

# etherFAX A2E (rev 2)

## *User Guide*



Firmware 2.0.6  
2017-10-25

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## General Overview

Organizations transitioning to IP-based networks need a cost-effective solution to integrate existing fax machines. etherFAX analog-to-etherFAX (A2E) offers a simple, plug-and-play device that allows any traditional fax machine to be extended to the etherFAX network. The etherFAX A2E, manufactured by MultiTech, connects existing analog fax machines to the etherFAX network, allowing faxes to be sent and received via the cloud, instead of the PSTN. The device allows organizations to leverage existing IT infrastructure and eliminate the cost and maintenance of fax lines.

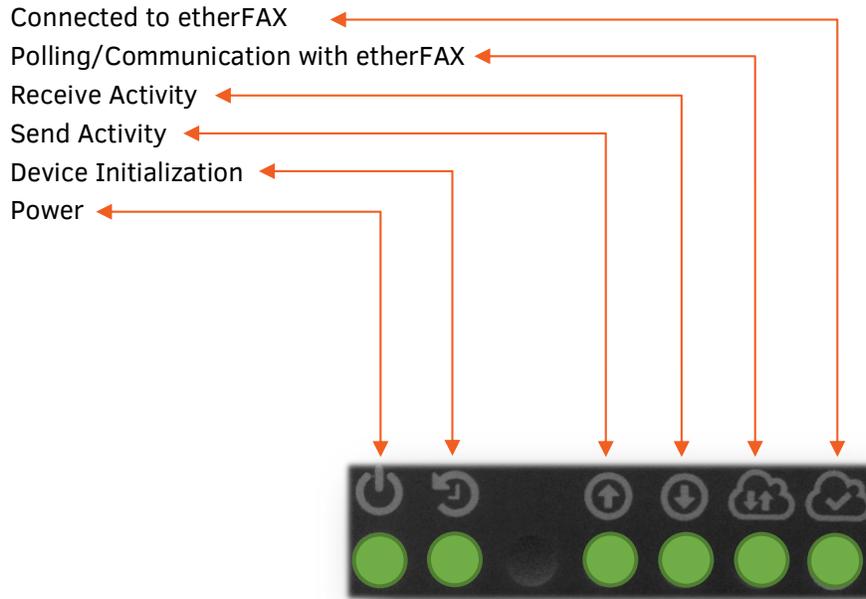


MODEL	MT200A2E-EF
<b>TECHNICAL SPECIFICATIONS</b>	
FAX Mode	V.34 Fax V.17 Fax V.29/V.27/V.21 Fax Fax Compression (MH, MR, MMR) Error Correction Mode (ECM)
Fax Interface	Fax Class 2.0/2.1
Fax Data Speed	Up to 33600
Voltage	9V DC @ 600mA
<b>CONNECTORS</b>	
LAN Connectors	RJ45
Dial Connector	RJ11
Button	Reset push button switch
Power Connector	2.5mm miniature

<b>PHYSICAL DESCRIPTION</b>	
Physical Dimensions (LxWxH)	2.89" x 4.75" x 1.58: 7.34cm x 12.06cm x 4.01cm
Physical Weight	0.28 lbs 0.127 Kg
Chassis Type	Plastic
<b>ENVIRONMENTAL</b>	
Operating Temperature**	32° to 158° F 0° to 70° C
Storage Temperature	-40° to 185° F -40° to 85° C
Humidity	Relative humidity 20% to 90% noncondensing
<b>CERTIFICATIONS</b>	
EMC Compliance Certifications	FCC Part 15, EN55022 Class B, EN55024
Safety Certifications	UL60950-1, cUL60950-1, IEC60950-1, AS/NZS60950-1

