Software Package for ThingsPro 2 (ThingsPro Gateway v2.6.0 installation file for Debian 9) Release Notes

Version: v2.6.0	Build: Build 20200616
Release Date: Jul 31, 2020	

Applicable Products

MC-1121-E2-T, MC-1121-E4-T, MC-1121-E4-T-US, UC-2100 Series, UC-2100-W Series, UC-3100 Series, UC-5100 Series, UC-8112-LX, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8100A-ME-T Series, UC-8200 Series

Supported Operating Systems

Moxa Industrial Linux (Debian 9)

New Features

- Core: ThingsPro now supports Python 3 (Python 2 is deprecated).
- Modbus: Shows Modbus TX/RX packet in debug mode.
- AWS IoT Core: Supports 0 and 1 settings in QoS.
- Aliyun IoT Platform: Supports 0 and 1 settings in QoS.
- Sparkplug: Support user-scheduled periodic group uploading of tags.

Enhancements

- Modbus: Improved the TCP/RTU reconnect mechanism.
- Modbus: Serial port will not be occupied if no RTU device is configured.

Bugs Fixed

- Cellular: An incorrect tag name.
- Cellular: Apply the watchdog to prevent system freeze during the reboot process.
- Cellular: Keepalive fails due to arping bind with the MAC address of the host instead of the target.
- Route: The routing priority is not working when the cellular interface is not WWAN0.
- Route: Changing route priority frequently could lead to a deadlock.
- OpenVPN: Missing DNS information when OpenVPN is enabled or disabled.
- OpenVPN: DNS info missing in the default route update script.
- OpenVPN: Incorrect status for MC1121.
- AVEVA Insight: All datatypes are changed to string value type in JSON payload. Keep the original datatype.
- Sparkplug: Correct the message out of sequence issue. DData should be sent before DBirth.
- Sparkplug: DBirth message received occasionally when writing a tag to devices.
- Web GUI: Sort by tag name does not work in the Modbus slave list.
- Modbus: The direct read/write library potential crash if timeout happens.
- MQTT: Double quotes missing for string and bytearray values in the upload payload.
- Dashboard: Show the correct storage size by name for `/overlayfs` instead of `/`.
- Wi-Fi: An empty password was allowed with no security.
- NTP: Failed to update NTP server when enabling it.
- Modbus Slave: Byte swap only supported for read tag; should also be supported for write tag.
- Tag Uploder: UI still shows storage paths even though the SD card was removed.
- Tag Uploader: Log on change function for bytearray type tag is not working.
- Switch network interface settings rapidly would cause route bundle freezed.
- System settings: serial setting lost when browser refresh system settings page.
- Serial: UC-2114 & UC-2116 should have 2 serial ports but config is given 4.

Changes

- Web Service: No longer supports TLS 1.0, TLS 1.1.

• Modbus: Auto restart now uses systemd service.
• Web GUI: Removed Wonderware connection status because it is based on HTTPS.
• Web GUI: "Wonderware Online" renamed to "AVEVA Insight".
• AVEVA Insight: Retry meta-data upload every 5 seconds upon failure.
• Azure: Data can be grouped by upload interval and current upload timestamp appended to the payload.
• Azure: Updated to SDK 2019-04-11.
• AWS IoT Core: Updated to SDK v3.0.1.
• Aliyun IoT Platform: Updated to SDK v3.0.1.

Notes

• ThingsPro Gateway software supports only the firmware versions listed above on Linux Debian 9.

Version: v2.5.1	Build: Build 19061318
Release Date: Jun 14, 2019	

Applicable Products

UC-2104-LX, UC-3100 Series, UC-5112-LX, UC-5112-T-LX, UC-8112-LX, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8112-ME-T-LX-US-LTE, UC-8100A-ME-T Series

Supported Operating Systems

Moxa Industrial Linux (Debian 9)

New Features

• Remote-Control: New API allows users to include customized properties.
• Sparkplug: Sparkplug version 2.1, payload B support and store and forward function.
• Data Acquisition: New data type float, (u) int16, and (u) int32.
• Data Acquisition: Modbus API supports data type float, (u) int16, and (u) int32.

