Airwall Gateway 75 Series Installation Guide

A Tempered Airwall Gateway allows your organization to create an identity-based, secure and private global connected network. It creates a zero-trust Software Defined Perimeter (SDP), using the Airwall gateway to establish the perimeter of your logical airgap. This perimeter could be deep in your network, closer to the data source, providing security for your IoT/ IIoT devices. It provides security for those devices that can't protect themselves.

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This is a step-by-step guide for setting up basic network connectivity for an Airwall Gateway 75, and provisioning the gateway on the Airwall Conductor. The Conductor is the central configuration and management point for your Airwall secure network, and manages trust between devices and Airwall Gateways on your network.

Here are the basic steps, explained in more detail below:

1. **Unbox the Airwall Gateway** and get familiar with the parts
2. **Connect the Airwall Gateway** to your network and to the Conductor
3. **Manage the Airwall Gateway** in the Conductor

Before you begin
To prepare for bringing the Airwall Gateway online, you need to:
- ❑ Get the Conductor IP address or URL that the Airwall Gateway will connect to
- ❑ Have network cables to connect the Airwall Gateway to your network
- ❑ Have a micro USB cable to connect a computer to the Airwall Gateway

Step 1 – Unbox the Airwall Gateway
The first step is to unbox the Airwall Gateway and become familiar with the parts. At the end of this step, you'll be ready to connect the Airwall Gateway.

1. Open the box and carefully remove the Airwall Gateway.
2. Get familiar with the top and front panel of the Airwall Gateway:
    Top panel:
    1. Activity/Status LED
    2. WiFi LED (for future functionality)
    3. Power LED
    Front panel:
    4. Port 1 (shared network)
    5. Port 2-3 (secure network)
    6. USB (future expansion).
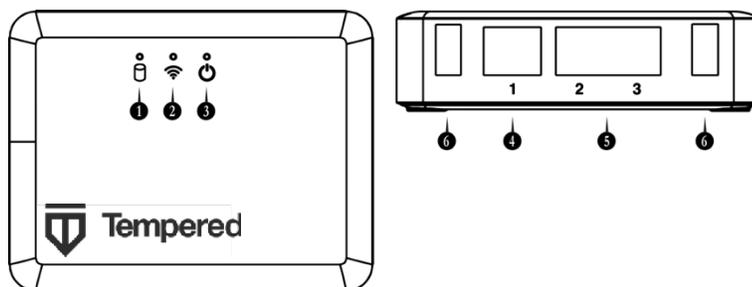
3. Check the specifications on the labels and platform guide included in the box to determine where to locate the Airwall Gateway.

Step 2 – Connect the Airwall Gateway to the network and the Conductor

The next step is to connect the Airwall Gateway to your network and to the Conductor, called provisioning. At the end of this step, your Airwall Gateway will be powered on and connected to the Conductor.

You can connect and configure the Airwall in one of two ways:
- Manually Connect – Faster for a few Airwall Gateways
- Use a DHCP Server – Faster if you are configuring more than a few.

Option 1 – Manually Connect

For provisioning, place the Airwall where it can reach the Conductor on your shared network. The fastest way to provision the Airwall is to connect a computer to the Airwall using the console port.

1. **Plug in the Airwall** – Locate the Airwall in an area that complies with the safe operating guidelines, and then plug it in with the supplied power cord.
2. **Connect to your network** – Connect the Airwall to a network shared with the Conductor using Port 1.
3. **Connect a computer to the Airwall** – Connect your computer to the micro USB console port located on the back of the Airwall. (Wide side and/or USB logo facing up)

   a. Using a terminal (macOS or Linux) or terminal emulator (Windows), connect to the Airwall using baud rate 115200.
   b. At the login prompt, log in with: name: airsh and no password. For Airwall Gateways with v2.2.5 and earlier, use password: airsh
   c. Set the Conductor IP address or URL, and optionally, the port. For example, enter:
      ```
      conductor set my-conductor.tempered.com
      ```

4. **Reboot** – Turn the power off and back on again.
5. **Ping the Conductor URL** – Check that you can reach the Conductor by pinging it. Enter:
   ```
   ping my-conductor.tempered.com
   ```

6. **Connect to devices** – Connect the devices you want to protect to the Airwall on Port 2.