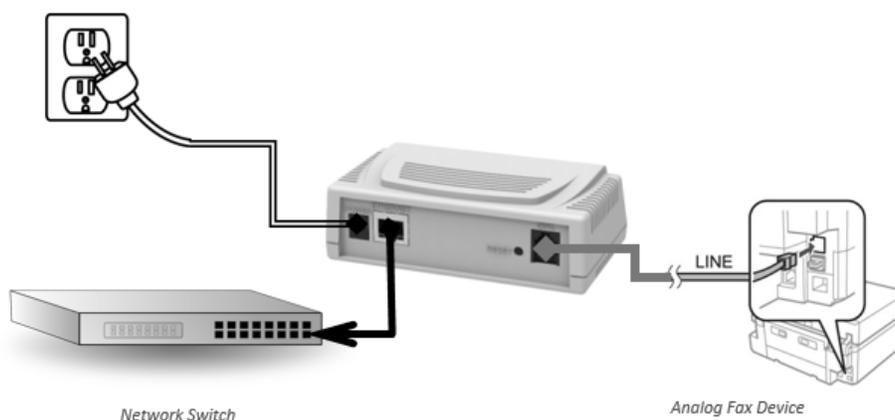


## Device Status Lights



## Device Registration & Initial Setup

When shipped from etherFAX the device will be provisioned to your etherFAX account. Before connecting the device to a power source and network you will want to ensure that it has been assigned correctly to your etherFAX account and the desired DID's or TFN's (Toll-Free Numbers) have been provisioned to the etherFAX A2E.



Using the supplied cabling connect the RJ-11 telephone cable to the RJ-11 port on the back of the etherFAX A2E and the other end into the **Line** port on the analog fax device you wish to use. Connect the supplied Ethernet cabling to the RJ-45 port on the back of the etherFAX A2E and the other end into an active network jack. When ready to power on the device use the supplied power adapter to attach to the power port on the etherFAX A2E and plug into an available power outlet.

The etherFAX A2E is configured for DHCP. If your network supports DHCP the device will be assigned a local IP address which will appear in the etherFAX Client Portal. To access this navigate to <https://clients.connect.etherfax.net> in an internet browser. Provide your client portal login credentials to sign in. Once logged in select **A2E Devices** from the navigation menu on the left side of the screen. From the Device Management page you will be able to determine if your device has received an IP address from the DHCP server in your local network. Further configuration of the device from the etherFAX Client Portal is discussed later in this guide.

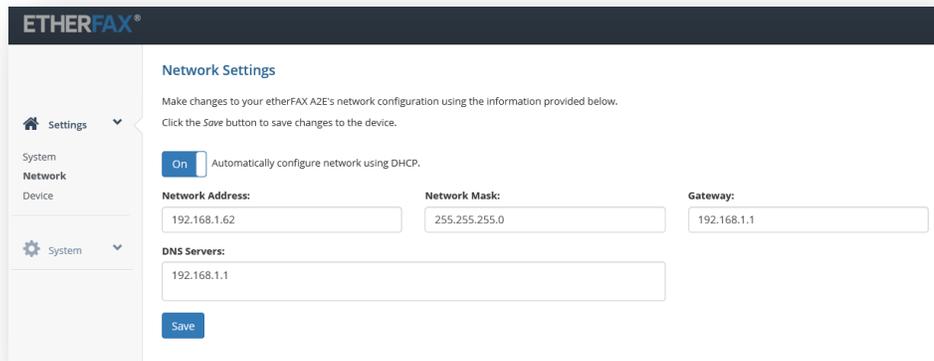
If your network does not support DHCP or the etherFAX A2E is not able to obtain an IP address through DHCP the device will timeout after two minutes and revert to a local IP of 192.168.2.1. The device can then be accessed through a direct network connection with a computer. The computer connected directly with the device will need to have its IP parameters set manually to the following settings:

- Local IP Address: 192.168.2.10
- Subnet: 255.255.255.0
- Gateway: 192.168.2.1

After the settings are configured on the computer and a direct network connection is made via Ethernet cable between the etherFAX A2E and the computer the etherFAX A2E local device portal will be accessible through an internet browser by navigating to <http://192.168.2.1>. Login using the default credentials:

- Username: admin
- Password: password

To configure the device's network settings manually select **Settings** then **Network** from the navigation menu on the left side of the screen. *See figure on next page.*



From the Network Settings configuration page you can disable DHCP and assign a static IP, network mask, gateway, and DNS servers.

