Lens Driver

Labview Instructions

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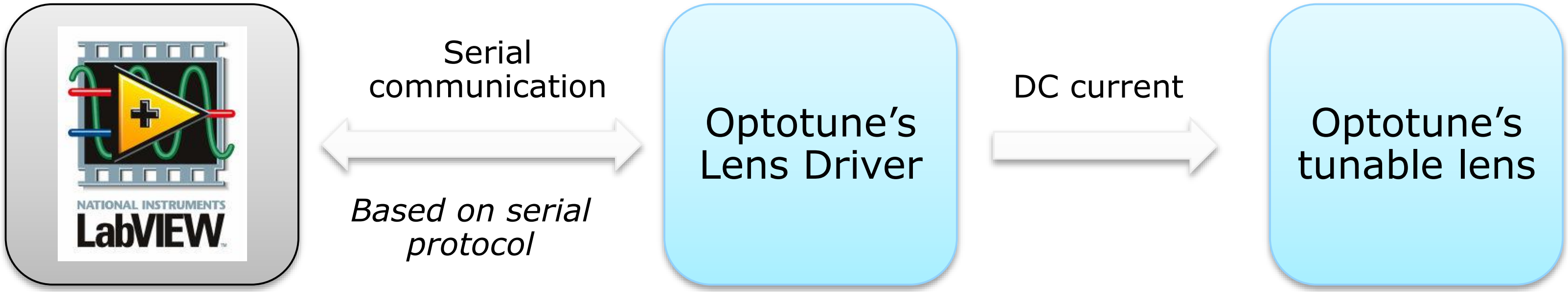
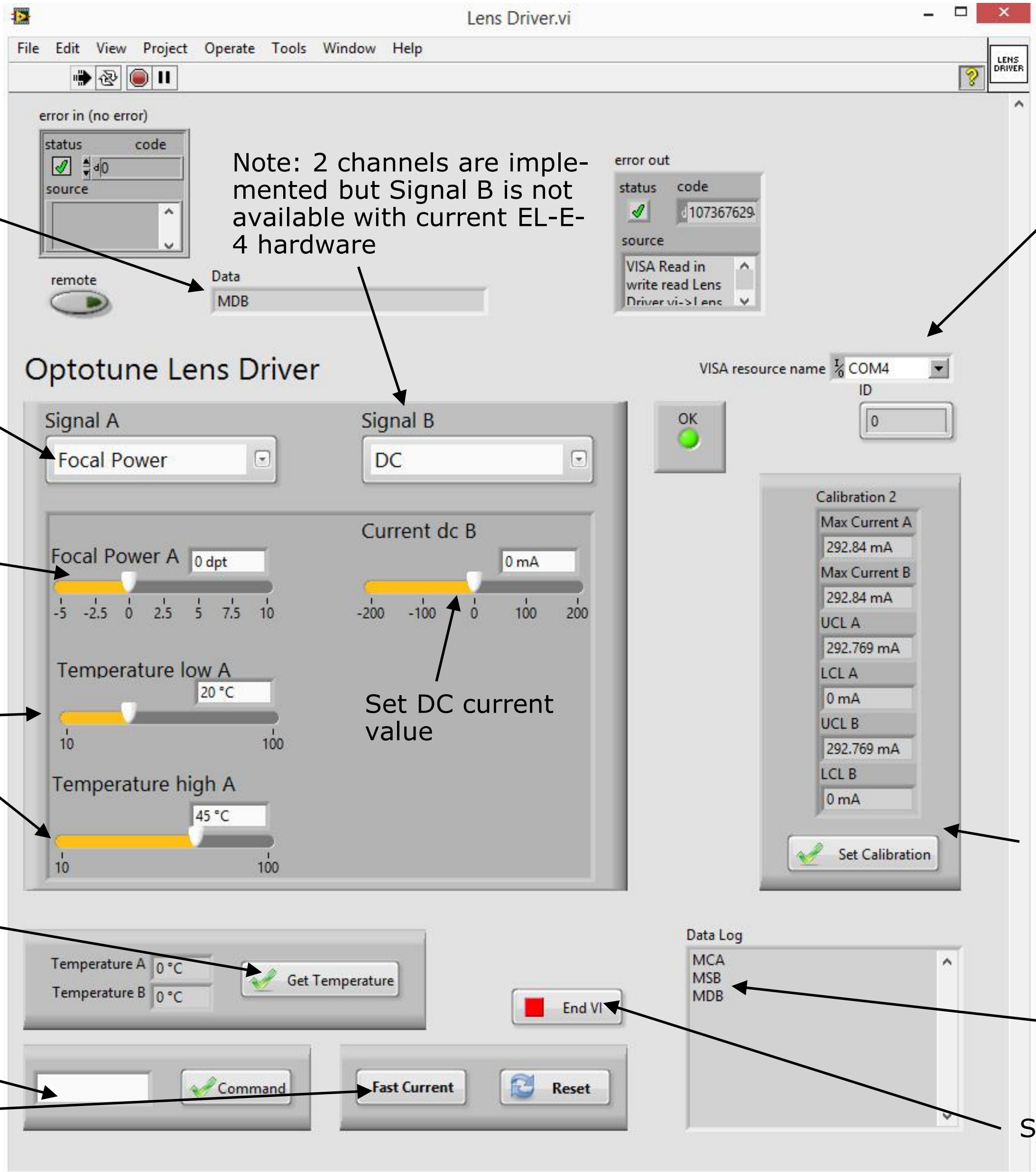
Overview



