Release Notes

Firmware 1.4.6

Abstract

This document encompasses the following key sections:

- **Firmware Update Instructions:** Guides users through the firmware update process to ensure a smooth and successful experience.

- **Description of New Features, Fixes, and Changes:** Provides detailed information about new features, enhancements, fixes for previous issues, and other significant changes included in the firmware update.

Firmware Release Information

- **Version**: 1.4.6

- **Release Date**: January 29, 2026

- **Target Devices**: ICR-1602, ICR-1642, ICR-1645, ICR-1745

- ⚠ **Compatibility and Distribution**:

    To ensure a clear differentiation between the segmented versions of the ICR-2000/3000/4000 series products, the version numbering has been changed from the previous 6.x.x format to 1.x.x. The first release under this new scheme is version 1.4.5, which inherits all contents and functionalities of version 6.4.5.

    For comprehensive compatibility details and distribution guidelines, see the *Firmware Compatibility Chart* document published with the specific firmware version.

Firmware and Product Documentation Notice

- **Firmware Versions in New Routers:** Not all new Advantech routers are shipped with this latest firmware release due to specific carrier or regional certifications. Check the *Firmware Compatibility Chart* document for the latest firmware information for your router model.

- **Router Configuration Information:** The most recent and detailed configuration information is available in the *Configuration Manual* for your router model.

- **Accessing Documents and Applications:** Visit the *Engineering Portal* at *icr.advantech.com* for product-related documents, applications, and firmware updates.

Contents

Part I.

Firmware Update Instructions

General Update Instructions and Notices

Automatic Update:

- The transition from 6.x.x to 1.x.x segmented versions is not supported by the "Automatic Update" feature.

- A manual firmware update is required. Please refer to the Configuration Manual, section 5.11 ˇV Update Firmware, for detailed instructions.

Part II.

Description of New Features, Changes, and Fixes

Added

Embedded Persistent Router App

Integrated the `WebAccess/DMP Client` as a mandatory embedded Router App on ICR-16xx and ICR-17xx-EU devices. This application is configured for persistence and will be automatically re-installed upon device reboot if manually deleted.

Localization Support

Introduced support for the "Simplified Chinese" language in the Web GUI for ICR-16xx-CN and ICR-17xx-CN router variants. The language selection option is available on the primary *Login* interface.

Changed

Enhanced WiFi Multi-AP Dual-Band Support

Implemented dual-AP operation via concurrent execution of two `hostapd` instances, enabling advanced multi-channel functionality:

- Supported independent frequency band configuration (2.4 GHz and 5 GHz) for *AP1* and *AP2*.

- When the same frequency band is configured for both APs, the channel selection is automatically corrected to a unified channel.

- Supported concurrent mixed mode operation (AP and STA) on different channels.

Enhanced Input Validation for Web GUI IPv4 Fields

Implemented enhanced validation logic within the Web GUI to immediately detect and reject non-compliant (illegal) IPv4 address input during configuration.

Removed

Default APN for PLMN Removed

Removed default APN for PLMN 26003.

Fixed

WiFi Access Control List

Resolved failure of the AP2 Deny List to enforce client blocking when AP1 was simultaneously active.

WiFi AP Client Limit Correction

Corrected the simultaneous client connection limit on ICR-16xxW Wi-Fi Access Points, restoring the intended 16-device capacity from the previous incorrect 5-device limit.

HTTP Login Functionality

Fixed improper functionality of *Configuration → Services → HTTP → Enable HTTP service* when the *Configuration → Services → HTTP → Enable HTTPS service* was explicitly disabled.

HTTPS/TLS Compatibility Fixed

Resolved HTTPS connection failures related to the TLS 1.0 and TLS 1.1 protocols. This includes the use of lower-security ciphers in `OpenSSL` to maintain backwards compatibility with legacy browsers/clients when utilizing TLS 1.0 or 1.1.

NAT64 Service Stability Resolved

Resolved stability issues causing incorrect operation of the *NAT64* translation service.

FTP Server Errors Resolved

Fixed occasional FTP server errors with message *failed to map segment from shared object* which could cause login failures.

Syslog Configuration Drift Resolved

Corrected configuration drift where the *Configuration → Services → Syslog → Minimum Severity* was incorrectly reset to `Emergency` following a firmware update from version 6.4.x.

WiFi Connectivity Stability

Resolved intermittent disconnection issues on ICR-16xx devices to ensure continuous network operationy.

DNS Service Termination Resolved

Fixed the unexpected termination of the `dnsmasq` service following a firmware upgrade from version 6.4.x to 1.4.x. This issue occurred when the `eth0` interface was configured in bridged mode, resulting in DNS resolution failures that previously required a factory reset to resolve.

Mobile Network Connectivity

Resolved intermittent connection failures on ICR-16xx devices when utilizing Taiwan Mobile IoT SIM cards.