Take readings from the THUM using your own programs

THUM Dynamic Link Library

The THUM DLL is a Dynamic Link Library that allows custom applications to be written to read temperature, RH, and dew point measurements from the THUM. This adds a great deal of flexibility to the THUM . Temperature/RH measurements can easily be taken and integrated into any project or solution capable of using DLLs. This is a great solution to add temperature and humidity monitoring capabilities to automated equipment or kiosk software.

The THUM DLL can be used in programming environments such as Visual Basic, Visual C++, .Net, etc.

The DLL is very easy to use. Install the DLL into the application folder or into the C:WindowsSystem32 folder on the computer. If using VC include the thum.h in your project and use some simple code to acquire the readings.

Functions

Read - instructs the THUM device to take a reading. It will read both temperature and humidity.
GetTempUnit - returns the unit of temperature as 1 or 2 (1 means °C or 2 means °F)
SetTempUnit - sets the unit of temperature - valid values 1 or 2 (1 sets to °C and 2 sets to °F)
GetTemp - returns the temperature in the units set by SetTempUnit
GetRH - returns the relative humidity reading
GetDewPt - returns the dew point reading
Reset - resets the THUM device - generally this function is not needed

Possible Error Codes returned from functions

THUM_ERROR_SUCCESS 0 // no error

```
THUM_ERROR_BADTEMPUNIT      1   //          bad temperature unit (not 1 or 2)
THUM_ERROR_THUMNOTFOUND  2   // THUM device not found
THUM_ERROR_READTIMEOUT     3   // Read          operation timed out
THUM_ERROR_WRITEFAILED       4            // Write operation failed
THUM_ERROR_READFAILED         5            // Read operation failed
THUM_ERROR_RESULTOUTOFRANGE   6   // Temp or RH was          out of range
```

Note: Readings can not be taken from the THUM faster than one reading every 3 seconds. Taking readings faster than this could raise the internal temperature of the sensor. This could skew the temperature and RH readings returned from the THUM.

License:

We require that you purchase one copy of a control per developer on a project. If this is met, you may distribute the DLL with your application royalty free. You may never distribute the .h file.

Click here for Sample VB.Net Example

Sample Visual Basic 6 code to read values from the THUM

'Reads from THUM and returns temp and dew point values in °F

```
'*****************************************************
'THUM DLL Declarations
'*****************************************************
'Tells the unit to take a temperature and RH reading
Public Declare Function Read Lib "thum.dll" () As Long
'Gets the temperature from temp/rh sensor of the unit
Public Declare Function GetTemp Lib "thum.dll" () As Double
'Sets the temperature unit (to F or C)
Public Declare Function SetTempUnit Lib "thum.dll" (ByVal cUnit As          Double) As Long
'Gets the relative humidity from the unit
Public Declare Function GetRH Lib "thum.dll" () As Double
'Gets the temperatire unit (F or C)
Public Declare Function GetTempUnit Lib "thum.dll" () As Long
```

```
'Gets the dew point from the unit
Public Declare Function GetDewPt Lib "thum.dll" () As Double


'*****************************************************
'THUM DLL readings
'*****************************************************
Dim returnvalue As Long



Dim cunits As Double

'1 is C and 2 is F
cunits = 2          'F
'set temp unit in dll
returnvalue = SetTempUnit(cunits)

'take temp only Reading
returnvalue = Read

'get temperature value
lblTemp.caption = Format(GetTemp, "###.00")

'get RH value
lblRH.caption = Format(GetRH, "###.00")

'get Dew point value
lblDewPt.caption = Format(GetDewPt, "###.00")

'get temp unit
If GetTempUnit = 2 Then
lblTempUnit.Caption = "°F"
Else
lblTempUnit.Caption = "°C"
End If
```