



Networking and Power Requirements

Networking & Power

Network Interface

- Wi-Fi 802.11 b/g/n (2.4 GHz only)
- WPA-PSK (a.k.a WPA-Personal)
 - WEP
 - Gigabit ethernet

Captive portal networks are not supported unless MAC address is registered.

DHCP Supported Configuration Options

Option 53 - DHCP Message Type

- Discover

Option 57 - Maximum DHCP Message Size

- 576

Option 55 - Parameter List

- Parameter request Line Items
 - Subnet Mask (1)
 - Router (3)
 - Interface MTU (26)
 - Private/Proxy Auto Discovery (252)
 - Network Time Protocol Servers (42)
 - Domain Name (15)
 - Domain Name Server (6)
 - Hostname (12)

Option 60 - Vendor Class Identifier*

- "Density S5 DPU"

Option 61 - Client Identifier

- MAC Address

Option 12 - Hostname

- Density-<Serial>

Recommended Network Cabling

Cat 5e or later

Static Configuration

- IPv4 Address
- Name Servers

Defaults

- DNS: 8.8.8.8
- NTP: *.pool.ntp.org

Network Data Usage

Traffic Summary

- Sensors only make outbound requests (HTTPS 443)
- Normal Usage: 50 MB/day/DPU
- Accuracy Reports: ~300MB/month/DPU
- Firmware Updates: ~70MB/month/DPU
- Health Logs/Metrics: ~10mb/hour

Power Options

- 802.3at (PoE+ Type 2) compliant network switch capable of providing 30W per port
- 30W PoE+ Injector Wall Plug

Supported Mode

- Mode A
- Mode B

Unit Setup

- iOS application compatible with iPhone, iPad, iPod Touch to configure units

Data Hosting

Amazon Web Services (AWS) Hosting

- Data centers in Northern Virginia
- On-premise hosting not supported

Required Whitelisted Addresses

- *.density.io
- *.s3.amazonaws.com
- *.pool.ntp.org (if applicable)
- connman.net
- connectivitycheck.gstatic.com
- 8.8.8.8 (if applicable)
- 8.8.4.4 (if applicable)

Density does not currently support IP address whitelisting. A list of exact API subdomains is available by request.

Power Requirements

Each DPU requires 30W at PSE and 25.5W at PD per 802.3at PoE+ Type 2 spec. Please ensure your switch is not overloaded or the devices will fail to operate. (For example, if you have a 24-port 500W switch you can support up to 16 DPUs at a time assuming no other load on the remaining ports).