Beginning

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

- **Use itlwm and HeliPort**
- **Use AirportItlwm**

The latest releases of `AirportItlwm` and `itlwm` can be found at the following link:

- https://github.com/OpenIntelWireless/itlwm/releases

The latest release of `HeliPort` can be found at the following link:

- https://github.com/OpenIntelWireless/HeliPort/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 add the following code to your `config.plist`:

```
<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>
    <true/>
    <key>ExecutablePath</key>
    <string>Contents/MacOS/itlwm</string>
    <key>MaxKernel</key>
    <string></string>
    <key>MinKernel</key>
    <string>16.0.0</string>
    <key>PlistPath</key>
    <string>Contents/Info.plist</string>
</dict>
```

- 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 AirportItlwm

- First, make sure your macOS version >= 10.15.
- Remove `itlwm` and `HeliPort` and turn on `Show Wi-Fi status in menu bar` in SysPref - Network - Wi-Fi.
- Then, unzip the pack you downloaded and copy `AirportItlwm.kext` to `/EFI/CLOVER/kexts/Other` or `/EFI/OC/Kexts/`.

For Clover users

- Open `/EFI/CLOVER/config.plist` and add the following code to `KernelAndKextPatches -
ForceKextsToLoad`:

```
<key>ForceKextsToLoad</key>
<array>
    <string>\System\Library\Extensions\IO80211Family.kext</string>
</array>
```

For OpenCore users

- Open `/EFI/OC/config.plist` and change the following code:

```
<dict>
    <key>Arch</key>
    <string>x86_64</string>
    <key>BundlePath</key>
    <string>AirportItlwm.kext</string>
    <key>Comment</key>
    <string>Intel Wi-Fi driver</string>
    <key>Enabled</key>
-   <false/>
+   <true/>
    <key>ExecutablePath</key>
    <string>Contents/MacOS/AirportItlwm</string>
    <key>MaxKernel</key>
    <string></string>
    <key>MinKernel</key>
    <string>19.0.0</string>
    <key>PlistPath</key>
    <string>Contents/Info.plist</string>
</dict>
```

- Also, change your `SecureBootModel` to allow loading immutablekernel. If your macOS version >=
macOS11 (KernelCollection), you don't need to do the following steps:

```
    <key>DmgLoading</key>
-   <string>Any</string>
+   <string>Signed</string>
```

```
    <key>SecureBootModel</key>
-   <string>Disabled</string>
+   <string>Default</string>
```

- If the above method does not work, reverse changes on `DmgLoading` and `SecureBootModel`, then force
loading `IO80211Family`. Open `/EFI/OC/config.plist` and change the following code:

```
<key>Force</key>
<array>
    <dict>
        <key>Arch</key>
        <string>Any</string>
        <key>BundlePath</key>
        <string>System/Library/Extensions/IO80211Family.kext</string>
        <key>Comment</key>
        <string></string>
        <key>Enabled</key>
-       <false/>
```

```xml
+          <true/>
          <key>Identifier</key>
          <string>com.apple.iokit.IO80211Family</string>
          <key>ExecutablePath</key>
          <string>Contents/MacOS/IO80211Family</string>
          <key>MaxKernel</key>
          <string>19.99.99</string>
          <key>MinKernel</key>
          <string></string>
          <key>PlistPath</key>
          <string>Contents/Info.plist</string>
      </dict>
</array>
```

- For macOS10.13 users, you also need to force load `corecapture.kext`. Add the following code before the `IO80211Family.kext` entry:

```xml
<dict>
          <key>Arch</key>
          <string>Any</string>
          <key>BundlePath</key>
          <string>System/Library/Extensions/corecapture.kext</string>
          <key>Comment</key>
          <string></string>
          <key>Enabled</key>
          <true/>
          <key>Identifier</key>
          <string>com.apple.driver.corecapture</string>
          <key>ExecutablePath</key>
          <string>Contents/MacOS/corecapture</string>
          <key>MaxKernel</key>
          <string>17.99.99</string>
          <key>MinKernel</key>
          <string>17.0.0</string>
          <key>PlistPath</key>
          <string>Contents/Info.plist</string>
      </dict>
```

Discussion

- 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

Credits

- Thanks to OpenIntelWireless for providing AirportItlwm, HeliPort, and itlwm.