| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/PixelInterleavedSampleModel.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/image/PixelGrabber.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/image/Raster.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/image/PixelInterleavedSampleModel.html)    [**NO FRAMES**](http://docs.google.com/PixelInterleavedSampleModel.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#2et92p0) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: FIELD | [CONSTR](#3rdcrjn) | [METHOD](#lnxbz9) |

## **java.awt.image**

Class PixelInterleavedSampleModel

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.awt.image.SampleModel](http://docs.google.com/java/awt/image/SampleModel.html)  
 [java.awt.image.ComponentSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html)  
 **java.awt.image.PixelInterleavedSampleModel**

public class **PixelInterleavedSampleModel**extends [ComponentSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html)

This class represents image data which is stored in a pixel interleaved fashion and for which each sample of a pixel occupies one data element of the DataBuffer. It subclasses ComponentSampleModel but provides a more efficent implementation for accessing pixel interleaved image data than is provided by ComponentSampleModel. This class stores sample data for all bands in a single bank of the DataBuffer. Accessor methods are provided so that image data can be manipulated directly. Pixel stride is the number of data array elements between two samples for the same band on the same scanline. Scanline stride is the number of data array elements between a given sample and the corresponding sample in the same column of the next scanline. Band offsets denote the number of data array elements from the first data array element of the bank of the DataBuffer holding each band to the first sample of the band. The bands are numbered from 0 to N-1. Bank indices denote the correspondence between a bank of the data buffer and a band of image data. This class supports [TYPE\_BYTE](http://docs.google.com/java/awt/image/DataBuffer.html#TYPE_BYTE), [TYPE\_USHORT](http://docs.google.com/java/awt/image/DataBuffer.html#TYPE_USHORT), [TYPE\_SHORT](http://docs.google.com/java/awt/image/DataBuffer.html#TYPE_SHORT), [TYPE\_INT](http://docs.google.com/java/awt/image/DataBuffer.html#TYPE_INT), [TYPE\_FLOAT](http://docs.google.com/java/awt/image/DataBuffer.html#TYPE_FLOAT) and [TYPE\_DOUBLE](http://docs.google.com/java/awt/image/DataBuffer.html#TYPE_DOUBLE) datatypes.

| **Field Summary** | |
| --- | --- |

| **Fields inherited from class java.awt.image.**[**ComponentSampleModel**](http://docs.google.com/java/awt/image/ComponentSampleModel.html) |
| --- |
| [bandOffsets](http://docs.google.com/java/awt/image/ComponentSampleModel.html#bandOffsets), [bankIndices](http://docs.google.com/java/awt/image/ComponentSampleModel.html#bankIndices), [numBands](http://docs.google.com/java/awt/image/ComponentSampleModel.html#numBands), [numBanks](http://docs.google.com/java/awt/image/ComponentSampleModel.html#numBanks), [pixelStride](http://docs.google.com/java/awt/image/ComponentSampleModel.html#pixelStride), [scanlineStride](http://docs.google.com/java/awt/image/ComponentSampleModel.html#scanlineStride) |

| **Fields inherited from class java.awt.image.**[**SampleModel**](http://docs.google.com/java/awt/image/SampleModel.html) |
| --- |
| [dataType](http://docs.google.com/java/awt/image/SampleModel.html#dataType), [height](http://docs.google.com/java/awt/image/SampleModel.html#height), [width](http://docs.google.com/java/awt/image/SampleModel.html#width) |

| **Constructor Summary** | |
| --- | --- |
| [**PixelInterleavedSampleModel**](http://docs.google.com/java/awt/image/PixelInterleavedSampleModel.html#PixelInterleavedSampleModel(int,%20int,%20int,%20int,%20int,%20int%5B%5D))(int dataType, int w, int h, int pixelStride, int scanlineStride, int[] bandOffsets)            Constructs a PixelInterleavedSampleModel with the specified parameters. |

| **Method Summary** | |
| --- | --- |
| [SampleModel](http://docs.google.com/java/awt/image/SampleModel.html) | [**createCompatibleSampleModel**](http://docs.google.com/java/awt/image/PixelInterleavedSampleModel.html#createCompatibleSampleModel(int,%20int))(int w, int h)            Creates a new PixelInterleavedSampleModel with the specified width and height. |
| [SampleModel](http://docs.google.com/java/awt/image/SampleModel.html) | [**createSubsetSampleModel**](http://docs.google.com/java/awt/image/PixelInterleavedSampleModel.html#createSubsetSampleModel(int%5B%5D))(int[] bands)            Creates a new PixelInterleavedSampleModel with a subset of the bands of this PixelInterleavedSampleModel. |
| int | [**hashCode**](http://docs.google.com/java/awt/image/PixelInterleavedSampleModel.html#hashCode())()            Returns a hash code value for the object. |

