

Cube Tracker - Quick Guide

This Quick Guide explains how to install, connect and use the Cube Tracker with a Inficon's Cube product.

Cube CDGsci is Inficon's high precision capacitance diaphragm gauge for reference vacuum pressure measurements.

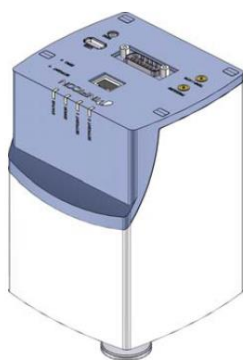
Cube Tracker is a software implementing RS-232 ASCII protocol communication with a Cube CDGsci device.

Cube Tracker can be used as a simple data-logger, for configuration of Cube or for quick testing of Cube's RS-232 ASCII command sequences during development of own control software using this protocol.

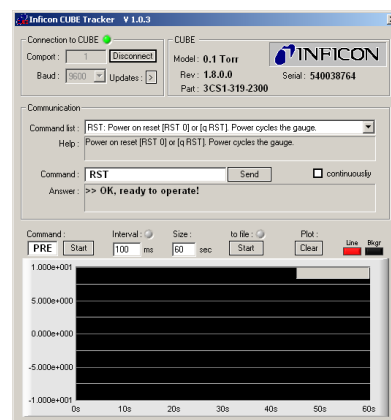
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Capacitance Diaphragm Gauge
Cube CDGsci



RS ASCII



1 Introduction

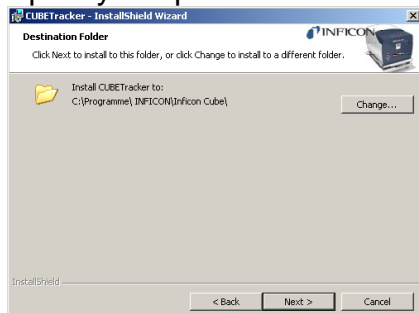
This Guide should outline the necessary steps to install and use the Software that allows to record data via RS ASCII interface of a CUBE Gauge.

2 Install procedure

1. Open installing executable



2. Specify the place for the software to be installed

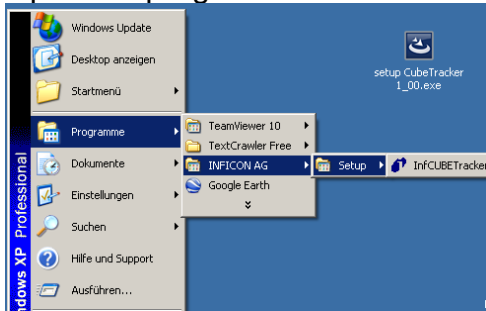


3. Close the install shield wizard

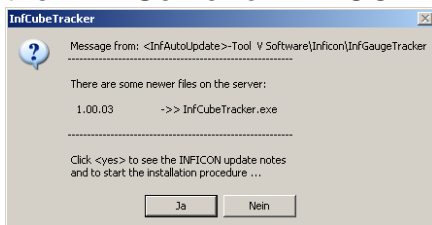


3 Start the program

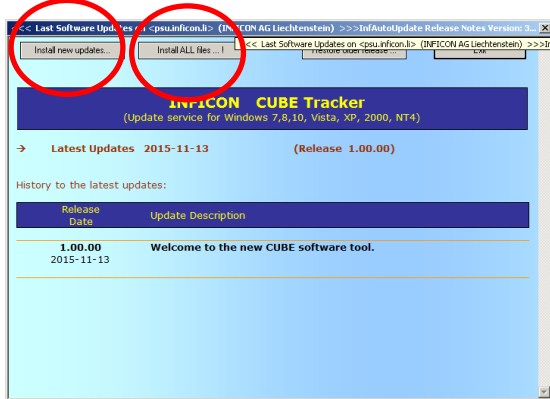
Open the program via the link in the start menu



If the function is activated, there will be check for a new version of the application at every start of the program and it will notify you if there is an update available on the FTP Server of INFICON.

