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Subject: Convert 8 byte array to double

Posted by [LNpellen](#) on Wed, 21 Dec 2016 10:25:06 GMT

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I'm working with DICOM files where a floating number is saved as BYTE array[8] and I know (at least pretty sure) it is a double precision floating number, but I cannot figure out how to convert it to DOUBLE.

```
IDL> help, a
```

```
A  BYTE    = Array[8]
```

```
IDL> print, a
```

```
 51 51 51 51 51 51 227 63
```

```
IDL> print, string(a)
```

```
3333333ã?
```

```
IDL> print, string(a, format='(Z)')
```

```
 33  33  33  33  33  33  E3  3F
```

```
IDL> print, double(a)
```

```
 51.000000  51.000000  51.000000  51.000000  51.000000  51.000000  
227.000000  63.000000
```

I understand that I can calculate it myself, but that will require a whole lot of code and quite some reading to understand howto. Anybody know of an easier way? As DOUBLE really is a 64bit number...

I have also a feeling that this is swapped endian, or what it is called. (3F first, 33 last).

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Subject: Re: Convert 8 byte array to double

Posted by [Heinz Stege](#) on Wed, 21 Dec 2016 10:47:32 GMT

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Try:

```
a=[51b,51b,51b,51b,51b,51b,227b,63b]
```

```
print,float(a,0,1)
```

or if swapped:

```
print,float(reverse(a),0,1)
```

HTH, Heinz

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Subject: Re: Convert 8 byte array to double

Posted by [Heinz Stege](#) on Wed, 21 Dec 2016 11:19:06 GMT

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One more thought: Of course you have to use double instead of float.  
If you are expecting 0.6 as the result, the given number is little  
endian. This can be considered in by:

```
litle_endian=byte(1s,0,1)  
print,double(litle_endian? a : reverse(a),0,1)
```

Cheers, Heinz

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