The Airwall should now be recognized in the Conductor, showing up on the Licensing tab, or on the Airwalls page as ready to manage. Once the Airwall is connected to the Conductor, you can manage and configure it there (including serial ports). For more command line options, see the Airwall Gateway Airshell Console Command Reference.

Option 2 – Use a DHCP Server
For provisioning, place the Airwall where it can reach the Conductor on your shared network. Once you set up DHCP on your network, you can skip steps 2 and 3 when setting up any additional Airwalls.

1. **Plug in the Airwall** – Locate the Airwall in an area that complies with the safe operating guidelines, and then plug it in or apply power.
2. **Check DHCP** – Ensure there is a DHCP server and a DNS resolver or DNS server for the local domain that is accessible on the shared network.
3. **Create a DNS SRV record** – On the DNS server, add a SRV record pointing to the Conductor URL:
   ```
   _service._proto.name TTL class SRV priority weight port target
   ```

   For example, if your shared network domain is me.com and the Conductor hostname is cond-01, then the SRV record should be:
   ```
   _ifmap._tcp.example.com. 3600 IN SRV 10 0 8096 cond-01.me.com
   ```

   *Use the TTL, priority and weight for your DNS environment. Port 8096 is the default, but you can change it in the Conductor and set it to an alternate port.
4. **Connect to your network** – Connect the Airwall to a network shared with the Conductor using Port 1. The DHCP server assigns an IP address, netmask, and a default gateway to the Airwall. The Airwall then does an DNS lookup and configures itself using the Conductor address.
5. **Connect to devices** – Connect the devices you want to protect to the Airwall on Port 2.

The Airwall should now be recognized in the Conductor, showing up on the Licensing tab, or on the Airwalls page as ready to manage. Once the Airwall is connected to the Conductor, you can manage and configure it there (including serial ports).

Step 3 – License and Manage the Airwall Gateway in the Conductor
See https://webhelp.tempered.io/webhelp/content/topics/lic_airwall.html for the latest instructions.

You need to Add Airwall Edge Service Licenses to the Conductor before you can provision and license Airwall Gateways. Airwall Edge Services include Airwall Gateways as well as Airwall Agents and Servers that allow people to connect their devices to your Airwall secure network.

1. In Conductor, open **Settings**, and go to the **Licensing** page.
2. If you have a license voucher, Add Airwall Edge Service Licenses to the Conductor. If you don't have a license voucher, contact sales@tempered.io to get one before continuing.
3. Under **Provisioning Requests**, select the check boxes for the Airwall Gateway you want to provision, and under the **Actions** dropdown, click **Grant Request** to provision your Airwall Gateway. The Airwall Gateway should reconnect to the Conductor and appear in your Airwall Edge Services list as unmanaged.
   Note: You can also grant provisioning requests from the **Provisioning** tab on the Dashboard.
4. On pre 2.2x Conductors, click **Sync**.
5. On the Conductor dashboard, click the **Show all Airwalls** box and filter the Airwall Edge Services by unmanaged.
6. In the row for the Airwall Gateway you want to license, in the far right column, click the arrow to open the drop down menu, and select **Manage Airwalls**.

You or your Conductor administrator can now configure the Airwalls in the Conductor.

Additional Resources

LED Status Codes
Use the following table to interpret the LED status light pattern. **o** is blink, and **=** is off. So **o o = =** means it blinks twice, is off for the same amount of time, then blinks twice again, then off again, and so on.

Normal Operation	On Steady	No Conductor Connection	o o o o = = o o = =
Conductor Blink	o o = =	System Error	o o o o = = o o o = =
Missing Identity	o o o = = o = =	Secure Network Error	o o o o = = =
Factory Reset	o o = = o = =	No Shared Network	o o o o = = o = =
Diagnostic Mode	o = o = (fast blink)	Downloading Firmware	o o o = = o o = =
Updating Firmware	o o o = = =		