- **Network Address:** Local IP address of etherFAX A2E device
- **Network Mask:** Subnet mask of network
- **Gateway:** IP address of network gateway the etherFAX A2E device should route traffic to
- **DNS Servers:** Domain Name Servers the etherFAX A2E device should use. Multiple DNS servers can be specified by using a comma (,) between entries.

Once configured click **Save** and then reboot the device.

## Device Operation

The etherFAX A2E preserves the traditional user experience while extending the reliability and security of the etherFAX network to an analog fax device.

### Sending a Fax

Users will load a fax into the document feeder and dial the number as they normally would. The analog fax device will connect to the etherFAX A2E via the RJ-11 cable and transmit the fax image. Once the image is received at the etherFAX A2E it will securely push the image to the etherFAX network where the document will be transmitted to its final destination.

Upon completion of sending, the device administrator can elect to receive a transmission report when the fax was sent successfully, an error occurred, both on a success or error, or never. Outputting of these transmission reports can also be redirected to a compatible printer (*See Appendix for Printer Requirements*). These options can be configured via the etherFAX Client Portal. Configuration steps are covered in the **Device Configuration** section of this guide.

*Note: It is important to ensure that transmission reports are disabled on the analog fax device as the etherFAX A2E will generate the reports.*

### Receiving a Fax

When a fax is received to a number on the etherFAX network that is assigned to a specific A2E device the etherFAX A2E will securely retrieve the image file and then begin communication with the local analog fax device. The fax image can either be transmitted to the local fax device or sent to a compatible printer. (*See Appendix for Printer Requirements*). For more information on provisioning a number to an etherFAX A2E device please see the **'Management via etherFAX Client Portal'** section later in this document.

*Note: It is important to ensure that auto-answer is enabled on the analog fax device. This will allow the analog fax device to receive all communication from the etherFAX A2E.*

## Device Configuration

The etherFAX A2E device can be managed from two different locations. The device itself has a local device portal that can be accessed via a standard HTTP connection to the device's IP address on port 80. The local device portal assists in configuring the device for network communication and device specific updates such as firmware. It also provides a logging interface and basic network utilities to assist in troubleshooting.

However, all functions of the etherFAX A2E such as DID provisioning are managed from the etherFAX Client Portal at <https://clients.connect.etherfax.net>. This is the preferred method of management. Multi-device configuration is also available from the etherFAX Client Portal allowing some settings to be applied to multiple devices at one time.

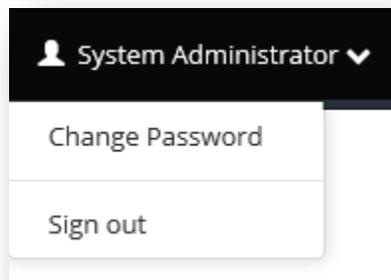
### Management via Local Device Web Portal

The etherFAX A2E local device portal can be accessed by launching a web browser and navigating to the IP address of the device (ex: <http://10.0.0.100>). If the IP address of the device is not known or a DHCP address was not assigned please refer to the **'Device Registration and Initial Setup'** section in this guide to manually configure network settings.

Default Username: admin

Default Password: password

*Note: For security, please update your password once logged in by clicking the 'System Administrator' profile in the top right of the device portal and choosing 'Change Password'.*



## System Settings

While it is preferred to manage all device settings from the etherFAX portal the settings can be managed locally. The system settings allow you to update the device configuration locally. Ensure to click **Save** button after updating any settings and then select **Test Connection** to validate any updated settings.

