



# ATLAS

## Advanced Test Lab with Automated Simulators

ATLAS is a comprehensive simulator and test automation tool designed for all systems, including real-time applications. It allows for flexible and rapid modeling of various system simulators through an automatically generated user interface, eliminating the need for coding knowledge. Users can define and execute test steps with ease, generating reports in formats like MS Word, HTML, and IBM Doors. With support for a wide range of communication protocols, including avionics, automotive, Ethernet, and serial channels, ATLAS's real-time operating system ensures the simultaneous execution of time-critical and expandable simulators.

# ATLAS

## ALL IN ONE SIMULATOR & TESTING SUITE



```
ViewModel
Device { get; }
IEnumerable<string> BaroCorrectionSource
{
    get
    {
        return Enum.GetValues(typeof(ADC_TUWP.BaroCorrectionEnum)).Cast<string>();
    }
}
public string BaroCorrection
{
    get
    {
        return Device.BaroCorrection.ToString();
    }
    set
    {
        if (Device.BaroCorrection.ToString() != value)
        {
            ADC_TUWP.BaroCorrectionEnum baroCorr;
            if (Enum.TryParse(value, out baroCorr))
            {
                Device.BaroCorrection = baroCorr;
            }
            OnPropertyChanged();
        }
    }
}
```



## SIMULATION

COMPLETE AND EFFECTIVE TEST MANAGEMENT

### TEST AUTOMATION

ATLAS provides solutions with its automated testing structure in the verification process which is one of the most important processes of development phases. The model-based test steps allow the definition of tests without any need for coding. The test steps defined as synchronous and asynchronous can be documented by exporting them in formats such as MS Word, HTML, IBM Doors etc. Tests can run on Windows and Real-Time operating systems.

After the test execution, the issues and bugs can be assigned to the users as an output through issue tracking programs such as Redmine, Jira etc.

### WHY CHOOSE ATLAS ?

- User-friendly UI
- Productive Test Management
- Easy Tracking The Status of Tests
- Real-time Synchronisation
- Integration with Test Automation Tools
- Reporting and Visualization Options
- Fast Professional Support

### SIMULATOR ENGINE

The simulators created by ATLAS Modeling Tool can be run on an auto generated interface. Communication is provided by automatic encoding / decoding process through defined periods and data types on the simulator. The capability of realtime communicating through different communication protocols provides high flexibility. Simulator engine provides the following features:

- Supporting different measuring units
- Transmitting the data out of range
- Aperiodical communication between the messages
- Communication restrictions

# MODELING TOOL

## INTEGRATION AND COLLABORATION

### MODELING TOOL

Model-based simulators can be created with ATLAS modeling tool. Thanks to the modern user interface, models are created fastly without any code development. Not only the interface control documents committed by the system engineers can be modeled, but also these documents can be exported with the modeling tool.

The modeling tool, which provides a script development structure for non-modelable objects, supports some features such as code completion and decoding provided by its development environment.

Flexible modeling possibility even in case of simple communications that do not support a specific protocol.

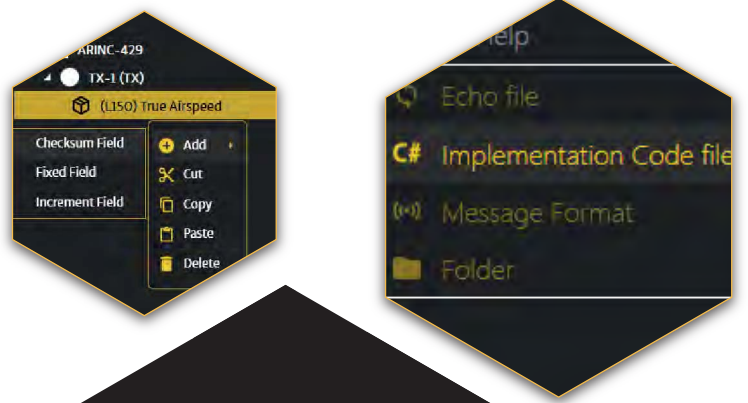
### SUPPORTED PROTOCOLS

- ARINC-429
- ARINC-664
- ARINC-708
- ARINC-825
- ARINC-818
- MIL-STD-1553
- MIL-STD-1760
- CANBUS
- TCP
- UDP
- DDS
- RS-170
- RS-232
- RS-485
- RS-422

### REAL-TIME DISTRIBUTED ARCHITECTURE

ATLAS provides real-time structure for critical system simulators like avionics. Time-critical situations of simulators and tests are provided in this architecture.

