

G5 Series

Regatron G5

LabVIEW DLL API Access

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Getting Started

Version V 1.02

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Overview of versions	
Operating instructions / programming handbook	Version V 1.0

All information is subject to technical changes without prior notice.

Content

Content	3
1. Overview	4
1.1. Content	4
1.2. Precondition / Dependencies	4
2. LabVIEW Access	5
2.1. VI Files	5
2.2. Need components	5
2.3. VI Level COLOR	5
2.4. General Recommendations	6
2.4.1. Basic Init VI	6
2.4.2. Configuration (..\Settings)	6
2.4.3. References (..\Power)	6
2.4.4. Output Values (..\Power)	6
2.4.5. System Info (..\Info)	7
2.4.6. Utility (..\Info)	7
2.4.7. Func Generator (..\F-Generator)	7
2.4.8. Examples (..\Example)	8
3. Change log	9

1. Overview

The G5 LabVIEW API can be used to access the Reagtron G5 to perform a small set of operations.

It cannot substitute the G5.Control PC Software, but offers some methods to automate certain operations.

The main configuration and error analysis can only be done with the G5.Control software.

1.1. Content

This document provides a guideline how to access the G5 LabVIEW VI's.

1.2. Precondition / Dependencies

The G5.API runs on Windows 10 (32bit and 64bit). Other Operating Systems that support .Net 4.7.2 may work as well but have not been tested.

To be able to use the G5.API the following frameworks and libraries have to be installed on the target system:

- Microsoft Visual C++ Redistributable for Visual Studio 2015-2019 x86
- Microsoft Visual C++ Redistributable for Visual Studio 2015-2019 x64
- Microsoft .NET Framework 4.7.2
- Minimal LabVIEW 2015

For LabVIEW 64 bit please replace the dll from the API package.

To be able to use the G5 LabVIEW API the G5.Control software must not be installed on the system.

For more Information read the Software Manual which you can find in the G5.Control software menu -> Help.

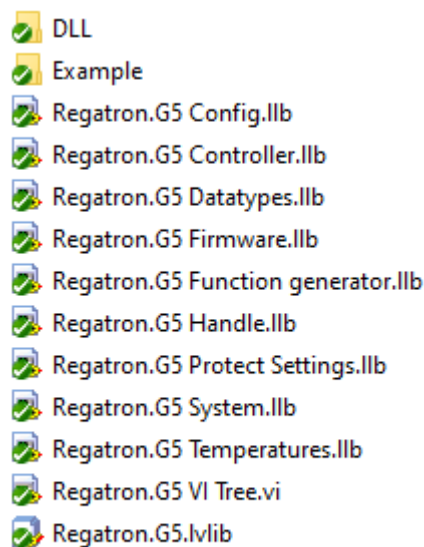
2. LabVIEW Access

There is a LabVIEW VI library to access the G5 Devices.

3 Examples are delivered and can help to get your first LabVIEW program running.

You can get an overview with the VI tree “Regatron.G5 VI Tree.vi” in the main directory.

2.1. VI Files

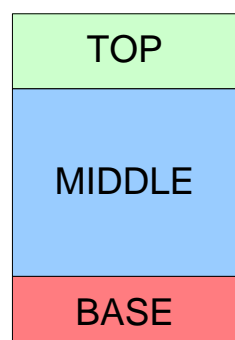


2.2. Need components

No additional components are required.

2.3. VI Level COLOR

The level model defines three levels with defined colors. This allows to directly recognize the VI Level.



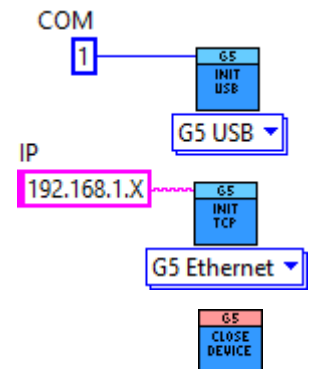
2.4. General Recommendations

To access the G5 API from LabVIEW, there are some points to mention.

2.4.1. Basic Init VI

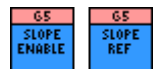
G5 INIT: Open a connection to G5 with a COM Port or TCP/IP Port

CLOSE: Disconnect the device

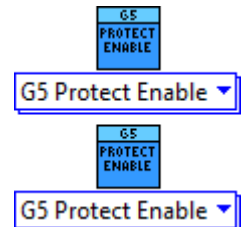


2.4.2. Configuration (..\Settings)

Slopes: Slopes Ramp Setting (Read/Write)



Protect Values: Protect Setting (Read/Write)

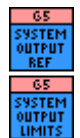


2.4.3. References (..\Power)

Power ONOFF: Voltage ON/OFF Setting (Read/Write)



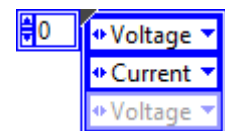
Power References: Preset and Limit Setting (Read/Write)



Datasource:

Read or Write Power Setting with Datasource

It is not necessary to write all values.