**System Settings**

Make changes to your etherFAX A2E's system configuration using the information provided below. Click the Save button to save changes to the device or Test Connection to make certain your account settings are valid.

**Service Address:**  
https://na.connect.etherfax.net/rest/2.0/api

**Account:**  **User:**  **Password:**

**Fax Transmit Settings**

**Send:**  **Skip Lines:**  **Reporting:**   Print reports to printer

**Busy Redial:**  **Redial Delay:**

**Fax Receive Settings**

**Receive:**  **Poll Interval:**

**Printer Settings**

**Printer:**

Print received faxes to printer

[Advanced Configuration >](#)

**Service Address:** Connection string used by the device to connect to the desired etherFAX POP (Point of Presence). Generally, this should not need to be changed, however, if you are attempting to reach primarily destinations in Canada it may be advantageous to use the Canadian POP (ca.connect.etherfax.net). Available options:

- https://na.connect.etherfax.net/rest/2.0/api (**default**)
- https://ca.connect.etherfax.net/rest/2.0/api

**Account:** etherFAX account the device is configured to use. **In most cases this will be left blank since the device securely communicates and registers via an authentication token, thus not needing the account number.**

**User:** etherFAX user account the device is configured to use. **In most cases this will be left blank since the device securely communicates and registers via an authentication token, thus not needing the user parameter.**

**Password:** etherFAX account password the device is configured to use. **In most cases this will be left blank since the device securely communicates and registers via an authentication token, thus not needing the password.**

**Send:** Enables the device for send fax functionality.

**Skip Lines:** Defines number of raster lines that will be removed from top of page. This allows the fax header placed on the image by the analog fax machine to be skipped and replaced with the header supplied by etherFAX.

**Reporting:** Configures the desired type of reporting for device send transmissions.

- Errors Only: Local analog fax device will print transmission report if send transmission fails.
- Always: Local analog fax device will print transmission report for every send transaction.
- Never: Local analog fax device will never print transmission report. Failed transactions can be viewed in the etherFAX Client Portal under the reporting section.
- Print reports to printer: Sends transmission reports to compatible printer. *(See Appendix for Printer Requirements)*

**Caller ID:** Configured caller ID for the etherFAX A2E to use when sending a fax.

*Note: Caller ID should be configured as a valid toll number. Failure to do so will result in higher transmission failure rates.*

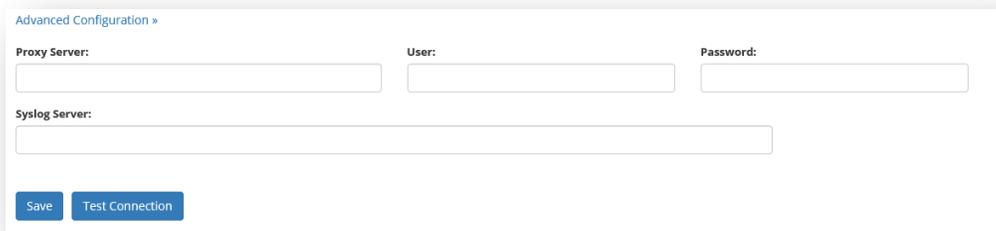
**Busy Redial:** Number of retry attempts to make if a busy is encountered.

**Redial Delay:** Amount of time in seconds to wait between retry attempts.

**Receive:** Enables the device for receive fax functionality.

**Poll Interval:** Integer value, in seconds, that the etherFAX A2E will poll the etherFAX service for inbound faxes.

## Advanced Configuration



Advanced Configuration »

Proxy Server:  User:  Password:

Syslog Server:

Save Test Connection

**Proxy Server:** IP or hostname address to use for connection if proxy server is required.

**User:** User name to supply if connection through proxy server is required.

**Password:** Password to supply if connection through proxy server is required.

**Syslog Server:** IP or hostname address to use for output of etherFAX A2E device syslog messages.

## Network Settings

The etherFAX A2E is configured to use DHCP if available. However if DHCP is not available for use the device can be configured to use a static or manual IP configuration.