- Before you start with the "Lens Driver" project, it is recommended to have a look at the "Hello Optotune Lens" program first
- This project is created in Labview 2013 SP1
- The project is a Labview implementation of Optotune's Lens Driver software
- All Labview functions that are needed are included in the basic Labview package
- Communication is done via standard VISA port
- Contact sales@optotune.com for technical support

Front Panel



error in (no error)

status ✓ code 0

source

Data: MDB

error out

status ✓ code 107367629

source: VISA Read in write read Lens Driver.vi->Lens

Optotune Lens Driver

VISA resource name: COM4

ID: 0

Signal A: Focal Power

Signal B: DC

Focal Power A: 0 dpt (-5, -2.5, 0, 2.5, 5, 7.5, 10)

Current dc B: 0 mA (-200, -100, 0, 100, 200)

Temperature low A: 20 °C (10, 100)

Temperature high A: 45 °C (10, 100)

Calibration 2

Max Current A	292.84 mA
Max Current B	292.84 mA
UCL A	292.769 mA
LCL A	0 mA
UCL B	292.769 mA
LCL B	0 mA

Data Log

MCA
MSB
MDB

Temperature A: 0 °C

Temperature B: 0 °C

If answer exists from Lens Driver it is displayed here

Note: 2 channels are implemented but Signal B is not available with current EL-E-4 hardware

Choose correct COM port

Choose operation mode

Set a focal power value. Range -5 to +10 dpt is not automatically adjusted based on temperature settings (like it is done in the Lens Driver software).

Set DC current value

Temperature limits are required in focal power mode. Restricts the available range of diopters (see discussion in Lens Driver Manual).

Set new Calibration values

Read Temperature from Sensor

Shows the history of the serial commands sent to the Lens Driver.

