

## Beginning

In this instruction, we will introduce two ways to drive our Intel Wireless Card.

- Use **itlwm** and **HeliPort**
- Use **itlwm** and **Black80211-Catalina**

If you want to use **itlwm** and **HeliPort**, please download the latest releases at the following links:

- <https://github.com/OpenIntelWireless/itlwm/releases>
- <https://github.com/OpenIntelWireless/HeliPort/releases>

If you want to use **itlwm** and **Black80211-Catalina**, please download the latest releases at the following links:

- <https://github.com/usr-sse2/itlwm/releases>
- <https://github.com/usr-sse2/Black80211-Catalina/releases>

## How to Use

### Use **itlwm** and **HeliPort**

- First, turn off **Show Wi-Fi status** in menu bar in **SysPref - Network - Wi-Fi**.
- Then, unzip all the packs you downloaded and copy **itlwm.kext** to **/EFI/CLOVER/kexts/Other/** or **/EFI/OC/Kexts/**.
- If you are using OC, you need to change your **config.plist**. Open **/EFI/OC/config.plist** and change the following code:

```
<dict>
  <key>Arch</key>
  <string>x86_64</string>
  <key>BundlePath</key>
  <string>itlwm.kext</string>
  <key>Comment</key>
  <string>Intel Wi-Fi driver</string>
  <key>Enabled</key>
-  <false/>
+  <true/>
```

- Reboot, and move **HeliPort.app** to your **Applications** folder.
- Open **HeliPort.app** and done.
  - You need to allow software from any sources first.
  - Run **sudo spctl --master-disable** in **Terminal.app**.

### Use **itlwm** and **Black80211-Catalina**

- First, make sure your macOS version  $\geq 10.15$ .
- Then, download and install OpenCore special version that supports immutablekernel loading from [acidanthera/bugtracker#1071](#).
- After that, unzip all the packs you downloaded and copy **itlwm.kext** and **Black80211.kext** to **/EFI/OC/Kexts/**.
- Open **/EFI/OC/config.plist** and change the following code:

```
<dict>
  <key>Arch</key>
  <string>x86_64</string>
  <key>BundlePath</key>
  <string>itlwm.kext</string>
  <key>Comment</key>
```

```

    <string>Intel Wi-Fi driver</string>
    <key>Enabled</key>
-   <false/>
+   <true/>

```

- Also, add these code into Kernel - Add section:

```

<dict>
    <key>Arch</key>
    <string>x86_64</string>
    <key>BundlePath</key>
    <string>Black80211.kext</string>
    <key>Comment</key>
    <string></string>
    <key>Enabled</key>
    <true/>
    <key>ExecutablePath</key>
    <string>Contents/MacOS/Black80211</string>
    <key>MaxKernel</key>
    <string></string>
    <key>MinKernel</key>
    <string>19.0.0</string>
    <key>PlistPath</key>
    <string>Contents/Info.plist</string>
</dict>

```

## Discussion

### itlwm and HeliPort

- If you have questions about the driver, please discuss them on <https://gitter.im/OpenIntelWireless/itlwm>
- If you want to report bugs, please use <https://github.com/OpenIntelWireless/itlwm/issues>

### itlwm and Black80211-Catalina

- If you have questions about the driver, please read <https://github.com/usr-sse2/Black80211-Catalina/blob/master/README.md>
- If you want to report bugs, please use <https://github.com/usr-sse2/Black80211-Catalina/issues>

## Credits

- Thanks to OpenIntelWireless for providing HeliPort and itlwm.
- Thanks to usr-sse2 for providing Black80211-Catalina and itlwm.