

Software toolkit to **develop and deploy**
GEM communication interfaces on
manufacturing equipment



Enabling the Smart Factory Through Equipment Connectivity

Cimetrix® CIMConnect software is trusted by **leading**
semiconductor and manufacturing **companies**
worldwide to power **smart manufacturing**.

Access our **top-rated, global** technical support team.

Problems with **Other Solutions**

In-house solutions require **costly**
dedicated expertise and are always
incomplete.

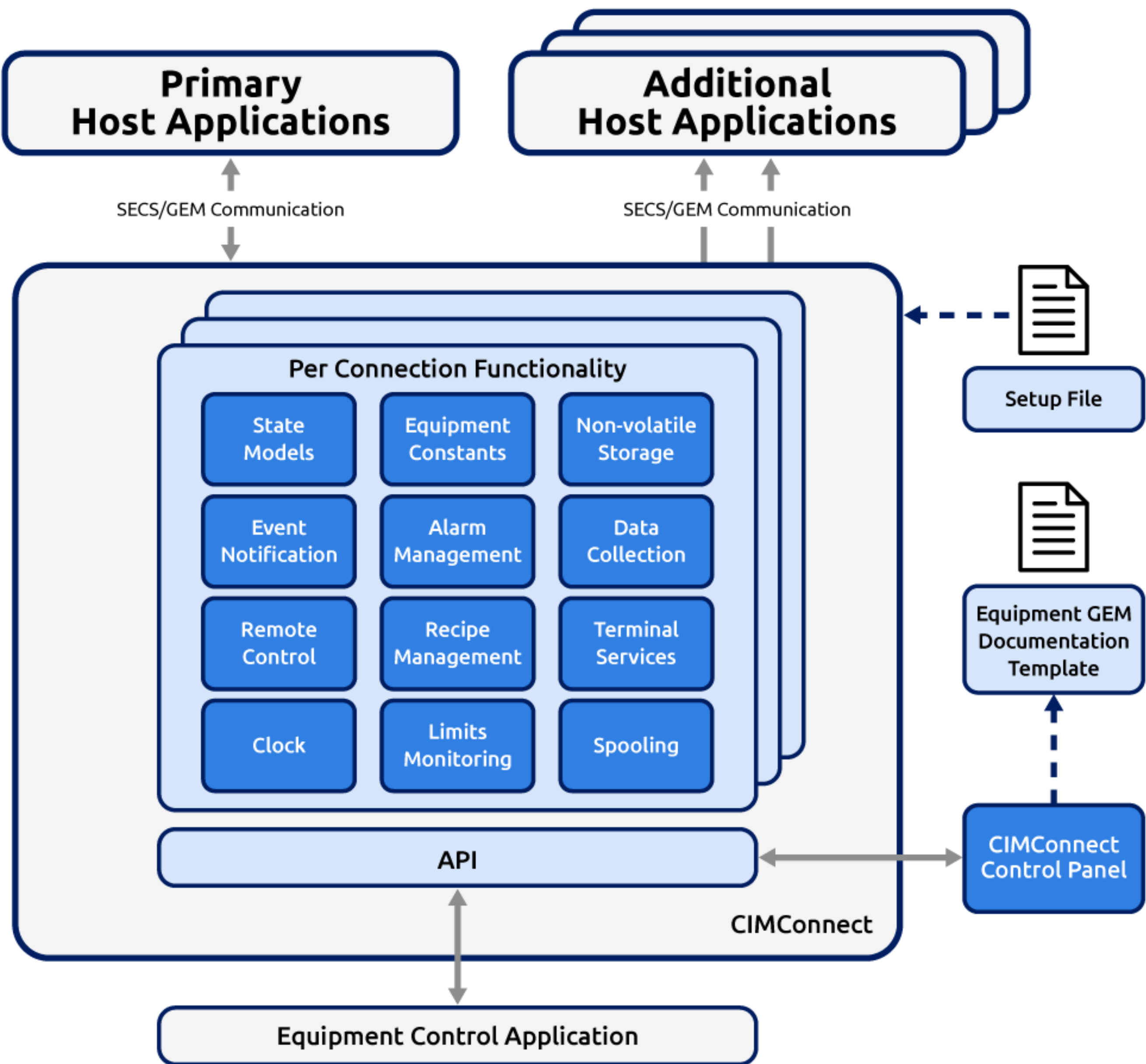
CIMConnect stands out for its **global**
acceptance, deep industry experience,
and **advanced feature set**.