2.4.4. Output Values (..\Power)

Power Values: Output Values (Read)



2.4.5. System Info (..\Info)

Device Info: Modul Typ, Serial Nr.



Device Info System: Nominal Modul and Multi Modul Values



Device State: State of the G5 (Warning, Error, Run)



Device Temperature: Read temperatue of each device



2.4.6. Utility (..\Info)

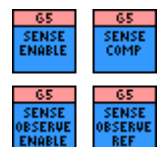
Clear Error: Clear TC Modul or System



Store Settings: Stroe Settings to Flash



Sense Settings: Sense Settings



2.4.7. Func Generator (..\F-Generator)

FGenerator Status: Set/Get Fgen Enable



FGenerator Control Mode: Set/Get Volate/Current/Power Mode



FGenerator Base: Set/Get Waveform for the Frequency



FGenerator Base: Set/Get Fgen values



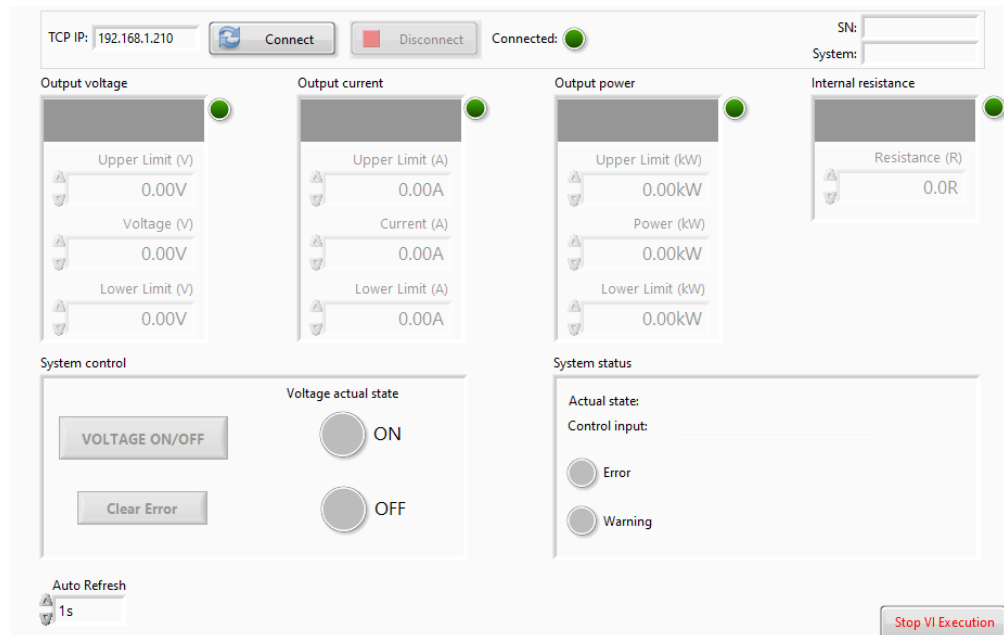
FGenerator Ramp Time: Set/Get ramp time



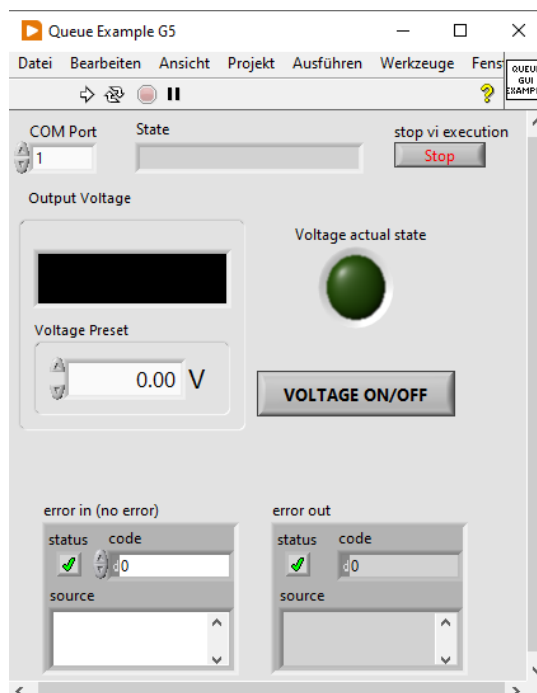
2.4.8. Examples (..\Example)

3 LabVIEW test Examples are provided to show how to access the G5 Device. The examples are for LabVIEW 2015 and LabVIEW 2021.

Example G5.Control



Example G5.Control small



3. Change log

This change log contains a list of changes in the previous versions of the documentation

Version	Date	Changes in documentation
1.00	2021-11-26	Initial documentation
1.01	2022-12-12	Update API (V0.5.0.6483 -> V0.8.0.9117)
1.02	2022-02-27	Update API (V0.8.0.9117 -> V0.9.2.9810)



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