| **Methods inherited from class java.awt.image.**[**ComponentSampleModel**](http://docs.google.com/java/awt/image/ComponentSampleModel.html) |
| --- |
| [createDataBuffer](http://docs.google.com/java/awt/image/ComponentSampleModel.html#createDataBuffer()), [equals](http://docs.google.com/java/awt/image/ComponentSampleModel.html#equals(java.lang.Object)), [getBandOffsets](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getBandOffsets()), [getBankIndices](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getBankIndices()), [getDataElements](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getDataElements(int,%20int,%20java.lang.Object,%20java.awt.image.DataBuffer)), [getNumDataElements](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getNumDataElements()), [getOffset](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getOffset(int,%20int)), [getOffset](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getOffset(int,%20int,%20int)), [getPixel](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getPixel(int,%20int,%20int%5B%5D,%20java.awt.image.DataBuffer)), [getPixels](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getPixels(int,%20int,%20int,%20int,%20int%5B%5D,%20java.awt.image.DataBuffer)), [getPixelStride](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getPixelStride()), [getSample](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getSample(int,%20int,%20int,%20java.awt.image.DataBuffer)), [getSampleDouble](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getSampleDouble(int,%20int,%20int,%20java.awt.image.DataBuffer)), [getSampleFloat](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getSampleFloat(int,%20int,%20int,%20java.awt.image.DataBuffer)), [getSamples](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getSamples(int,%20int,%20int,%20int,%20int,%20int%5B%5D,%20java.awt.image.DataBuffer)), [getSampleSize](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getSampleSize()), [getSampleSize](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getSampleSize(int)), [getScanlineStride](http://docs.google.com/java/awt/image/ComponentSampleModel.html#getScanlineStride()), [setDataElements](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setDataElements(int,%20int,%20java.lang.Object,%20java.awt.image.DataBuffer)), [setPixel](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setPixel(int,%20int,%20int%5B%5D,%20java.awt.image.DataBuffer)), [setPixels](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setPixels(int,%20int,%20int,%20int,%20int%5B%5D,%20java.awt.image.DataBuffer)), [setSample](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setSample(int,%20int,%20int,%20double,%20java.awt.image.DataBuffer)), [setSample](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setSample(int,%20int,%20int,%20float,%20java.awt.image.DataBuffer)), [setSample](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setSample(int,%20int,%20int,%20int,%20java.awt.image.DataBuffer)), [setSamples](http://docs.google.com/java/awt/image/ComponentSampleModel.html#setSamples(int,%20int,%20int,%20int,%20int,%20int%5B%5D,%20java.awt.image.DataBuffer)) |

| **Methods inherited from class java.awt.image.**[**SampleModel**](http://docs.google.com/java/awt/image/SampleModel.html) |
| --- |
| [getDataElements](http://docs.google.com/java/awt/image/SampleModel.html#getDataElements(int,%20int,%20int,%20int,%20java.lang.Object,%20java.awt.image.DataBuffer)), [getDataType](http://docs.google.com/java/awt/image/SampleModel.html#getDataType()), [getHeight](http://docs.google.com/java/awt/image/SampleModel.html#getHeight()), [getNumBands](http://docs.google.com/java/awt/image/SampleModel.html#getNumBands()), [getPixel](http://docs.google.com/java/awt/image/SampleModel.html#getPixel(int,%20int,%20double%5B%5D,%20java.awt.image.DataBuffer)), [getPixel](http://docs.google.com/java/awt/image/SampleModel.html#getPixel(int,%20int,%20float%5B%5D,%20java.awt.image.DataBuffer)), [getPixels](http://docs.google.com/java/awt/image/SampleModel.html#getPixels(int,%20int,%20int,%20int,%20double%5B%5D,%20java.awt.image.DataBuffer)), [getPixels](http://docs.google.com/java/awt/image/SampleModel.html#getPixels(int,%20int,%20int,%20int,%20float%5B%5D,%20java.awt.image.DataBuffer)), [getSamples](http://docs.google.com/java/awt/image/SampleModel.html#getSamples(int,%20int,%20int,%20int,%20int,%20double%5B%5D,%20java.awt.image.DataBuffer)), [getSamples](http://docs.google.com/java/awt/image/SampleModel.html#getSamples(int,%20int,%20int,%20int,%20int,%20float%5B%5D,%20java.awt.image.DataBuffer)), [getTransferType](http://docs.google.com/java/awt/image/SampleModel.html#getTransferType()), [getWidth](http://docs.google.com/java/awt/image/SampleModel.html#getWidth()), [setDataElements](http://docs.google.com/java/awt/image/SampleModel.html#setDataElements(int,%20int,%20int,%20int,%20java.lang.Object,%20java.awt.image.DataBuffer)), [setPixel](http://docs.google.com/java/awt/image/SampleModel.html#setPixel(int,%20int,%20double%5B%5D,%20java.awt.image.DataBuffer)), [setPixel](http://docs.google.com/java/awt/image/SampleModel.html#setPixel(int,%20int,%20float%5B%5D,%20java.awt.image.DataBuffer)), [setPixels](http://docs.google.com/java/awt/image/SampleModel.html#setPixels(int,%20int,%20int,%20int,%20double%5B%5D,%20java.awt.image.DataBuffer)), [setPixels](http://docs.google.com/java/awt/image/SampleModel.html#setPixels(int,%20int,%20int,%20int,%20float%5B%5D,%20java.awt.image.DataBuffer)), [setSamples](http://docs.google.com/java/awt/image/SampleModel.html#setSamples(int,%20int,%20int,%20int,%20int,%20double%5B%5D,%20java.awt.image.DataBuffer)), [setSamples](http://docs.google.com/java/awt/image/SampleModel.html#setSamples(int,%20int,%20int,%20int,%20int,%20float%5B%5D,%20java.awt.image.DataBuffer)) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### PixelInterleavedSampleModel