Enhancements

• Import/export: Adds check model name mechanism during configuration import.
• IPTABLES: A "MOXA-" prefix chain to apply ThingsPro rules.
• Time: Uses ntpd to improve performance.
• Cloud: Aliyun SDK upgraded to v 2.2.1 and includes the Aliyun reconnect mechanism.
• Cloud: Maximum tag limit increased to 512.

Bugs Fixed

• IPTABLES: Cellular connection goes down when a packet larger than the MTU limit is detected.
• IPTABLES: Resource lock issue when multiple simultaneous GET network status requests are sent.
• IPTABLES: NAT WAN interface is not updated when the default route and rules are changed.
• Wi-Fi: High CPU usage when refreshing the Wi-Fi status.
• GPS: A configuration change to a GPS module is applied even though the module is down.
• System Status: CPU and memory usage information is not updated on the Dashboard.
• Import/export: Import configuration does not include the GPS option.
• Cellular: Keep alive for cellular devices fails if the IP is not assigned by the carrier.
• Cellular: Connection retry should stop after all the profiles have been tried and no connection is established.
• Cloud Connectivity: Add a mechanism in the ThingsPro cloud applications to detect if the MQTT broker has started.
• Cloud Connectivity: Adding more than 64 tags results in a segmentation fault.
• Cloud Connectivity: Optimized connectivity to the Aliyun Cloud.
• Data acquisition: Write failed in Python API when byte array starts with a zero.
• Data acquisition: Tag value issue in Python API when the value type is byte array or string.

Changes

• Brute-force attack protection only applies to web access.
• Sets default MQTT QoS value to 0.
• Wi-Fi: Network scan does not lock the Wi-Fi page and supports non-blocking scan and displays a list of available networks.
• Cloud: Data is logged in the device log using FIFO sequence.

Notes

N/A

Version: v2.5.0	Build: Build 18112901
Release Date: Nov 29, 2018	

Applicable Products

UC-8112-LX1, UC-8112-LX, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8112-ME-T-LX-US-LTE, MC-1121-E2-T, MC-1121-E4-T, UC-2104-LX, UC-3101-T-US-LX, UC-3101-T-EU-LX, UC-3101-T-AU-LX, UC-5112-LX, UC-5112-T-LX

Supported Operating Systems

N/A

New Features

• Fail2ban—an intrusion prevention software framework that protects against brute-force logins to the SSH server.
• Supports dual SIM for specific models with multiple SIM-card slots.
• NE CLI command, mx-tp-ctl to enable/disable ThingsPro.
• Supports data upload to Aliyun (Alibaba Cloud).
• Supports DHCP server maximum lease time of up to 30 days.
• API token to extend the expiration date for up to 7 days.
• User-defined IP routing rules.
• ThingsPro Gateway is run on Linux Kernel 4.4 and Debian 9.
• Supports the following additional devices: UC-2104-LX, UC-3101-T-US-LX, UC-3101-T-EU-LX, UC-3101-T-AU-LX, UC-5112-LX, and UC-5112-T-LX.

Enhancements

N/A

Bugs Fixed

• Error displaying byte arrays in Modbus.
• Connection retry if tag polling fails.
• Remove legacy configuration files mxmodbusmaster.init and mxmodbusgateway.init.
• Too many events logged in the syslog file.
• Modbus slave crashes if tag polling fails.
• Removed valid MAC check because it is not necessary.
• CoAP option is not available when uploading data to Azure IoT.
• Date and time of exported configuration and log files remain the same as the first time.
• Error: mantis (0000015) write coil fail.

Changes

• Installation process no longer requires model name.
• Automatic scan of available storage paths for cloud apps.
• The maximum length of the tag name has been increased to 128 bytes.
• The maximum numbers of tags per equipment has been increased to 1024.
• Azure IoT SDK upgraded to version 2018-07-11.
• Mosquitto version upgraded to 1.4.15-0mosquitto4.
• Web UI enhancements.

Notes

• This installation file is for Debian 8 Kernel 4.1.