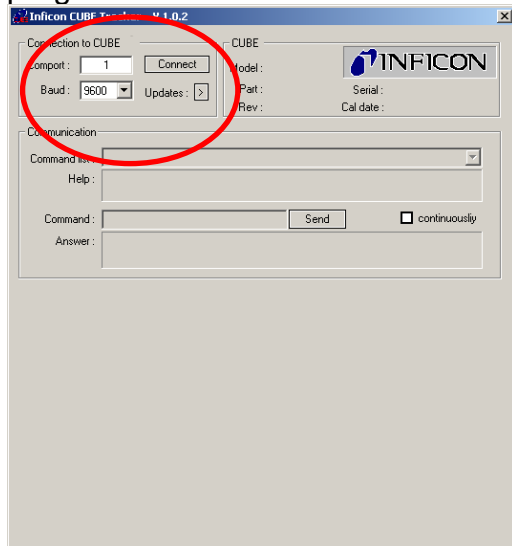


If you click on YES you will be asked to choose if you want to download all files or only the updated ones

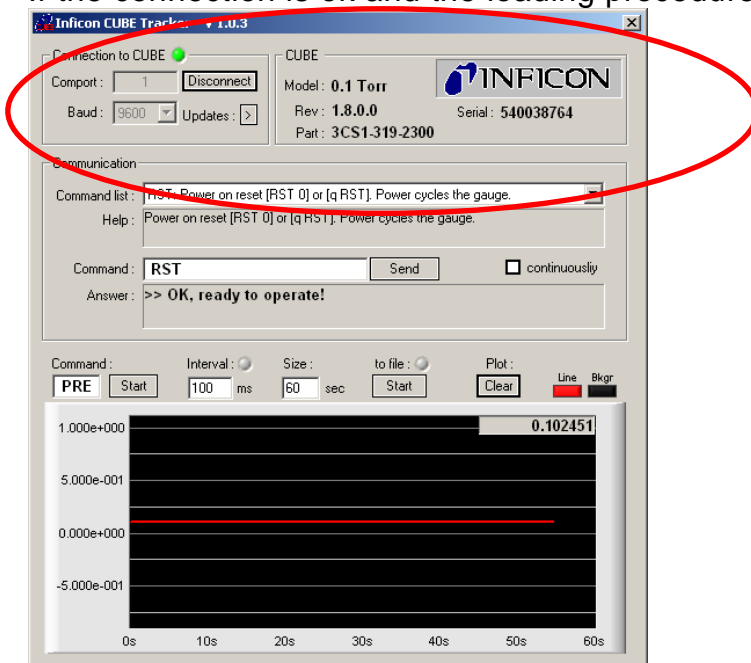


3.1 Connection to CUBE

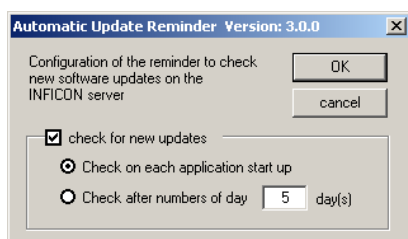
Enter the necessary information in the top fields and press CONNECT and wait for the program to read out all available commands from the CUBE



If the connection is ok and the loading procedure is done, the GUI looks like this

