

"""

This Python example shows how to transfer an IQ-data file from Spectrum Analyzer to the controller PC and open it with VSE signal analysis software.

Tested with:

- FSVR Real-Time Spectrum Analyzer (FW: 2.23 SP1)
- VSE Software (1.90)
- PyVISA 1.11.3
- Python 3.9

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Updated on 22.01.2021

Version: v1.3

Technical support -> <https://www.rohde-schwarz.com/support>

Before running, please always check this script for unsuitable setting !
This example does not claim to be complete. All information have been compiled with care. However, errors can't be ruled out.

"""

```
import pyvisa

rm = pyvisa.ResourceManager()
# adjust the VISA Resource string to fit your instrument
instr = rm.open_resource('TCPIP::192.168.0.1::INSTR') # replace by your
IP-address
instr.write_termination = '\n'
instr.read_termination = '\n'
instr.timeout = 3000

vse = rm.open_resource('TCPIP::127.0.0.1::INSTR') # do not change
localhost
vse.timeout = 3000

vse.write('*RST')
vse.query('*OPC?')
instr.write('*RST')
instr.query('*OPC?')
instr.write('*CLS')

instr.write('INIT:CONT OFF')

print('\n' + instr.query('*IDN?'))

instr.write('FREQ:CENT 1e9')
instr.write('DISP:TRAC:Y:RLEV 0')
instr.write('TRAC1:IQ ON')
instr.write('TRAC1:IQ:SRAT 32 MHZ')
instr.write('TRAC1:IQ:RLEN 691') # Range: 1 ... 209715200 (200*1024*1024)
instr.query('*OPC?')

filePathPc = r"c:\temp\data.iq.tar"
filePathInstr = r"c:\temp\dev_data.iq.tar"
```

```
instr.write('INIT')
instr.query('*OPC?')

# save IQ-data file on instrument hard drive
instr.write(f'MMEM:STOR:IQ:STAT 1, "{filePathInstr}"')

# ask for file data from instrument and save to local hard drive
fileData = bytes(instr.query_binary_values(f'MMEM:DATA?
"{filePathInstr}"', datatype='s'))
newFile = open(filePathPc, "wb")
newFile.write(fileData)
newFile.close()

print(instr.query('SYST:ERR?'))

instr.close()

# load file into VSE software
vse.write(f'MMEM:LOAD:IQ:STAT 1, "{filePathPc}"')

vse.close()
```