Solution Highlights

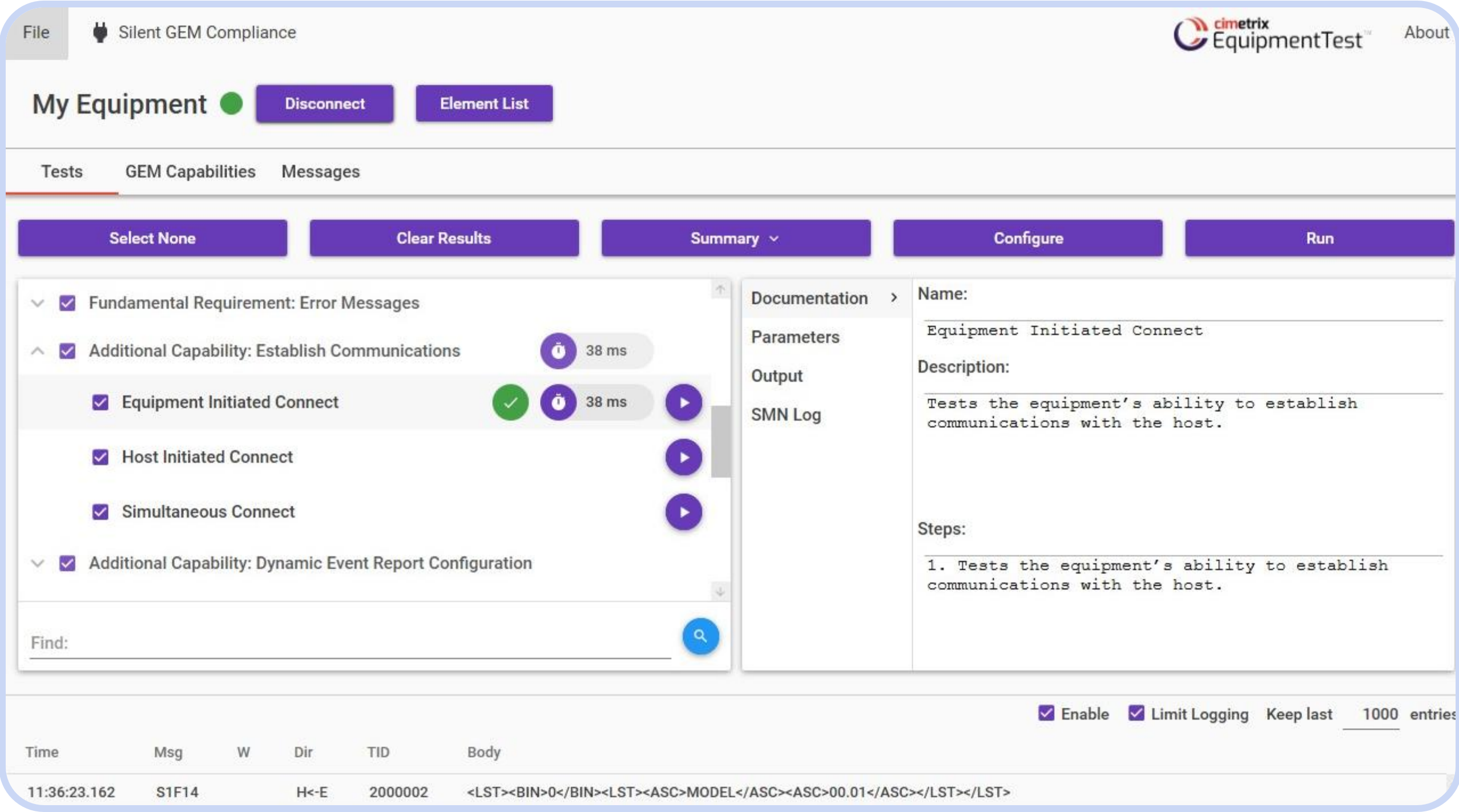
- Control Panel and other helpful **utilities**
- sample **applications & documentation**
- built-in support for connection to **multiple host systems**

Components

- Control Panel**
Real-time insight into the GEM interface for testing, diagnostics and simulation
- API**
Compatible with different development environments like C#, C++, and VB.NET
- 100% GEM Functionality**
Implement a complete GEM/SECS-II interface. CIMConnect supports everything
- Configuration Options**
Text setup file and/or setup through the API



Use Cases



Comprehensive GEM/SECS-II Compliance Testing

EquipmentTest gives you a **hands-on way to explore the GEM interface**, providing clear insight and confidence through direct interaction.



Challenge

An equipment’s GEM interface is **system critical** for factory production, but every GEM interface has **unique features**.



Result

CIMConnect SDK includes EquipmentTest with **standard tests** and the ability to **write custom tests** in Visual Studio.



Challenge

Traditional GEM interfaces are restricted to **one factory connection**, reducing their value in modern manufacturing.



Result

CIMConnect’s multiple host feature delivers **simultaneous, independent GEM connections**.

Foundation for All GEM-Based Standards

More than 50 GEM-based SEMI standards span a broad spectrum of industries, equipment types, and automation needs.

CIMConnect serves as a **proven, scalable solution** for implementing these standards—supporting GEM 300 for semiconductor **automation** while providing a **strong foundation** for manufacturing systems in any industry.

Key GEM Features

Event Notification

Alarm Notification

Data Variable Collection

Recipe Management

Remote Control

Adjust Settings

Operator Interface

SEMI Standards



- E4/E37 – SECS-I/HSMS Protocols
- E5 – SECS-II Message Layer
- E30 – Generic Equipment Model
- E172/E173 – XML documentation/logging

Contact Us



PDF Solutions Corporate Headquarters
2858 De La Cruz Blvd
Santa Clara, CA 95050 USA
www.pdf.com +1-408-280-7900