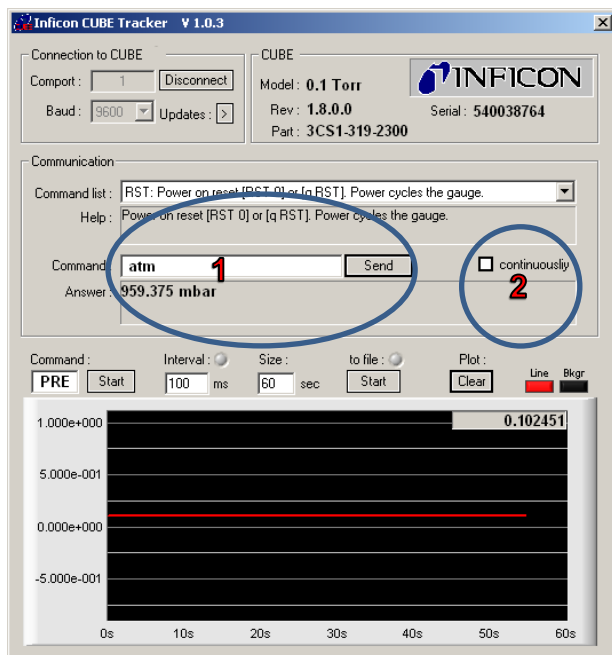
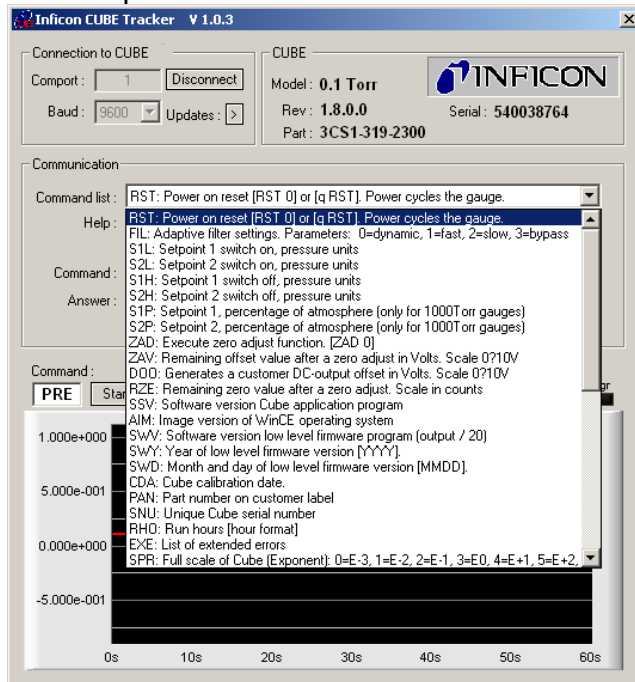


If you click on the > next to UPDATE, you can set the parameters for the automatic update function for the application



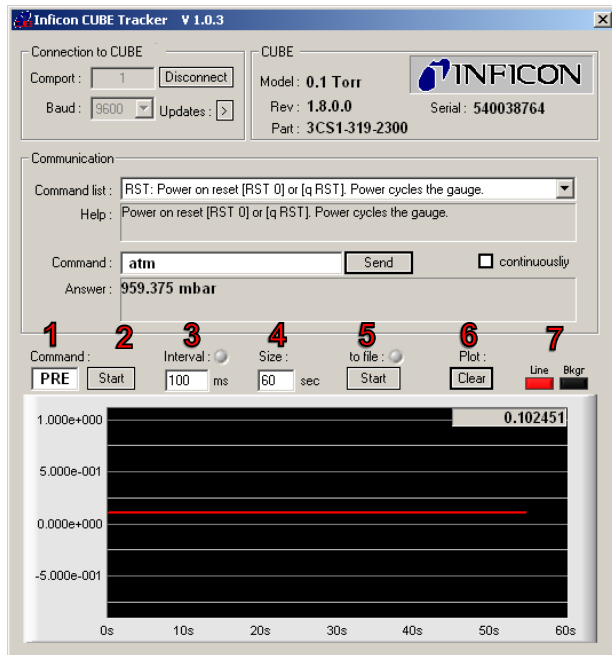
3.2 Communication section

The drop down menu contains all commands that are available for customer

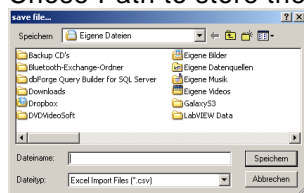


- 1) You can now communicate with the cube either by picking a command from the drop down menu or directly entering the command into the field and pressing the SEND button
- 2) If you check the CONTINUOSLY box, the program will poll the command from the CUBE repeatedly

3.3 Plot / Trace data to Excel file



- 1) The command whose result will be put into the graph (pre = Pressure Value)
- 2) Click START to begin to fill the graph with the specified commands value
- 3) Time between the measurements in ms
Note: If the Interval LED is on, the communication was not within the interval due to latency of either computer or CUBE or communication issues, try to increase the Interval timing
- 4) Size of graph, how many points should be displayed, the graph will start to roll after exceeding of this value
- 5) Put the reading of the sensor into a file
Chose Path to store the file



