

▶ Start

■ Stop

Fixture Locked

Emergency Stop OK

Fixture Lid Closed

Overview

Today

Overall

Passed Failed Ratio

020406080100

PassedFailed

40

Passed Failed Ratio

020406080100

PassedFailed

134633

Last Cycle

Average Cycle

4,01907

0,151822

Serial

SN-BP2531-1035PS

Sequence Info

Measure Voltages

# ProDSP ATE Supervisor

11.09.2025 v1.1



## Features and Benefits

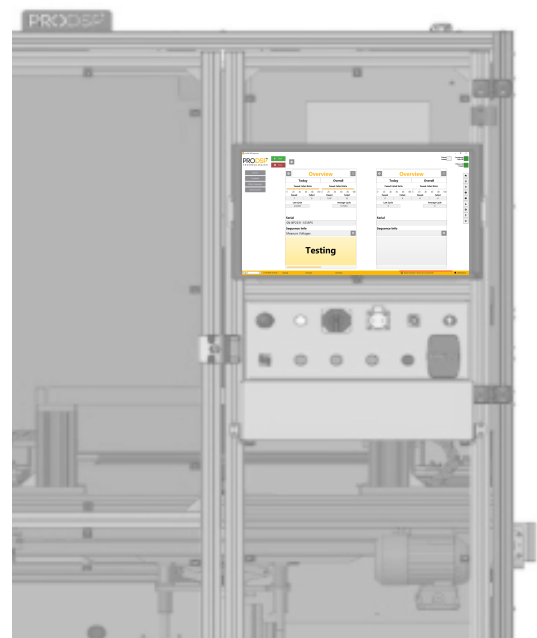
- **Plan.** Test-plan editor with multiple product types and product variants support. The online limit editor allows immediate implementation of STI changes.
- **Execute.** Standalone user interface with integrated sequence execution, user management, and localization features. Reduced training needs thanks to a standardized user interface.
- **Control.** Implementation of golden-sample and Jidoka rule supervision. Act before any production downtime.
- **Analyse.** Built-in database with analysis tools for traceability and MSA reporting. Worry-free auditing process with a few clicks.
- **Repeat.** Test configurations can be stored and retrieved at any time. Test plans can be distributed across multiple testers easily. Your ATE device can be shared between multiple projects without disruptions.

## Description

The **ProDSP ATE Supervisor** software is a ready-to-use solution to **configure, control, and monitor your Automated Test Equipment** in a user-friendly environment.

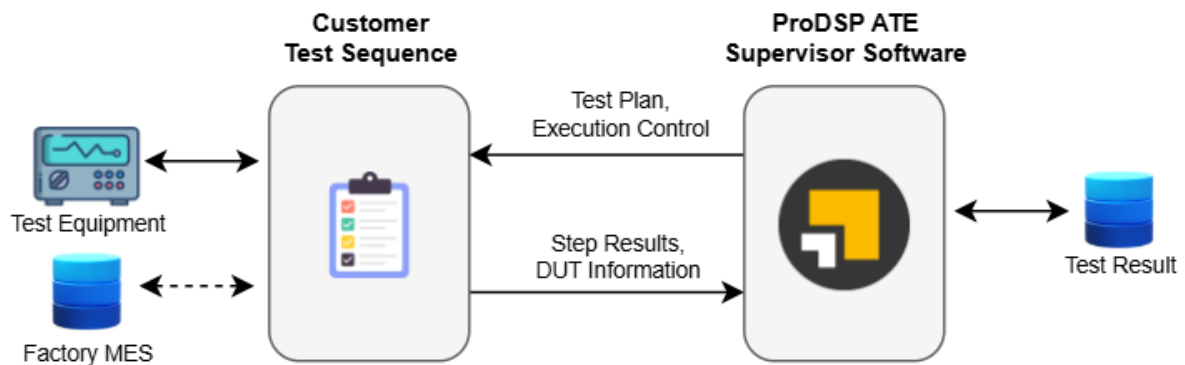
The software can be adapted to a wide range of test devices: it can be a single-seat manual fixture or a fully autonomous, multi-socket in-line handler. With our solution, you can increase your system flexibility to easily switch between testable DUT product types and variants. It helps to reduce your manufacturing process downtime by monitoring the key process indicators and detecting issues before they become failures. Users can also be notified in case of a required maintenance period.

