

## About

[pco.java](#) project provides a plug-in for the Java ImageIO API to display the images and get the metadata from the proprietary B16 file format of the PCO cameras.

Provides the ability to retrieve PCO-specific metadata also from the standard TIFF files.

Depends on the TIFF package of [TwelveMonkeys ImageIO](#).

Project is built using Apache Maven

Group-ID: de.pco

Artifact-ID (Maven modules):

- pco -- Parent pom.xml
- pco-common -- Common sources for the other modules
- pco-imageio -- Java ImageIO plugin for reading and writing B16 files
- pco-example -- Example application

All jars are compiled and tested for at least Java 8.

## Download

Maven artifacts on the Maven Central Repository: <https://repo1.maven.org/maven2/de/pco/>

Parent pom.xml: <https://search.maven.org/artifact/de.pco/pco/1.0.1/pom>

If only ImageIO plugin for B16 files necessary, add to your pom.xml

```
<dependency>
  <groupId>de.pco</groupId>
  <artifactId>pco-imageio</artifactId>
  <version>1.0.1</version>
</dependency>
```

Binaries and sources are also available directly from [www.pco.de](http://www.pco.de).

## Example

pco-example artifact presents an application where the user can display B16 and TIFF files, edit the inherent metadata from the PCO cameras and save the B16 file again.

```
<dependency>
  <groupId>de.pco</groupId>
  <artifactId>pco-example</artifactId>
  <version>1.0.1</version>
</dependency>
```

Source codes of the application are in the package de.pco.example, the main class is SimpleExample.java.

Run the example application (by installed Java) with the mere double-click on pco-example/pco-example-1.0.1-jar-with-dependencies.jar or from the console using

```
java -jar pco-example-1.0.1-jar-with-dependencies.jar
```

## Basic Usage

pco-imageio artifact contains the ImageIO plugin for the B16 files.

After including pco-common-1.0.1.jar and pco-imageio-1.0.1.jar on the classpath, the plugin will be available

```
File file = new File("image.b16");  
BufferedImage image = ImageIO.read(file);
```

## Advanced Usage

To retrieve the PCO metadata from the B16 files

```
B16ImageReader reader = new B16ImageReader();  
ImageInputStream iis = ImageIO.createImageInputStream(file);  
reader.setInput(iis);  
BufferedImage image = reader.read(0);  
PcoIIOMetadata metadata = (PcoIIOMetadata)reader.getImageMetadata(0);
```

To retrieve the PCO metadata from the TIFF files

```
TIFFImageReader reader = new TIFFImageReader();  
...  
TIFFImageMetadata tim = (TIFFImageMetadata)reader.getImageMetadata(0);  
B16ImageWriter writer = new B16ImageWriter();  
ImageTypeSpecifier imageType = null;  
PcoIIOMetadata metadata = null;  
imageType = reader.getImageTypes(0).next();  
metadata = (PcoIIOMetadata)writer.convertImageMetadata(tim, imageType, null);
```

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