**Network Settings**

Make changes to your etherFAX A2E's network configuration using the information provided below.  
Click the *Save* button to save changes to the device.

**On** Automatically configure network using DHCP.

**Network Address:**  **Network Mask:**  **Gateway:**

**DNS Servers:**

**Automatic DHCP:** Enable or Disable use of DHCP

The following options are available if DHCP is disabled.

**Network Address:** Local IP address of etherFAX A2E device

**Network Mask:** Subnet mask of network

**Gateway:** IP address of network gateway the etherFAX A2E device should route traffic to

**DNS Servers:** Domain Name Servers the etherFAX A2E device should use. Multiple DNS servers can be specified by using a comma (,) between entries.

## Device Information

The device information section provides the device serial number as well as its registration status on the etherFAX network.

### Device Information

Your etherFAX A2E's serial number and registration information are shown below. Click the *Update* button to retrieve your registration status.  
If you are operating your device in stand-alone mode, the registration process is not required.

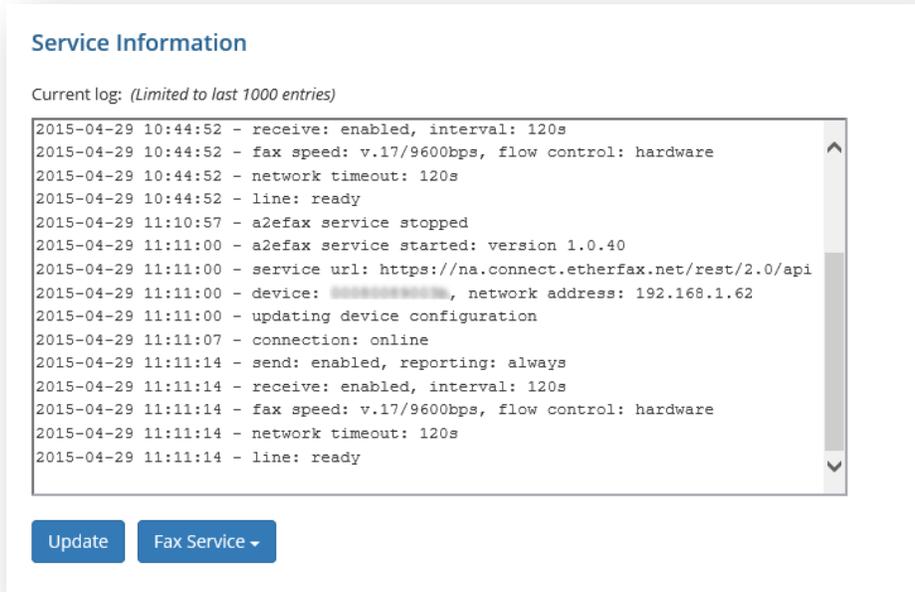
Serial Number: 00080089003b
Registered: Yes

[Update](#)

## Service Information

### Service Logging

The service information section displays the last 1000 entries of the etherFAX A2E log. The log can be refreshed by selecting 'Update'. When submitting a support ticket please include the contents of the current log window along with your issue description.



The screenshot shows a window titled "Service Information". Below the title, it says "Current log: (Limited to last 1000 entries)". A scrollable text area contains the following log entries:

```
2015-04-29 10:44:52 - receive: enabled, interval: 120s
2015-04-29 10:44:52 - fax speed: v.17/9600bps, flow control: hardware
2015-04-29 10:44:52 - network timeout: 120s
2015-04-29 10:44:52 - line: ready
2015-04-29 11:10:57 - a2efax service stopped
2015-04-29 11:11:00 - a2efax service started: version 1.0.40
2015-04-29 11:11:00 - service url: https://na.connect.etherfax.net/rest/2.0/api
2015-04-29 11:11:00 - device: [REDACTED], network address: 192.168.1.62
2015-04-29 11:11:00 - updating device configuration
2015-04-29 11:11:07 - connection: online
2015-04-29 11:11:14 - send: enabled, reporting: always
2015-04-29 11:11:14 - receive: enabled, interval: 120s
2015-04-29 11:11:14 - fax speed: v.17/9600bps, flow control: hardware
2015-04-29 11:11:14 - network timeout: 120s
2015-04-29 11:11:14 - line: ready
```

At the bottom of the window, there are two buttons: "Update" and "Fax Service" with a dropdown arrow.

