



Iris ReadMe First

The following is a list of errata, tips, and tricks relative to your Iris device. Please contact info@landminstruments.com with any questions or feedback.

- Account Setup
 - Your L&M representative will have provided you with an Azure Active Directory account for logging into one or more L&M cloud-based monitoring applications. If you have not seen an email, from Microsoft, requesting the setup of an account, please contact L&M.
 - Hint: There is a chance this may have got caught in the spam folder.
 - IMPORTANT: The L&M Active Directory service does not support 2-Factor Authentication. If your internal system requires 2-Factor Authentication for all Active Directory [sub] organizations, the login will fail. In this case one must use a personal email address to register for the L&M cloud.
- Network Connections
 - The Iris device supports both wired Ethernet (10/100) and Wi-Fi (2.4 GHz, 802.11b/g/h) connectivity.
 - Hint: If available, wired connectivity is the most seamless method for evaluation as there is no need to configure passwords.
 - Rental kits typically come pre-configured with Wi-Fi access to an included mobile hot spot.
 - The sensor confirms internet connectivity via the HTTPS protocol. As a result, HTTPS must be enabled on the network for the device.
 - The sensor communicates with the Azure IoT Hub via MQTT (Message Queuing Telemetry Transport), over Web Sockets on Port 443. If firewall inbound/outbound rules with specific IP addresses are required, check with L&M to confirm the cloud IP address for the rule. Both inbound [unsolicited] traffic and outbound traffic are required. Outbound-only rules, with stateful allowance for replies is acceptable as well, albeit without remote management capability.
 - The following support ports are also required:
 - UDP 123 for Network Time Protocol
 - If specific port rules are required, the current devices look here for NTP (Google IP Space):
 - 216.239.35.8
 - 216.239.35.12
 - UDP 53 for Domain Name Services



- Wi-Fi access points with spaces in the SSID are not currently supported. If testing with a cellphone as an access point, the phone name or access point name may need to be changed to remove spaces.
- Wi-Fi passwords may contain spaces, just not leading or trailing spaces.
- Hidden Wi-Fi networks are supported.
- Wi-Fi security supports standard SSID/Password protocols (i.e., WEP, WPA, WPA2) and does not currently support centralized directory services, aka “Enterprise” security. If different security schemes are required, connect the device via the hard-wire Ethernet connection and manage security at the Ethernet port level.
- IoT Messaging
 - The Iris IoT devices are programmed to report telemetry data every 15 minutes by default. The messaging protocol employs a retry algorithm should it encounter any network issues. In some cases, a database entry will be duplicated if the original message completes while a retry is in flight. In some cases, where the network may be congested, a message and subsequent retries will fail creating a missed message for that time period.
- Usage Notes and Known Issues
 - If performing a firmware update from a USB stick, it is required that the USB stick be formatted in FAT32.
 - The date/time stamps are collected and stored in UTC. Use the web app Settings menu to change the viewing time zone. There is a known issue whereby this time zone setting is reset to UTC when daylight savings time is changed.
 - Within the View Alerts screen of both Continuous Monitor and Collections Insight, and the Table screen of Continuous Monitor, there is a horizontal scroll bar that might not be seen on lower-resolution screens without scrolling down. This horizontal scroll bar exposes additional columns of information.
 - When collecting spectral data (Device Settings -> Capture Spectral Data -> ON), this data is reported in real-time and will return as all zeros (0.00 at every wavelength) if there was an issue capturing the spectrum. Other telemetry data is averaged over the collection period. As a result, there is a rare occurrence where the spectral data will show all zeros, but spectrum-related data (color temperature, M/P ratio, etc.) will be reported in the database record. All the data is accurate. It is just the last sample that was unable to be added to the average data.