



Firmware for AIG-501 Series Release Notes

Version: v1.5.0	Build: N/A
Release Date: Nov 04, 2025	

Applicable Products

AIG-501 Series

Supported Operating Systems

Moxa Industrial Linux 1 (Debian 9)

New Features

N/A

Enhancements

- RED Cybersecurity EN18031-1 compliance.

To adopt RED Cybersecurity EN18031-1, the AIG includes the changes below:

- HTTPS connection now only supports TLS v1.2 or higher.
- HTTP redirect to HTTPS service now is enabled as default
- Force to modify the admin's password upon the first login
- Remove the default password for the Wi-Fi AP feature"
- The DLM Client for the Moxa DLM Service now implements a backoff mechanism to prevent excessive message repetition during high-frequency events, optimizing events reported while ensuring critical notifications remain visible.
 - ?- If the same event occurs five times within a 5-minute window, the system enters backoff mode, progressively increasing the message delay up to a maximum of 60 minutes.
 - ?- During backoff, events are sent as compressed messages with an indication of suppression count (e.g., ""backed off for x times"").
 - ?- Normal message delivery is resumed once the event stops occurring or after a device reboot."

Bugs Fixed

- When the WAN connection was restored by replugging the Ethernet cable, the connection to the AWS IoT Core service was not re-established.
- The certificat weren't received properly after the AIG was fully registered, and the Moxa DLM Service returned error code 500
- The tag type changed from uint16 to double when the scalingFunc in the exported Modbus CSV file was set to 1 and then imported again.
- Upgrade thingspro-agent to v2.3.0 that extended Azure IoT Edge module token refresh interval to reduce disconnection risks.
- Failed to establish a 2G cellular connection in the EU
- The DO value didn't refresh immediately when the tag value had been modified.
- The refresh button of IO did not update info.

Changes

- Upgrade Azure IoT Device SDK to LTS_03_2025.
- When no DNS information is received on the cellular interface, treat the network as connected. Note that this may affect the Cellular Enable check-alive mechanism. Ensure that a reachable target host is properly configured to prevent the check-alive process from looping.
- Sensitive and confidential data under the ThingsPro folder is now protected by permission control. Unauthorized users cannot read, write, or execute such data.
- OPC UA Server changes:

- The OPC UA server now generates X.509 private keys with a length of 2048 bits.
- The signing algorithm has been upgraded to SHA-256.
- Existing OPC UA server certificates will continue to be used. The new key length and algorithm apply only to certificates generated after the v1.8.0 upgrade.
- The OPC UA server no longer includes any default or built-in user accounts.
- User account information is now excluded from the OPC UA server's configuration import/export operations."
- The Wi-Fi AP feature no longer ships with a default password.
- Function changes:
 - The Function (container) has been upgraded from Python 3.9 to Python 3.10.8
 - For python package migration, the system will automatically reinstall the user's desired packages with network access; or you can call GET /api/v1/function/requirements/migration to retrieve the list of desired packages without network access. To provide flexibility, new APIs are available to manage the migration process:
 - a. GET /api/v1/function/requirements/migration: Fetch current settings, migration results, and desired packages.
 - b. PUT /api/v1/function/requirements/migration: Update settings (e.g., enable/disable migration, timeout duration).

Notes

- Tag Dashboard Value Precision Issue

The tag monitor may display incorrect values when handling numbers beyond JavaScript's safe integer range ($\pm 2^{53} - 1$, i.e., from -9,007,199,254,740,991 to 9,007,199,254,740,991).

This is due to a limitation in JavaScript number precision. When values such as int64 or uint64 exceed this range, browsers (e.g., Chrome) will show distorted results when parsing JSON raw data."

- Upgrade From the Local Drive To upload the upgrade package requires a minimum upload speed of 1MB/sec.
- The OPC UA Server certificate generation may rarely fail due to a race condition, which may be triggered if the apply operation is executed immediately after the regenerate operation in very quick succession. Perform an enable/disable OPC UA Server cycle to restore normal operation.
- The upgrade process from firmware v1.4.0 to v1.5.0 will require approximately 20+ minutes.



Version: v1.4	Build: N/A
Release Date: Nov 14, 2024	

Applicable Products

AIG-501 Series

Supported Operating Systems

Debian 9.x

New Features

- Supports backup of logs with capability to upload to FTP/SFTP.

Enhancements

N/A

Bugs Fixed

- A case of IoT edge modules startup failure when AIG was disconnected.
- An issue where memory usage was unusually high.
- A case of inability to send data to the cloud when it contains a NaN value.
- An issue with a DO initial state configuration.
- Modbus master, OPC UA Server, and Function Management apps occasionally fail to start after reboot.
- A case of incorrect display of Wi-Fi information.
- An issue with GPS time synchronization drift.
- An issue where function app content was missing after extracting large files.
- A case of unexpected message display when fail2ban is triggered.
- A data loss issue during telemetry transmission via Azure IoT Edge.
- A module connection failure issue when the UDP DNS payload is too long.
- An issue of the GPS API not returning up-to-date values.
- CVE-2024-21646: <https://nvd.nist.gov/vuln/detail/CVE-2024-21646>.
- CVE-2024-27099: <https://nvd.nist.gov/vuln/detail/CVE-2024-27099>.
- CVE-2024-25110: <https://nvd.nist.gov/vuln/detail/CVE-2024-25110>.

Changes

- Updated Azure IoT Edge runtime to v1.4.33.
- Updated thingspro-agent to v2.2.6 with Azure IoT Edge v1.4.40.
- edgeAgent and edgeHub images updated to v1.4.40.

Notes

- The size this upgrade package is approximately 452 MB and the upgrade process will take a minimum of 20 minutes.
- This upgrade package includes Linux headers. Ensure that the system reboots successfully after the upgrade.