### Service Control

The etherFAX A2E device service can be controlled by selecting 'Fax Service'. Available service commands are:

- Start
- Stop
- Restart

After a given command has been issued the current log can be updated to view the etherFAX A2E status.

## System Tools

Basic network utilities are provided in the etherFAX A2E local device portal to assist in verifying and troubleshooting network connectivity.

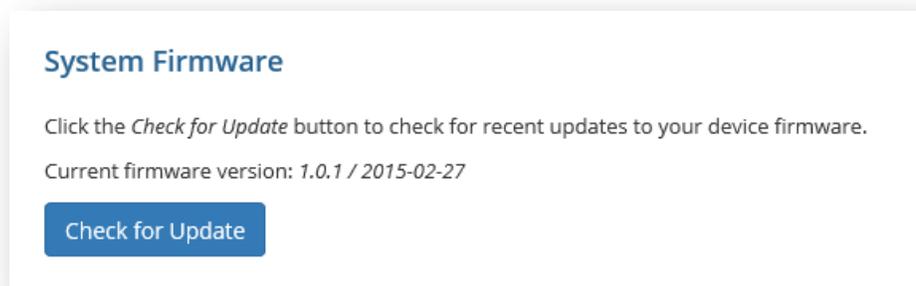
Available utilities:

- free – Display RAM details
  - Line 1 - Indicates Memory details like total available RAM, used RAM, Shared RAM, RAM used for buffers, RAM used of caching content.
  - Line 2 - Indicates total buffers/Cache used and free.
  - Line 3 - Indicates total swap memory available, used swap and free swap memory size available.
- ping - Sends ICMP ECHO\_REQUEST packets to specified network host.
- netstat - used to print network connections, routing tables, interface statistics, masquerade connections, and multicast memberships.
- nslookup - Query internet name servers interactively for information. By default, nslookup will translate a domain name to an IP address (or vice versa).
- traceroute - Prints the route that packets take to a network host.

*Note: Not all standard command switches are available within the etherFAX A2E device portal.*

## System Firmware

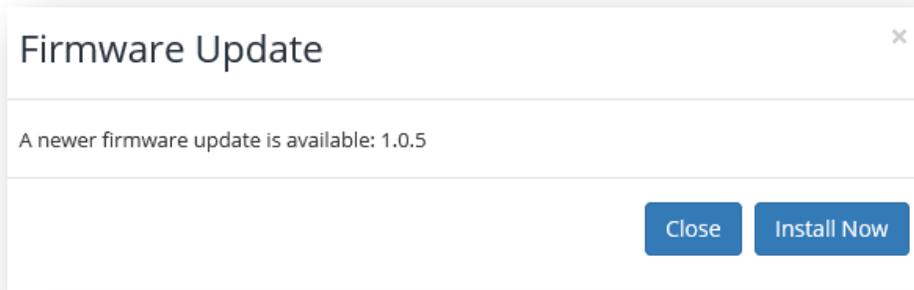
The current firmware loaded on the device can be verified from this menu. A check for the latest firmware can also be performed as well as the ability to install the latest firmware if a new version is available.