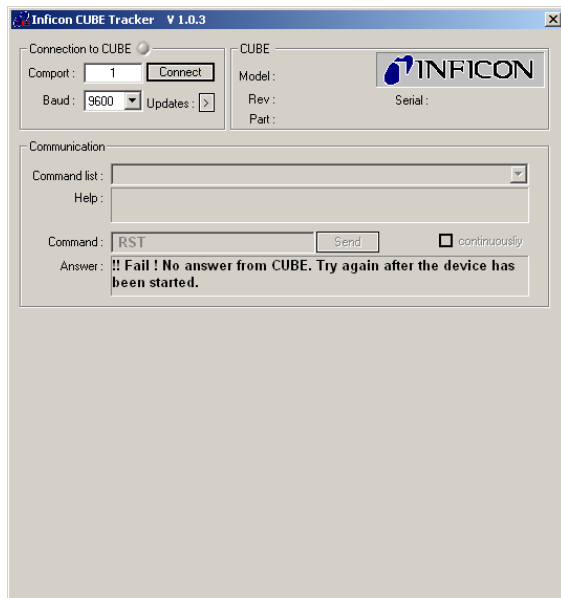
Note: If "to File" LED is on, all data from the sensor will be filled into a *.CSV file

- 6) Clear the graph, this will not affect the file
- 7) Choose color properties for Line or Background of the graph

! Note: Do not open the file with excel (Text Editor works fine!) while the data logging is activated. Excel will open the file in exclusive mode and this will prohibit the CUBE TRACKER from storing any new data to the file!!! !

4 Troubleshooting

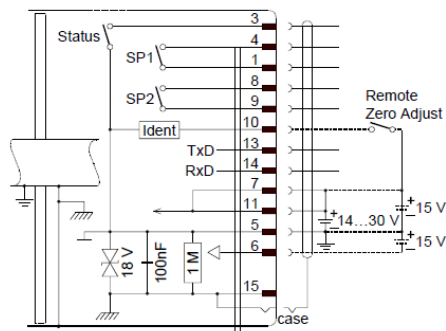
4.1 No Communication



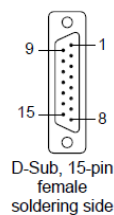
- Check if the CUBE gauge is completely up and running (No Error LED etc)
Note: It can take several minutes for a CUBE to fully start up
- Check the Comport and Baudrate setting
- Check the connection to the cube (Cable configuration)
Note: RS ASCII is only available on the DSUB 15 Connector

D-Sub, 15-pin Connector

If no sensor cable is available, make one according to the following diagram (cable length and conductor cross-sections → 12).