public **PixelInterleavedSampleModel**(int dataType,  
 int w,  
 int h,  
 int pixelStride,  
 int scanlineStride,  
 int[] bandOffsets)

Constructs a PixelInterleavedSampleModel with the specified parameters. The number of bands will be given by the length of the bandOffsets array.

**Parameters:**dataType - The data type for storing samples.w - The width (in pixels) of the region of image data described.h - The height (in pixels) of the region of image data described.pixelStride - The pixel stride of the image data.scanlineStride - The line stride of the image data.bandOffsets - The offsets of all bands. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if w or h is not greater than 0 [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if any offset between bands is greater than the scanline stride [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if the product of pixelStride and w is greater than scanlineStride [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if pixelStride is less than any offset between bands [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if dataType is not one of the supported data types

| **Method Detail** |
| --- |

### createCompatibleSampleModel

public [SampleModel](http://docs.google.com/java/awt/image/SampleModel.html) **createCompatibleSampleModel**(int w,  
 int h)

Creates a new PixelInterleavedSampleModel with the specified width and height. The new PixelInterleavedSampleModel will have the same number of bands, storage data type, and pixel stride as this PixelInterleavedSampleModel. The band offsets may be compressed such that the minimum of all of the band offsets is zero.

**Overrides:**[createCompatibleSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html#createCompatibleSampleModel(int,%20int)) in class [ComponentSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html) **Parameters:**w - the width of the resulting SampleModelh - the height of the resulting SampleModel **Returns:**a new SampleModel with the specified width and height. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if w or h is not greater than 0

### createSubsetSampleModel

public [SampleModel](http://docs.google.com/java/awt/image/SampleModel.html) **createSubsetSampleModel**(int[] bands)

Creates a new PixelInterleavedSampleModel with a subset of the bands of this PixelInterleavedSampleModel. The new PixelInterleavedSampleModel can be used with any DataBuffer that the existing PixelInterleavedSampleModel can be used with. The new PixelInterleavedSampleModel/DataBuffer combination will represent an image with a subset of the bands of the original PixelInterleavedSampleModel/DataBuffer combination.

**Overrides:**[createSubsetSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html#createSubsetSampleModel(int%5B%5D)) in class [ComponentSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html) **Parameters:**bands - a subset of bands from this ComponentSampleModel **Returns:**a ComponentSampleModel created with a subset of bands from this ComponentSampleModel.

### hashCode

public int **hashCode**()

**Description copied from class:** [**Object**](http://docs.google.com/java/lang/Object.html#hashCode()) Returns a hash code value for the object. This method is supported for the benefit of hashtables such as those provided by java.util.Hashtable.

The general contract of hashCode is:

* Whenever it is invoked on the same object more than once during an execution of a Java application, the hashCode method must consistently return the same integer, provided no information used in equals comparisons on the object is modified. This integer need not remain consistent from one execution of an application to another execution of the same application.
* If two objects are equal according to the equals(Object) method, then calling the hashCode method on each of the two objects must produce the same integer result.
* It is *not* required that if two objects are unequal according to the [Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) method, then calling the hashCode method on each of the two objects must produce distinct integer results. However, the programmer should be aware that producing distinct integer results for unequal objects may improve the performance of hashtables.

As much as is reasonably practical, the hashCode method defined by class Object does return distinct integers for distinct objects. (This is typically implemented by converting the internal address of the object into an integer, but this implementation technique is not required by the JavaTM programming language.)

**Overrides:**[hashCode](http://docs.google.com/java/awt/image/ComponentSampleModel.html#hashCode()) in class [ComponentSampleModel](http://docs.google.com/java/awt/image/ComponentSampleModel.html) **Returns:**a hash code value for this object.**See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/PixelInterleavedSampleModel.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/image/PixelGrabber.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/image/Raster.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/image/PixelInterleavedSampleModel.html)    [**NO FRAMES**](http://docs.google.com/PixelInterleavedSampleModel.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#2et92p0) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: FIELD | [CONSTR](#3rdcrjn) | [METHOD](#lnxbz9) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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