Version: v2.3.17	Build: Build 18072709
Release Date: N/A	

Applicable Products

UC-8112-LX, UC-8112-LX1, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8112-ME-T-LX-US-LTE, MC-1121-E2-T, MC-1121-E4-T

Supported Operating Systems

Debian 8.x

New Features

N/A

Enhancements

• Includes TLS Cert and Key file options for ThingsPro MQTT.
• A maximum tag name length of 256 characters is supported for cloud applications (MQTT, Azure, Aws IoT, and Wonderware).

Bugs Fixed

• SSDP: Failure when getting the device serial number.
• Upgrade: ThingsPro frm file is removed when ThingsPro is reinstalled.
• AWS IoT: Add schema validation to prevent unexpected crashes.
• Cloud Apps: Crash when bundle calculates the maximum storage days (MQTT, AWS IoT, and Wonderware)
• Cloud Apps: Web UI displays incorrect information for data type, description, and unit after multiple on/off of a device.
• Cloud Apps: Remove fixed values in the storage path options for cloud apps.
• Route: Socket address didn't bind with correct address after switching the default route.
• Modbus: Fixed the error log by put the init script with the right name.
• Removed file type hints for AWS IoT and MQTT.

Changes

N/A

Notes

• This installation file is for Debian 8 Kernel 4.1.

Version: v2.3.0	Build: Build 18022412
Release Date: N/A	

Applicable Products

UC-8112-LX, UC-8112-LX1, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8112-ME-T-LX-US-LTE, MC-1121-E2-T, MC-1121-E4-T

Supported Operating Systems

Debian 8.x

New Features

• Web Server protocol/port configuration.
• Auto retrieval of GPS position.
• Default route modification.
• Upgrades the Modbus Framework.
• Supports continuous upload, tag selector, and connection status for applications (excluding Sparkplug and Azure).
• Supports additional cloud applications: Azure and Wonderware.
• Supports MC-1121 Series.
• Supports Telit LE910 on MC-1121-LX.
• DHCP server provides status by interface.
• Supports software upgrade from v2.1 to v2.3.
• UI: Network Overview page and User Program management.

Enhancements

• Robust firmware upgrade that enables upgrade during bootup.
• Firmware download on to remote devices and resume interrupted download function.
• Updated data type from string to value in Generic MQTT.

Bugs Fixed

• Data Acquisition: Application auto scaling type error.
• DHCP Server: Server may not restart in some cases.
• Status: Hostname sync issue at boot time.
• SSDP: "Kill all child processes" does not work as expected.
• User programs/Serial interface: Add missing API endpoint.
• GPS locations of gateways is not synched to the server.
• Modbus: Modbus status sign is yellow when there is any active _Write tag in the template.
• Sparkplug failed to get the tag value and initialize it with the configuration.

Changes

N/A

Notes

• This installation file is for Debian 8 Kernel 4.1.

Version: v2.1.0	Build: Build 17072504
Release Date: N/A	

Applicable Products

UC-8112-LX, UC-8112-LX1, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8112-ME-T-LX-US-LTE

Supported Operating Systems

Debian 8.x

New Features

• Adds Wi-Fi support (only for UC-8112-LX).
• Updates the Sparkplug application version.
• Adds popup to confirm the modifications to a device/device group.
• New UI: Network overview and Cellular carrier switch.

Enhancements

• Updates the Python module voluptuous.
• Updates Mosquitto.
• UI: Adds countdown information and includes some text enhancements.

Bugs Fixed

• Get serial number issue (only for UC-8112-LX).
• Modbus TCP equipment cannot be deleted.
• Modbus local socket closed unexpectedly.
• Typo in Modbus C API class name.

Changes

• Remove function only removes the selected gateways from a group and not all gateways.

Notes

• This installation file is for Debian 8 Kernel 4.1.

Version: v2.0.0	Build: Build 17011611
Release Date: N/A	

Applicable Products

UC-8112-LX, UC-8112-LX1, UC-8112-ME-T-LX, UC-8112-ME-T-LX1, UC-8112-ME-T-LX-US-LTE

Supported Operating Systems

Debian 8.x

New Features

• First release.

Enhancements

N/A

Bugs Fixed

N/A

Changes

N/A

Notes

• This installation file is for Debian 8 Kernel 4.1.