Our test sequence framework (available in Python and NI TestStand) implements the tester control, reporting and monitoring tasks so you can focus on implementing the actual product test sequence. This helps reduce deployment time for our test engineer users.



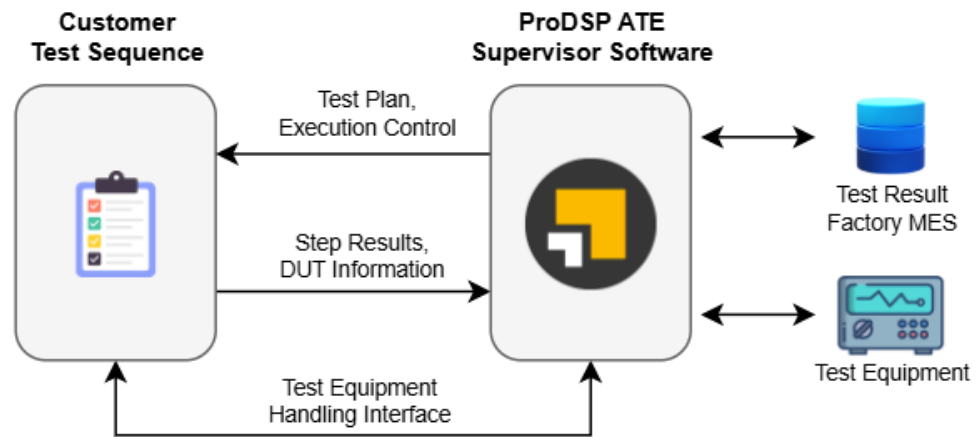
## Overview

Our solution can be integrated with your ATE in a flexible way. You can choose to handle all your test equipments, MES/ERP and DUT communication within your sequence:



*Option 1: Distributed*

Or you have the possibility to integrate all the control tasks in our software with device plug-ins to get a more integrated, clean, and fully controlled solution:



*Option 2: Integrated*

With either solution we are providing an API to control the ProDSP ATE Supervisor and access its data. We have a ready-to-use library written in **Python** and also in **LabVIEW** (NI TestStand). For the common test equipment control plug-ins are available on request.

## Main Functionalities

### Test Plan Editor

- Create Test Plans, add Products and Product variants.
- Edit limits and parameters. Changes can be applied immediately.
- All changes are stored, traceable. Test configurations can be reproduced at any time.
- Test Plans can be shared, synchronized between testers.

| Tables (Bold: active version) | Test ID | Measurement Name    | Comparison   | Lower Limit | Upper Limit | Unit |
|-------------------------------|---------|---------------------|--------------|-------------|-------------|------|
| Group: Product1               | 1.0     | Current Measurement | GELE (>= <=) | 0,1000      | 0,5000      | mA   |
| Variant: VariantA             | 1.1     | Voltage Measurement | GELE (>= <=) | 10,0000     | 14,0000     | V    |
| Workspace                     | 2.0     | TP01 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Limits                        | 2.1     | TP09 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Parameters                    | 2.2     | TP10 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Variant: VariantB             | 2.3     | TP21 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Workspace                     | 2.4     | TP22 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Limits                        | 2.5     | TP23 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Parameters                    | 2.6     | TP24 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Group: Product2               | 2.7     | TP25 Voltage        | GELE (>= <=) | 3,2000      | 3,4000      | V    |
| Variant: VariantA             | 3.1     | FW Version          | GELE (>= <=) |             |             |      |
| Workspace                     |         |                     |              |             |             |      |

### Integrated Sequence Execution

- Built-in sequence execution option for NI TestStand (Runtime licence required), and for Python.
- Sequences can be configured, stored, and selected. Sequences can be assigned to products.
- The appropriate sequence can be launched from the main UI.

