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This simple 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.

Updated on 24.03.2020

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import pyvisa

rm = pyvisa.ResourceManager()
instr = rm.open_resource('TCPIP::192.168.0.1::INSTR') # replace by your
IP-address
instr.timeout = 10*1000

vse = rm.open_resource('TCPIP::127.0.0.1::INSTR') # do not change
localhost
vse.timeout = 10*1000

vse.write('*RST')
instr.write('*RST')
instr.write('*CLS')

print(instr.query('*IDN?'))

instr.write('FREQ:CENT 1e9')

instr.write('INIT:CONT OFF')

instr.write('TRACel:IQ ON')
instr.write('TRACel:IQ:SRAT 32 MHZ')
instr.write('TRACel:IQ:RLEN 691') # Range: 1 ... 209715200 (200*1024*1024)

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

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

# save IQ-data file on instrument hard drive
instr.write('MMEM:STOR:IQ:STAT 1, \'C:\\temp\\data.iq.tar\'')

PCfilePath = r'c:\Temp\data.iq.tar'
query = 'MMEM:DATA? \'c:\\temp\\data.iq.tar\''

# ask for file data from instrument and save to local hard drive
fileData = instr.query_binary_values(query, datatype='s')[0]
newFile = open(PCfilePath, "wb")
newFile.write(fileData)
newFile.close()

instr.close()

# load file into VSE software
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vse.write('MMEM:LOAD:IQ:STAT 1, \'C:\\temp\\data.iq.tar\\')  
vse.close()
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