

How to get Images From Scanner in C# with Windows Image Acquisition(WIA) Library

Getting images from Scanner in C#, we will use `ShowTransfer()` method of `WIA.ICommonDialog` class in **Windows Image Acquisition(WIA) library**

Full Code

```
WIA.ICommonDialog dialog = new WIA.CommonDialog();
WIA.Device device = dialog.ShowSelectDevice(WIA.WiaDeviceType.UnspecifiedDeviceType, true, false);
var d = device.DeviceID;

WIA.DeviceManager manager = new WIA.DeviceManager();

foreach (WIA.DeviceInfo info in manager.DeviceInfos)
{
    if (info.DeviceID == d)
    {
        // connect to scanner
        device = WiaDeviceId.Connect();
        break;
    }
}
//First item starts with 1 not 0
Item item = device.Items[1];

//gets image from scanner
ImageFile image = (ImageFile) dialog.ShowTransfer(item, WIA.FormatID.wiaFormatTIFF, true);

var imageBytes = (byte[])image.FileData.get_BinaryData();
var ms = new MemoryStream(imageBytes);
Bitmap bitmap = (Bitmap)System.Drawing.Image.FromStream(ms);

//tiff images can contain multiple images named as frame
int count = bitmap.GetFrameCount(FrameDimension.Page);
for (int idx = 0; idx < count; idx++)
{
    // save each frame to a bytestream
    bitmap.SelectActiveFrame(FrameDimension.Page, idx);
    MemoryStream byteStream = new MemoryStream();
    bitmap.Save(byteStream, ImageFormat.Tiff);

    // and then create a new Image from it
    System.Drawing.Image newImage = System.Drawing.Image.FromStream(byteStream);

    string filePath = System.IO.Path.GetTempPath() + "\\wiamnx" +
        DateTime.Now.ToString("yyyyMMddHHmmss.fff") + "." + image.FileExtension;

    newImage.Save(filePath);
}
}
```

If you want to scan **single side or multiple side** of a page, **simplex or duplex**, you can use following lines of codes:

```
1 deviceManager = new WIA.DeviceManager();
2
3 if (!string.IsNullOrEmpty(this.WiaDeviceName))
4 {
5     IEnumerable<WIA.DeviceInfo> devices =
6     this.deviceManager.DeviceInfos.OfType<WIA.DeviceInfo>()
7     .Where(x => x.DeviceID == (string) this.WiaDeviceName);
8     if (devices != null && devices.Count() > 0)
```

```

9      {
10         this.WiaDeviceId= devices.FirstOrDefault();
11     }
12 }
13 var device = WiaDeviceId.Connect(); //Connects to selected Scanner
14 device.Properties.get_Item("3088").set_Value(5); // Double scanning or duplex scanning
15 device.Properties.get_Item("3088").set_Value(1); // Single scanning or simplex scanning

```

If you want to change **DPI resolution**, you can use following codes:

```

1  private const int WIA_IPS_DPI_HORIZONTAL = 6147;
2  private const int WIA_IPS_DPI_VERTICAL = 6148;
3  var dpi=500;
4  Item item = device.Items[1]; //First item starts with 1, not 0
5  item.Properties.get_Item("6147").set_Value(dpi); // horizontal DPI
6  item.Properties.get_Item("6148").set_Value(dpi); // vertical DPI

```

Note: Normally **ShowTransfer()** method scan all pages inserted in the scanner. If you want to change this default value, you can use 3096 property as follows:

```

1  private const int WIA_IPS_PAGES = 3096;
2  var device = WiaDeviceId.Connect();
3
4  foreach (Property p in device.Properties)
5  {
6      switch (p.PropertyID)
7      {
8          case WIA_IPS_PAGES:
9              // 0 means fast scan, 1 means single page scan, 2 means double scan, duplex .
10             //And also set above 3088 property as 5
11             p.set_Value(0);
12             break;
13         }
14 }

```