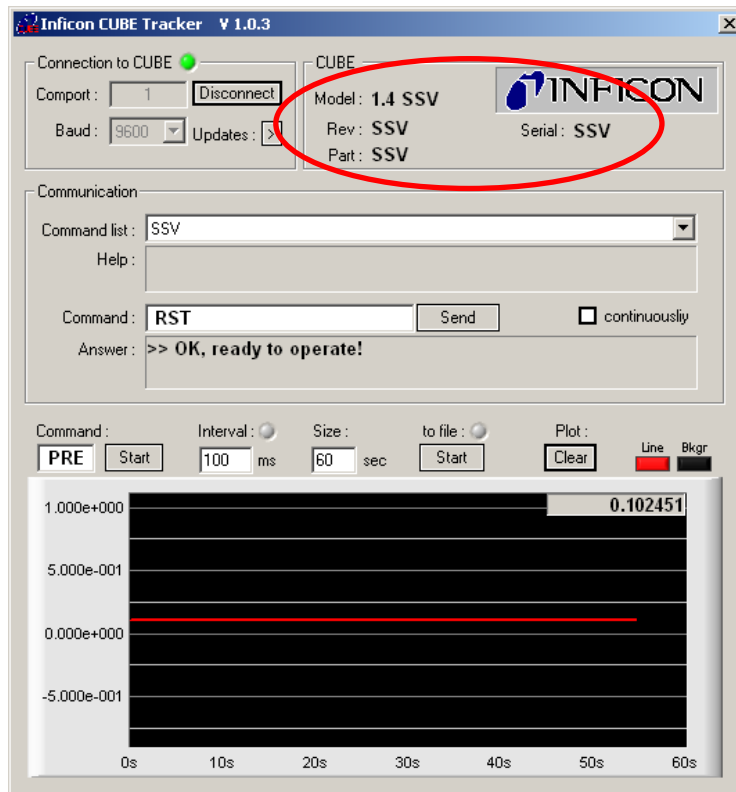


- Pin 1, 4 Relay SETPOINT 1, closing contact
- Pin 3 Status
- Pin 5 Supply common
- Pin 6 Supply (-15 V)
- Pin 7, 11 Supply (+14...+30 V or +15 V)
- Pin 8, 9 Relay SETPOINT 2, closing contact
- Pin 10 Gauge Identification or Remote Zero Adjust
- Pin 13 RS232, TxD
- Pin 14 RS232, RxD
- Pin 15 Housing (Chassis Ground)
- case Connector case



D-Sub, 15-pin female soldering side

4.2 Reading error during startup



Explanation:

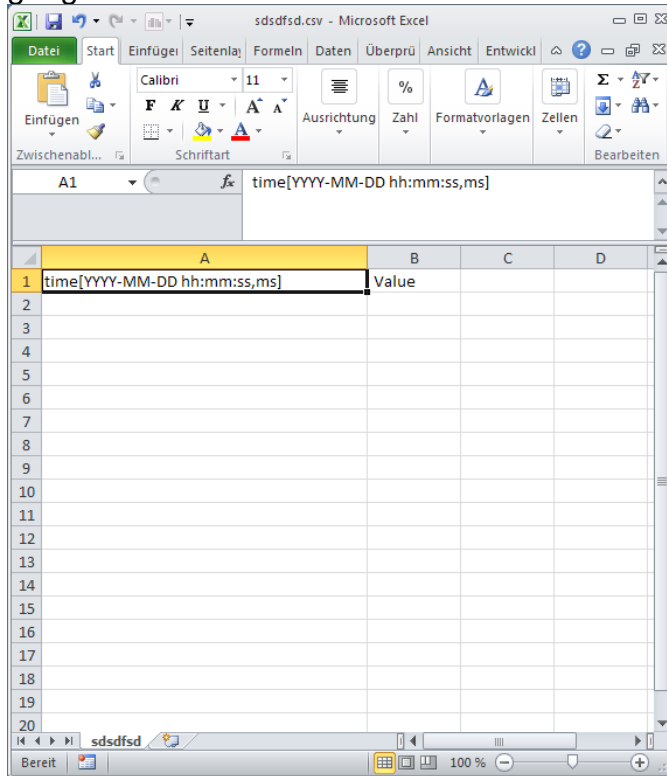
It was attempted to establish a connection to the CUBE before it was completely up and running.

Cure:

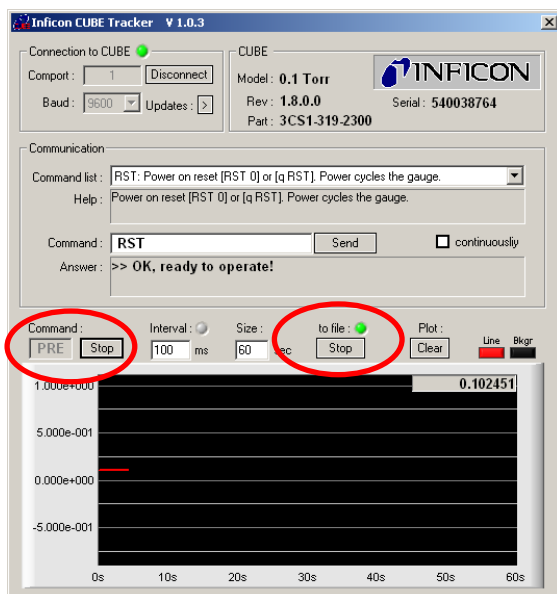
Disconnect and Re Connect the communication to the CUBE

4.3 No Data in File

If the *.csv file looks like this when its opened in Excel, no data was transferred from gauge to file.



Make sure that the plot function is activated, otherwise no data is collected



Both **“Command” START** and **“to File” START** have to be activated to store data into a file