



Arrow Lake S Intel® Platform for Linux* Kernel 6.11 CNVi Integration BKM

Validation Report

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Revision History

Revision	Description	Revision Date
1.0	• Initial Release	September 2023
2.0	• Updated Kernel Version to 6.5.7	February 2024
3.0	• Updated Kernel Version to 6.8.0	June 2024
4.0	• Updated Kernel Version to 6.10.1	August 2024
5.0	• Updated Kernel Version to 6.11	November 2024

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1 Overview

This document covers the BKM for integrating the Wi-Fi and BT driver on Intel® Platform for Linux Kernel 6.11 platform.

1.1 Security Considerations

This document provides a sample integration workflow to integrate the Wi-Fi and BT Driver on Intel® Platform for Linux Kernel 6.11 platform. These instructions shall be used as reference only, and it is the responsibility of the <integrator> to ensure that all components and their dependencies are using the latest available secure versions of the implementation. These instructions are for reference only; hence it is the responsibility of the <integrator> to consider security considerations before building a production capable system.

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2 *Wi-Fi Driver Integration*

Follow the below steps to install the Wi-Fi driver and FW components and need to be performed on the DUT (Device Under Test). The steps provide instructions on building the Wi-Fi driver out of tree. The Garfield Peak-2 Wi-Fi module was used to validate the Wi-Fi/BT BKM.

2.1 Setup

Install the required packages using the command

- `sudo apt update`
- `sudo apt install git build-essential`

2.2 Wi-Fi Firmware

Follow the below steps to fetch and copy the Wi-Fi firmware.

- `git clone https://git.kernel.org/pub/scm/linux/kernel/git/firmware/linux-firmware.git`
- `cd linux-firmware`
- `git checkout db0082faa5fee3e81ef00fc6a5d09d8f97a1b0af`
- `sudo cp iwlwifi-so-a0-gf-a0.pnvm /lib/firmware/`
- `sudo cp iwlwifi-so-a0-gf-a0-89.ucode /lib/firmware/`
- `reboot`

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3 Bluetooth Integration

The Bluetooth driver is part of the 6.11 kernel. Please follow the steps below to fetch and copy the Bluetooth firmware.

- git clone <https://git.kernel.org/pub/scm/linux/kernel/git/firmware/linux-firmware.git>
- cd linux-firmware
- git checkout db0082faa5fee3e81ef00fc6a5d09d8f97a1b0af
- sudo cp intel/ibt-1040-0041.sfi /lib/firmware/intel/
- sudo cp intel/ibt-1040-0041.ddc /lib/firmware/intel/
- reboot the device.

Note: This is for adding Wi-Fi 7 support through Galepeak card BE200.

- sudo cp intel/ibt-0291-0291.sfi /lib/firmware/intel/
- sudo cp intel/ibt-0291-0291.ddc /lib/firmware/intel/
- Reboot the device.