The screenshot displays the ProDSP Test Execution interface. A 'Configure Test Execution' dialog box is open, showing 'Product1' selected in a dropdown menu. Below the dropdown, there is a toggle switch for 'Enabled' (currently off) and a 'Start Testing' button. To the right of the dialog, a green circle indicates 'Ready' status, and an 'Add/Remove' button is visible. In the background, a table shows the test sequence steps and their status.

| STEP            | DESCRIPTION                         | SETTINGS                             | STATUS |
|-----------------|-------------------------------------|--------------------------------------|--------|
| - Setup (1)     |                                     |                                      |        |
| Set Main Status | Action, Call Thread.PostUIMessa...  | Result Recording: Disabled           | Done   |
| <End Group>     |                                     |                                      |        |
| - Main (22)     |                                     |                                      |        |
| + Progre...     | Action, Call Thread.PostUIMessa...  | Pre Expression, Result Recording:... | Done   |
| 0 Meas 1        | {3.39524397428}, Numeric Limit T... | Post Expression                      | Passed |
| STEP_1.1 Meas 2 | {1.01500999367}, Numeric Limit T... | Post Expression                      | Passed |

On the right side of the interface, a 'UUT Report' is partially visible, showing fields for Station ID, Serial Number, Date, Time, Operator, and Execution Time.

## Advanced Sequence Debugging

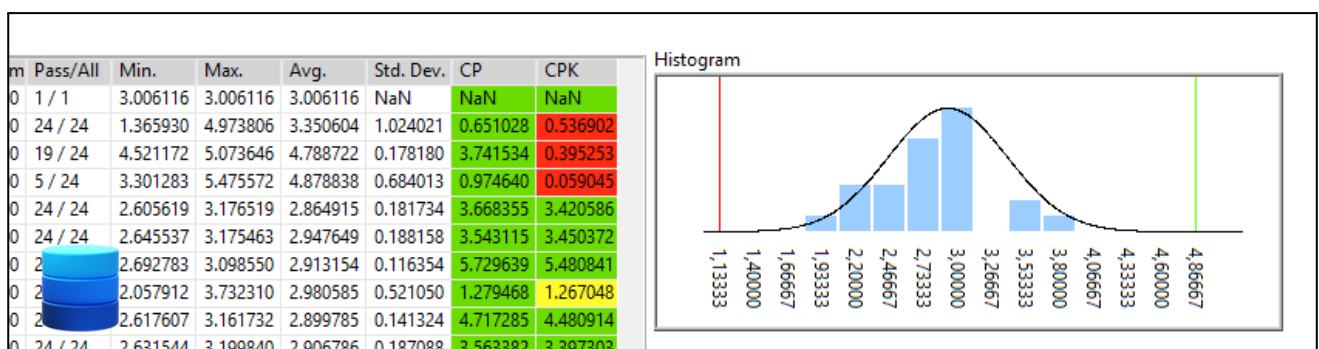
- Sequences can be executed from native development environments also.
- They can be stopped, executed step-by-step, and modified.
- The development environment can be running on an external PC, thanks to the TCP/IP API interface.

```

TestSequenceExecution.py X  Logger.py  KeysightDMM.py
TestSequenceExecution.py > DemoSeq > MainSequence
27  class DemoSeq(SequentialModel):
66      def MainSequence(self): self = <__main__.DemoSeq object at 0x0457C778>
73
74      PSE.SetSocketSection(self.executionID, "Measure Voltages", self.socketID)
75      PSE.SetSocketProgress(self.executionID, 50, self.socketID)
76
77      0.23281910740333078
78      VoltageMeas = DMM.Measure()
79  self.numericLimitTest("2.1", ProdTestPlan["Test2_1"]["Name"], VoltageMeas)
80
81      self.RelayControl("K01", True)
82      self.numericLimitTest("2.2", ProdTestPlan["Test2_2"]["Name"], DMM.Measure())
    
```

## Statistical Analysis

- All measurement data, and test results can be stored, and retrieved.
- Pass/Failed ratio, TOP Fail indicators calculation for all seats/jigs
- Automatic statistical evaluation of key performance indicators.
- MSA Analysis reports with a few clicks: CPK, R&R.
- See our Statistical Tool brochure for further information.