Send command directly as byte command

Possible fast DC current set

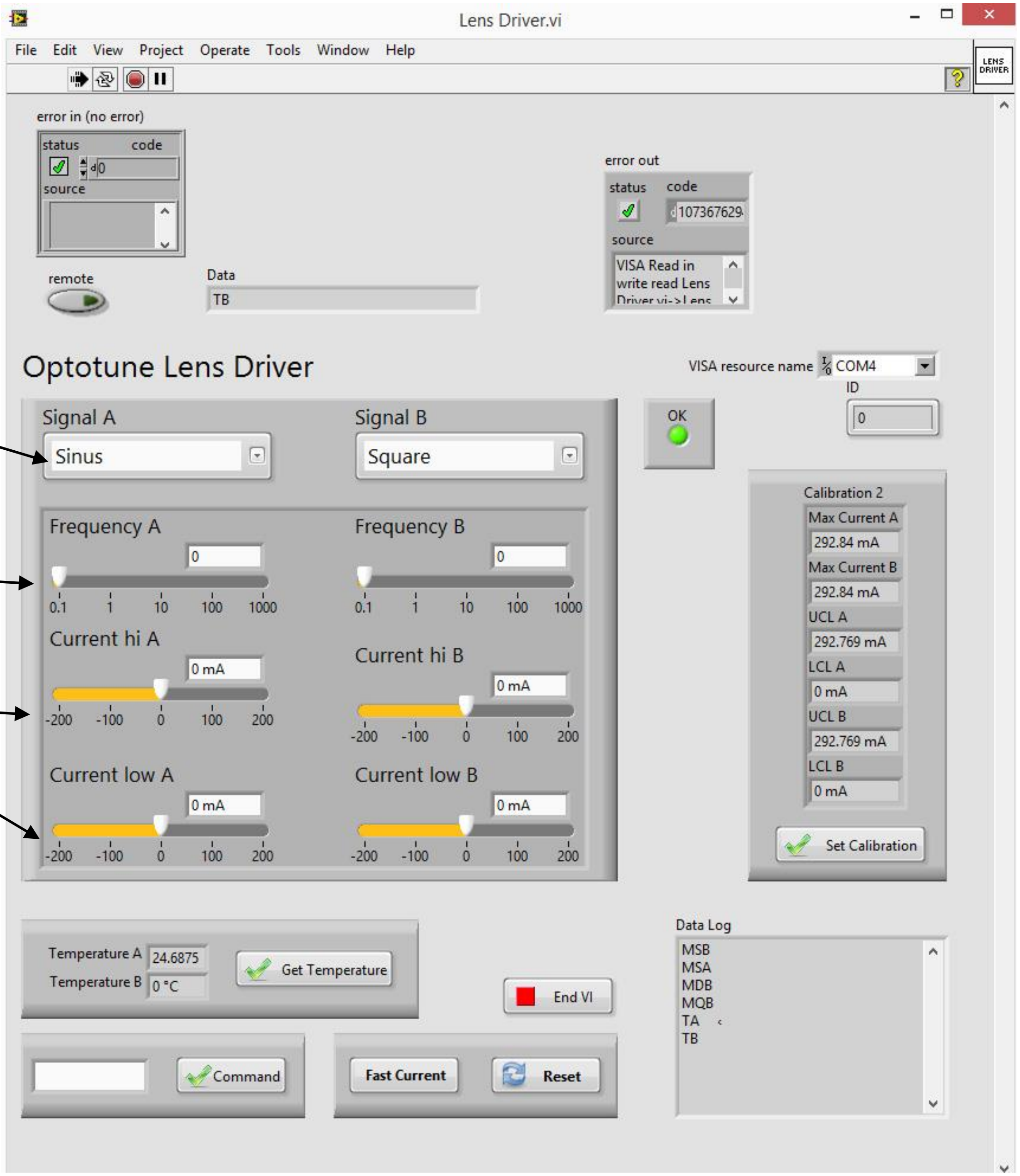
Stop application

Front Panel

Different operation modes selected

Set modulation frequency

Set upper and lower current limit for frequency modes.



error in (no error)

status: ✓ code: 0

source:

Data: TB

error out

status: ✓ code: 107367629

source: VISA Read in write read Lens Driver.vi->Lens

Optotune Lens Driver

VISA resource name: COM4

ID: 0

Signal A: Sinus

Signal B: Square

Frequency A: 0

Frequency B: 0

Current hi A: 0 mA

Current hi B: 0 mA

Current low A: 0 mA

Current low B: 0 mA

Calibration 2

Max Current A	292.84 mA
Max Current B	292.84 mA
UCL A	292.769 mA
LCL A	0 mA
UCL B	292.769 mA
LCL B	0 mA

Temperature A: 24.6875

Temperature B: 0 °C

Data Log

```
MSB
MSA
MDB
MQB
TA
TB
```

Code

- The code contains the implementation of most of the serial commands
- Complete serial communication protocol can be obtained from Optotune
- “**Write Read Lens Driver**” vi implements communication at basic level
- Command list sent to Lens Driver only takes into account the values that have changed during run time
- This minimizes the required resources
- More detailed documentation is given **directly in the code**