Specifications

Ethernet Ports	3 x 10/100/1000 Mbps RJ-45 ports	Operating Temp	0° to 40° C (32° to 104° F)	
Controls	1x Micro USB console port 1x Reset button	Environment	For indoor use only	
Displays	1x Power LED 1x WiFi LED 1x Activity/Status LED	Dimensions	W: 110mm (4.33") D: 84.5mm (3.33") H: 29.5mm (1.16")	
DC Power Input	12V DC, 2A max 5.5×2.1mm barrel jack Center positive	Weight	153 g (.337 lbs.)	
Regulatory Approvals	CE (75e/w)	EN 55032:2015, EN 55035:2017, EN 55024:2010, EN 6100-3-2:2014, EN 61000-3-3:2013, EN 60950-1:2006+A2:2013, IEC 60950-1:2005+A1:2009+A2:2013		
	FCC (75w)	EN 300 328, EN 301 893, EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 62311:2008		
	FCC	FCC, part 15	IC	CAN ICES-3 (B)/NMB-3(B)

Airwall Gateway Airshell Common Command Reference

For Airwall Gateways that have a console port, you can deploy and configure the Airwall Edge Service with the **Airshell** (airsh) command-line interface. You can deploy & configure an Airwall Gateway directly without going into diagnostic mode.

Get Started with Airshell
Connect a computer to the console port on the back of the Airwall™ or Conductor hardware, and use a terminal (macOS, Linux) or terminal emulator (Windows) to open the console. See the platform guide for your Airwall for specific connection instructions.

At the console:
- v2.2.8 and later: log in with name: airsh, and no password
- v2.2.5 and earlier: log in with name: airsh, and password: airsh.

You can then enter commands at the airsh» prompt.

No Default Password in v2.2.8 and later
Starting with v2.2.8, the Airshell console default login has no default password. If you are concerned about securing physical access to Airshell, set a password by entering `conf password` and following the prompts to set and confirm a new password. Keep this password in a secure location, as it cannot be recovered. This password is only for Airshell physical console access and is not used when you access Airshell remotely.

CAUTION: If this password is lost, you will need to do a factory reset to clear the password.

Common Airshell Commands

Command	Description
help	List available commands. Use help tree to see commands and options.
setup-ui	Open the setup wizard to set up an Airwall Gateway. See Configure an Airwall Gateway with the airsh Setup Wizard.
conf network	**v2.2.10 and later** – Configure port groups, see Configure Port Groups with Airshell in Airwall help. **v2.2.8 and earlier** – Set up static IP addresses.
ping	Test network connectivity
status	See Airwall status: • **Hostname** – Shows the Airwall Gateway's identity used when it connects to the Conductor. You use this name to confirm the provisioning request from the Airwall Gateway. • **HIT** – The Host Identity Tag is a hash of the Airwall Gateway's Host Identity, the public key identifier. This IPv6-like identifier is used for secure communication. • **LSI** –The Local Scoped Identifier is a shortened IPv4 version of the HIT, used for secure communication. • **Device cert.** – Present indicates the presence of a device certificate, which means the Airwall Gateway has been provisioned by the Conductor. • **Device key** – Present indicates the presence of the device identity private key.

	• **Keystore** – Indicates where the device identity private key is stored: TPM, Operating System, or file-based keystore. • **Annunciator** – Displays the status of the annunciator. On some models this affects LEDs and/or LCD display. • **Run mode** – Indicates the mode the Airwall Gateway is running in: • **Protected** – Normal operation mode. • **Transparent** – Running withnon-encrypted bridging. • **Diagnostic** – In diagnostic mode. • **Factory reset** – In factory reset mode. • **HA primary/secondary/active** – Indicates the High Availability role of the Airwall Gateway. • **Conductor** – Shows the status of the Airwall Gateway's connection to the Conductor. Disconnected indicates the Airwall Gateway is not connected to the Conductor. • **IP address** – Shows the active IP addresses for this Airwall Gateway. An IP address displayed in green indicates it has been selected as active.
`status conductor`	See status of connection to the Conductor
`conductor set`	Set or remove a Conductor IP address or URL and port (optional). For example: `conductor set my-conductor.tempered` or just `conductor set`to remove.
`diag`	Put the Airwall Gateway in diagnostic mode
`factory-reset`	Reset Airwall Gateway back to factory default settings. If you want to preserve the network configuration, use the keep-networking option: `airsh>> factory-reset keep-networking`
`reboot`	Restart the Airwall Gateway
`shutdown`	Shut down the Airwall Gateway
`exit or quit`	Exit Airshell

For the full reference of command-line commands, see Airwall help.

For the latest info, see Airwall help: 	Tempered support@tempered.io +1 206.452.5500 ext. 2 www.tempered.io 19410 HWY 99 STE A #119 Lynnwood, WA 98036