## Test Control

- Define OK/NOK samples and golden sample rules.
- Apply Jidoka measures: disable test jig at abnormalities.

| Configuration                                                                                                                |                                                                | Name / Group  | Variant / Description     |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|---------------------------|
| <b>Mode</b><br><input checked="" type="radio"/> Disabled<br><input type="radio"/> Daily<br><input type="radio"/> By Interval | <b>Warning Period</b><br><input type="text" value="01:00:00"/> | SN-11035464QA | Product1                  |
|                                                                                                                              |                                                                | OK Sample     | All test should be passed |
|                                                                                                                              | <b>Time Interval</b><br><input type="text" value="08:00:00"/>  | SN-11035464QB | Product1                  |

## Maintenance

- Wear parts can be tracked in the system. Maintenance periods can be configured and users will be notified in advance.
- All IOs can be monitored and tested manually.

| Part Name  | Lifespan | Trigger Signal | Usage Counter | Last Reset Date     | Last Reset By (User Name)    | Description   |
|------------|----------|----------------|---------------|---------------------|------------------------------|---------------|
| K01        | 100000   | K01            | 0             | 2025.09.10 13:59:47 | Developer ProDSP (developer) | RIF-0-RPT-24D |
| K02        | 100000   | K02            | 0             | 2025.09.10 13:59:50 | Developer ProDSP (developer) | RIF-0-RPT-24D |
| K03        | 100000   | K03            | 0             | 2025.09.10 13:59:52 | Developer ProDSP (developer) | RIF-0-RPT-24D |
| K04        | 100000   | K04            | 0             | 2025.09.10 13:59:57 | Developer ProDSP (developer) | RIF-0-RPT-24D |
| K05        | 100000   | K05            | 0             | 2025.09.10 13:59:54 | Developer ProDSP (developer) | RIF-0-RPT-24D |
| TP01 Probe | 50000    | Contact        |               |                     |                              |               |
| TP09 Probe | 50000    | Contact        |               |                     |                              |               |
| TP10 Probe | 50000    | Contact        |               |                     |                              |               |
| TP21 Probe | 50000    | Contact        |               |                     |                              |               |
| TP22 Probe | 50000    | Contact        |               |                     |                              |               |
| TP23 Probe | 50000    | Contact        |               |                     |                              |               |
| TP24 Probe | 50000    | Contact        |               |                     |                              |               |
| TP25 Probe | 50000    | Contact        |               |                     |                              |               |

| Type     | Offset | Set To | Value     |
|----------|--------|--------|-----------|
| DI, Bool | 0      |        | SET TRUE  |
| DI, Bool | 1      | TRUE   | SET FALSE |
| DI, Bool | 2      |        | SET FALSE |
| DI, Bool | 3      |        | SET TRUE  |

## Device Plug-ins

- Integrated Test Equipment control (Option 2), DUT communication, or external database connectivity is achievable via user plug-ins.
- Device status and error log can be monitored, connectivity parameters can be configured.
- Soft panel for manual control and debug.
- Ready-to-use plug-ins are available on request.

|                                                                     |                                                                |                                                       |
|---------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------|
| CAN UDS Diag<br>Keysight 34470A<br>Modbus Client<br>Climate Chamber | Read Value<br><input type="text" value="0,232819"/>            | Measure                                               |
|                                                                     | Select Measurement<br>Voltage DC                               | Set Conf                                              |
|                                                                     | Voltage Parameters<br>Autorange <input type="checkbox"/> False | Manual Range (V)<br><input type="text" value="10 V"/> |