

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5  using System.Threading.Tasks;
6
7  namespace WindowsFormsApp2
8  {
9      class 浮点数据转换
10     {
11         /// <summary>
12         /// 浮点转16进制(精确到小数点后4位)
13         /// </summary>
14         /// <param name="paraFloat">浮点数据</param>
15         /// <returns></returns>
16         public static string FloatToHex(float paraFloat)
17         {
18             StringBuilder sb = new StringBuilder();
19             byte[] bytes = BitConverter.GetBytes(paraFloat);
20
21             foreach (var item in bytes)
22             {
23                 sb.Insert(0, item.ToString("X2"));
24             }
25             return sb.ToString();
26         }
27
28         /// <summary>
29         /// 16进制转浮点(精确到小数点后4位)
30         /// </summary>
31         /// <param name="hexStr">字符串</param>
32         /// <returns></returns>
33         public static float HexToFloat(string hexStr)
34         {
35             #region 字符串判断
36             hexStr = hexStr.Trim().ToUpper();
37             if (hexStr.StartsWith("0X") || hexStr.StartsWith("0x"))
38             {
39                 hexStr = hexStr.Substring(2);
40             }
41             if (hexStr.Length != 8)
42             {
43                 return float.MinValue;
44             }
45             #endregion
46             byte[] bytes = new byte[4];
47             for (int i = 0; i < 4; i++)
48             {
49                 bytes[i] = Convert.ToByte(hexStr.Substring((3 - i) * 2, 2), 16);
50             }
51             return BitConverter.ToSingle(bytes, 0);
52         }
53
54
55
56
```

```
57     /// <summary>
58     /// 字节转浮点(16进制字节)
59     /// </summary>
60     /// <param name="bytes">16进制字节</param>
61     /// <returns></returns>
62     public static float ByteToFloat(byte[] bytes)
63     {
64         if (bytes.Length != 4)
65         {
66             return float.MinValue;
67         }
68         return BitConverter.ToSingle(bytes, 0);
69     }
70
71     /// <summary>
72     /// 浮点转字节(16进制字节)
73     /// </summary>
74     /// <param name="paraFloat">浮点数据</param>
75     /// <returns></returns>
76     public static byte[] FloatToBtyes(float paraFloat)
77     {
78         return BitConverter.GetBytes(paraFloat);
79     }
80
81     }
82 }
83
```