### Installing New Firmware

1. From the System Firmware menu select 'Check for Update'. The etherFAX A2E device will contact the etherFAX service to determine if a newer firmware version is available. If a newer firmware is

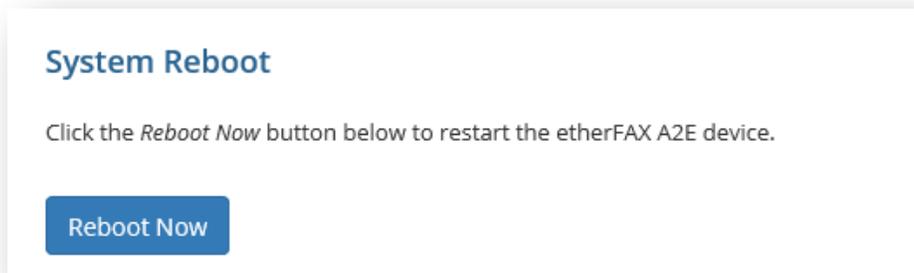
available you will be notified and given the option to 'Install Now'.



2. After selecting 'Install Now' the etherFAX A2E will download and install the latest firmware. The device will automatically reboot once complete.
3. Once the device has rebooted you will need to refresh your internet browser and sign in to the device.
4. Verify that the device has been updated by checking for an update.

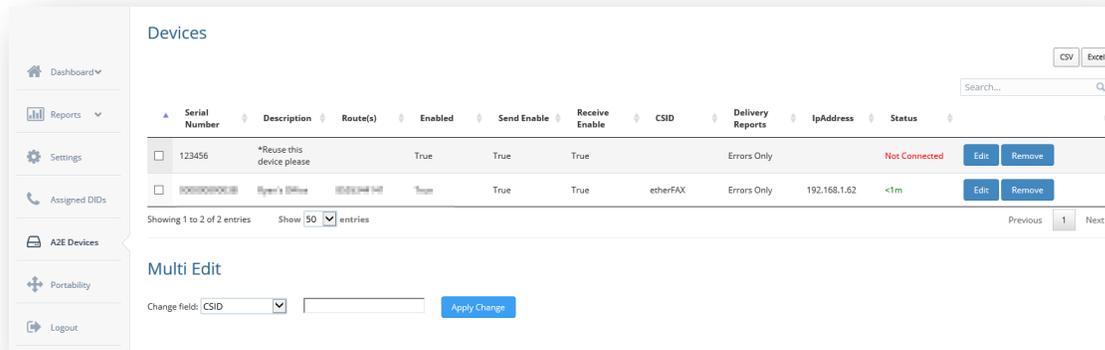
### System Reboot

Through the local device portal a reboot can be initiated by selecting 'Reboot Now'



## Management via etherFAX Client Portal

The etherFAX A2E can be managed remotely from the etherFAX Client Portal (<https://clients.connect.etherfax.net/>). Once logged into the etherFAX Client Portal, select **A2E Devices** from the navigation menu. Any devices currently assigned to your account will be displayed here.



### Multi-Device Edit

From the etherFAX Client Portal you can manage specific settings on multiple devices at once. The available settings to apply to multiple devices are:

- **CSID** – Called Subscriber Identification, text or numeric value, usually company name or fax number.
- **Delivery Report** – Set delivery report to print out on errors only, always, or never.
- **Enabled** – Enable devices
- **Send Enabled** – Enable devices for send functionality
- **Receive Enabled** – Enable devices for receive functionality

Select which devices you would like to apply settings to by selecting the checkbox to the left of the device. Choose the setting from the dropdown, select/input the appropriate setting value, then select **Apply Change**.

### Device Inventory Report

A device inventory report can be exported to a CSV or Excel file. To obtain a device inventory for all etherFAX A2E devices provisioned to your account choose **CSV** or **Excel** from the top right of the **A2E Devices** portal section. You will be prompted for the desired save location on your local computer.

## Single Device Edit

To configure a single device select **Edit** on the right corresponding to the device you would like to configure.