By using a distributed structure, different processors can communicate with each other in case a single real-time processor is not enough. Simulators and test engines running on these processors display the test reports by communicating with the software.





# ATLAS

## ONE SIMULATOR FOR ALL SYSTEMS

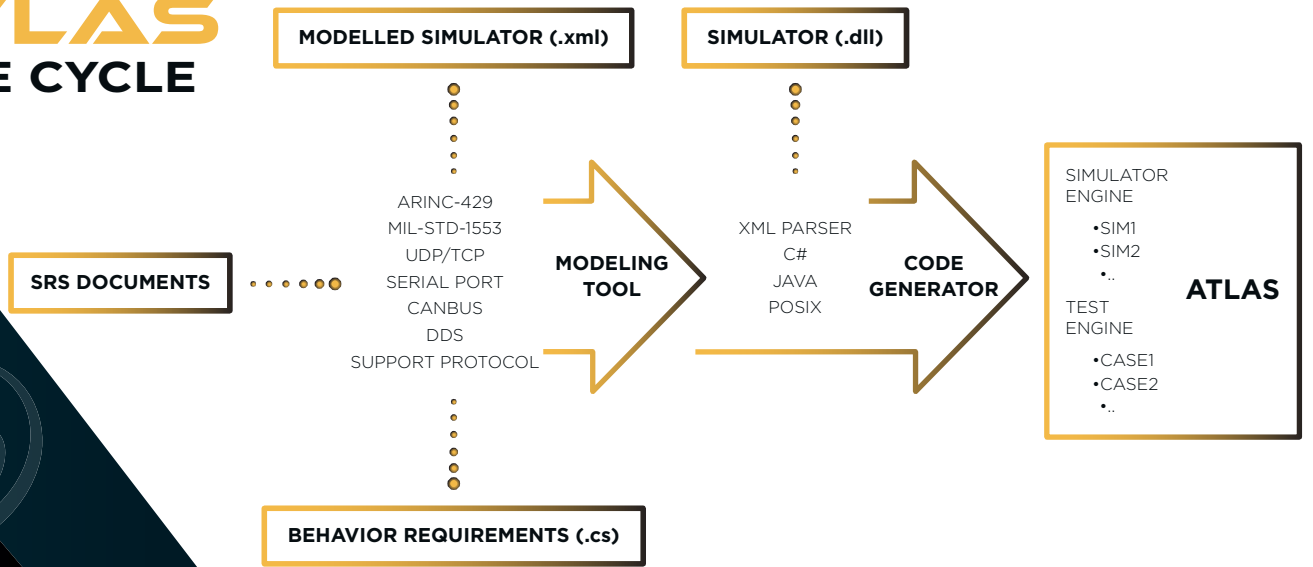
### FEATURE HIGHLIGHTS

- Advanced Test Automation
- Simple Simulator Modeling
- Modern Simulator UI
- Test Debugging and Automatic Reporting
- Supporting Various Communication Protocols
- Real-Time Operating System Support
- Distributed Architecture
- Wide variety of hardware support including PCs, SBCs, Embedded Devices
- Automatic Interface Control Document Generation
- Measurement Unit Conversions
- Easy to Create Test Steps
- Writing Script Tests
- Exporting Test Definitions
- Integration with Issue/Bug Tracking
- Integration with System Specifications

### BENEFITS

- Adjustable features accelerate development and test processes.
- Once the model is defined, test cases and test steps can be generated automatically from the model.
- Test definition documents are generated automatically from the model-based test steps.
- The software can be used in CI/CD phases with automatic test running.
- With the various of tool integrations (specifications, issue tracking), auto-tracking progress is provided.
- Thanks to the different communication protocols, the flexible development execution is provided.
- Real-time support provides the capability for the developers to simulate time-critical systems.

## ATLAS LIFE CYCLE



**CMMI** DEV | ML3  
APPRAISED

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