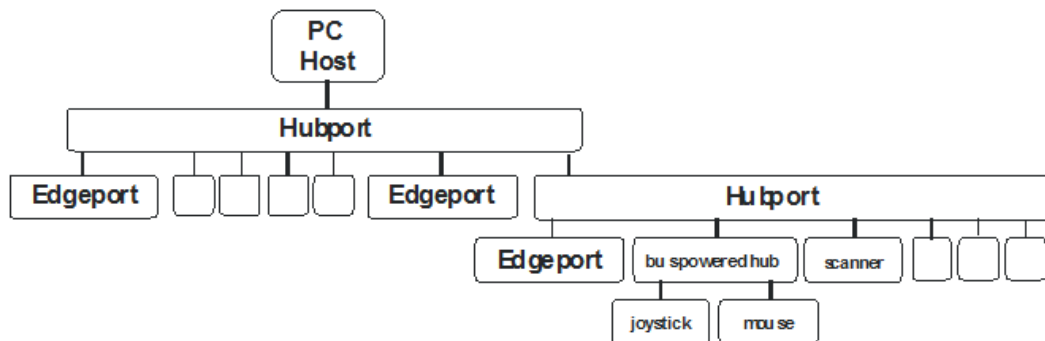
Double clicking on the key will bring up the Edit Multi-String dialog.



Appendix B: Understanding hubs

About hubs

Hubs are critical components in the plug-and-play architecture. They are wiring concentrators that enable the attachment of multiple devices, thus converting a single attachment point into multiple attachment points. USB architecture allows a cascaded multiple hub configuration with certain power limitations (explained later in this section). The figure below shows an example of a typical hub configuration.



Upstream and downstream ports

Each hub has an upstream port, connecting to the host, and multiple downstream ports, connecting to downstream devices, including other hubs. A hub can detect attachment and detachment of downstream devices and enable and monitor the distribution of the power to downstream devices via their integral hardware and the operating system.

Power requirements

Each USB device reports its power requirements to the operating system, which then enables and disables the device as a function of its power requirements and the amount of available power. High-speed devices typically connect to a self-powered hub, which obtains power from its external power supply and provides up to 500 mA for each downstream port. Connect only simple devices, such as a mouse, to a bus-powered hub, which obtains power from its upstream host and provides up to 100 mA for each downstream port.

Due to the limited available power for bus-powered hubs, cascading two bus-powered hubs is an illegal topology, and devices connected to the second hub will not function. (USB specifications limit the connection of a bus-powered hub to a self-powered hub or host only.)

Series limits

According to the USB Specification, the maximum limit of hubs cascaded in series cannot exceed five. In other words, you may have a maximum of five hubs between any device and the host. This does not mean that the maximum number of hubs in a system is five. Connect up to seven parallel hubs at any given level. You must tally both external and embedded hubs when counting downstream hubs.

Appendix C: Firewall support

Configure for firewall support

To access an AnywhereUSB that is behind a firewall:

- Your firewall must have a well known static IP address, for example, 10.52.48.37.
- The AnywhereUSB must have an IP address on the private subnet, for example, 192.168.1.10.
- You must configure your firewall to allow TCP/IP and UDP/IP packets to pass through port 3422.
- You must configure the firewall to send these TCP/IP and UDP/IP packets directed to the IP Address of the AnywhereUSB; in this example the address would be 192.168.1.10.
- You must manually add the address of the firewall to the Connection List.

Note You can access only one AnywhereUSB through each firewall.

For more information on how to configure your firewall, refer to your firewall manual.

At this point, the computer will attempt to connect to the AnywhereUSB.

If you would like AnywhereUSB information in the discovery window of the AnywhereUSB Remote Hub Configuration Utility, you can add the address of the firewall into the Discovery List.

Note AnywhereUSB devices behind firewalls, as displayed in the discovery window, show the IP address of their private network.
