

# **SECS DRIVER**

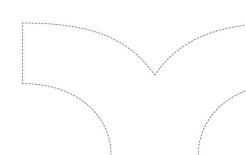
SECS Communication Driver (SEMI Standards E4, E5, E30 & E37.1)

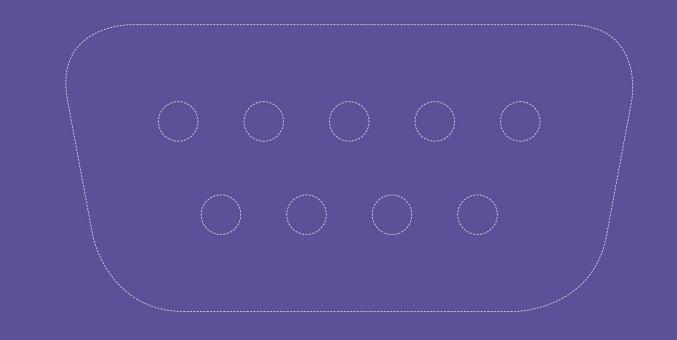
X-PORT is a software driver that can be configured to add SECS /GEM capabilities to an equipment. It is designed to run quietly in the background while maintaining full SECS logging for the purpose of traceability.

X-PORT 's behaviour is controlled by XML-based configuration files through the selection of specific SECS/GEM functionalities to be implemented; definition of associated variables, alarms, terminals and parameters; linking of variables to reports; and linking of reports to events.

Deploying the configured GEM-compliant equipment is then simply a matter of feeding appropriate data into the variables defined in X-PORT (via API calls provided in the .NET GEM control) for communication with the host computer.







# **Specifications**

## Installation Requirements

- Windows XP Professional with .NET 2.0; 512MB RAM (minimum)
- Windows 7 Professional; 2GB RAM (minimum)

## SEMI Standards Compliance

X-PORT adheres strictly to the following SEMI standards:

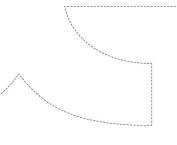
- SEMI E4: SEMI Equipment Communications Standards 1 Message Transfer ( SECS-I )
- SEMI E37.1: High-speed SECS Message Service Single Selected-Session Mode (HSMS-SS)
- SEMI E5: SEMI Equipment Communications Standards 2 Message Content (SECS-II)
- SEMI E30: Generic Model for Communications and Control of Manufacturing Equipment (GEM)

## Software Functionalities (configurable with X-CHANGE)

- SECS-I or HSMS communication protocol
- Fundamental GEM scenarios
- Status Variables ( SV ) ; Equipment Constants ( EC ) ; Discrete Variable Values ( DVVAL )
- Collection Events; Reports
- Alarms; Spooling; Terminal Services; Trace Management
- Process Program Management; Remote Control (Remote Commands)
- Limit Monitoring (with some additional programming)
- Non-GEM Stream Functions

#### **Equipment Controller Interface**

- Programming of a .NET user application (on the same PC that X-PORT is installed)
- Handling of SECS Messages for:
  - .NET Callback Event (covering Communication/Control Statuses)
  - Terminal Messages & Remote Commands from Host
- Feeding of equipment data to X-PORT via API calls such as SetSV(), SetEC() and SetDV()



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