**Configuration**

Account: [Dropdown]

Owned Or Leased: **Owned**

Time Zones: (UTC-5) America/New\_York

Description: [Text Field]

Call ID: etherFAX

Caller ID: [Text Field]

Delivery Reports: **Always**

Lines to Skip: 45

Device Enabled  
 Send Enabled  
 Receiving Enabled

Model Speeds: 14.4 Kbps

Ecm

Device Types: **A2E (v2)**

Device Groups: **Default**

Printer IP Address: 192.168.1.73

Enable the remote printing service on this device (license required).  
 Allow remote print services to print to this device.  
 Print delivery report directly to printer.  
 Print received faxes directly to printer.  
 Attach thumbnail image to delivery reports.

**A2E Device Status**

Date Registered: 5/31/2017 1:02 PM  
Last Login Date: Unknown  
Last Connected Date: 10/25/2017 3:50 PM  
Created On: 3/30/2015 11:27 AM  
IP Address: 192.168.1.5  
Device Token: [Redacted]

**DIDs Assigned to Device**

[Redacted] Delete

[Redacted] Assign DID

Save Back to List

- **Time Zone:** Desired Time Zone in which A2E will operate in.
- **Description** – Text value which can describe location or function within the environment
- **Local ID** – Transmitting Subscriber Identification, text or numeric value, usually company name or fax number
  - **Note:** If the local fax device/machine has a local ID configured the A2E will use this as the value for submission to etherFAX. If no value is configured on the local fax device/machine, then the value will here will be used. Finally, if nothing is configured here the default CSID value from the etherFAX account settings will be used.
- **Caller ID** – Valid phone number to be used as Caller ID (numeric only)
- **Delivery Reports** – Set delivery report to print out on errors only, always, or never
- **Lines to Skip** – Value defines number of raster lines that will be removed from top of page. This allows the fax header placed on the image by the analog fax machine to be skipped and replaced with the header supplied by etherFAX.
- **Send Enabled** – Enable device for send functionality
- **Receive Enabled** – Enable device for receive functionality

- **Modem Speed** – Desired speed of modem on A2E (bps/ bits per second)
- **ECM (Error Correction Mode)** - Optional transmission mode built into the A2E modem. ECM automatically detects and corrects errors in the fax transmission process between the local fax machine and the A2E that are sometimes caused by telephone line noise. This will be used regardless of setting when transmitting using the v.34 protocol (speed > 14,400 bps)
- **Printer IP Address** – Local IP address of compatible printer to output inbound fax images and transmission reports to, if enabled.
- **Print Delivery Report Directly to Printer** – If enabled, transmission reports will be sent to the printer using the configured IP address above. *(See Appendix for Printer Requirements)*
- **Print Received Faxes Directly to Printer** - If enabled, inbound faxes will be sent to the printer using the configured IP address above. *(See Appendix for Printer Requirements)*

#### *Assigning DID's/TFN's to a device*

Any number currently provisioned to your etherFAX account can be assigned to an etherFAX A2E device. Assigning a number to the A2E device allows it to receive faxes sent to the specified number(s) and print them out via the attached analog fax device.

To assign a DID or TFN to an etherFAX A2E device, first select and edit the device from the **A2E Devices** section of the etherFAX Client Portal. A dropdown will be visible that lists all available numbers on the etherFAX account. Choose the desired number and select **Assign DID**. The number is now attached to the A2E device. Multiple numbers can be assigned to one A2E device.

# APPENDIX

## Requirements for Printers

The following protocols must be supported on the printer when using the optional features to output transmission reports or inbound fax images to a printer.

- Printer must support Line Printer Daemon (LPD) protocol (TCP port 515).
  - This is the protocol used to transmit the job to the printer.
- Printer must accept PostScript (PS) jobs natively.
  - This is the page description language used by the etherFAX A2E to format print jobs.

## Support

For support questions regarding the etherFAX A2E please contact etherFAX Support.



+1.877.384.9866



support@etherfax.net



<http://www.etherfax.net/support>