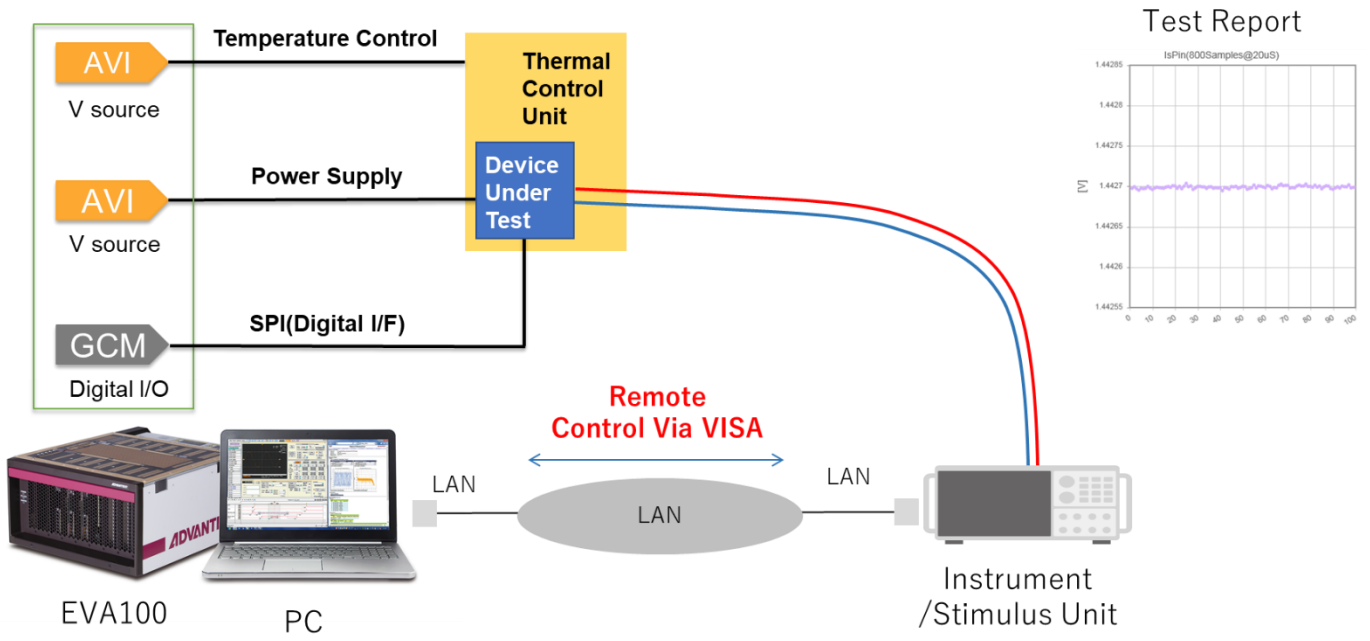
Instrument Control via VISA Library

EVA100 Measurement System



Automation and System up with External Instruments

- System Integration with External Instruments
- Automated Validation, Saving Labor Cost
- Reporting and Judgement

■What's VISA Library

VISA Library is a kind of control library of the instrument via remote access. VISA stands for Virtual Instrument Software Architecture and this library has been defined by IVI Foundation to control the instruments seamlessly, now it is used as the national standard.

Main Features

- Switchable I/F, it has no dependency of I/F itself such as USB/LAN/GPIB.
- Reusable source code, which is common for each supplier of instruments.

Most of supplier recommends strongly to use the VISA programming.

■Example

High accuracy digital multi-meter, High current power supply, Thermal Control, Magnetic and Pressure Stimulus unit, Oscilloscope, Data-Logger etc.

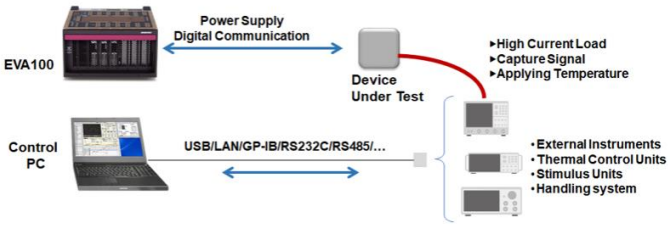


FIg1. System Overview EVA100 and Instruments

■Control Instruments via VISA on EVA100

EVA100 provides the user function library (software environment) to enable the VISA Control.

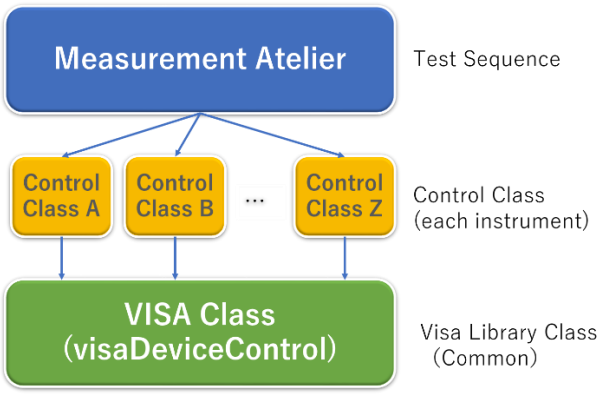


Fig2.Software structure

■Control Class：User Function to use on a Sequence. This class need to develop for each instrument. It requires no modification on User Function when changes the I/F.

■VISA Library Class: This class sends the commands which is defined in the Control class. This is using JAVA Native Access(JNA)to access VISA library.

■Source Measure Unit Control

Here is the sample of SMU Control sequence that measures Current and Voltage then judge the PASS/FAIL.

1. PC and SMU connect to the LAN(Ethernet).
2. Connect to Instrument from sequence.
3. Measure current via Control Class
4. Measure voltage via Control Class
5. Download the measured data, then judge the total result (PASS/FAIL).

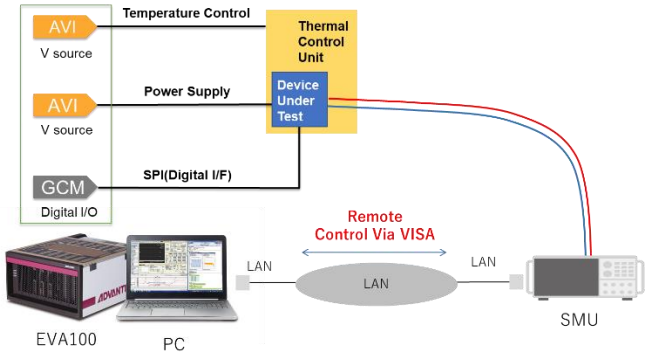


Fig3. SMU Control Sample

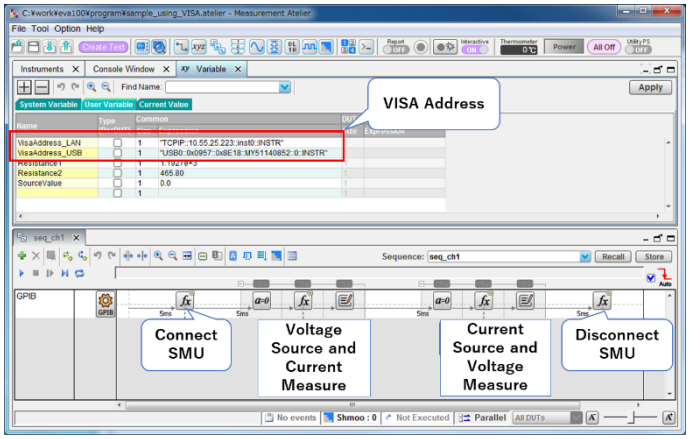


Fig4.SMU Control Sequence

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