

CELL CONTROLLER

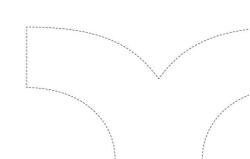
Station Controller Software (SEMI Standards E4, E5, E30 & E37.1)

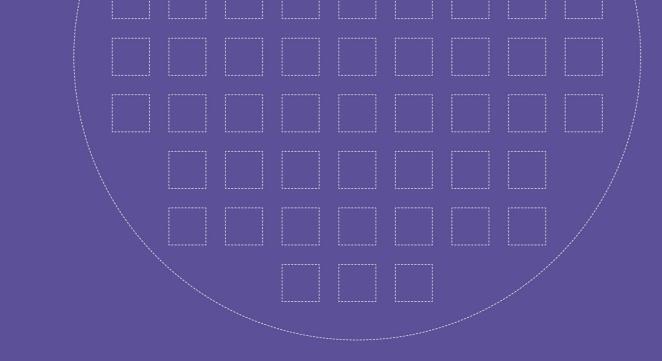
X-CELL is a generic cell controller software for making equipment connections to physical machines which are compliant with SEMI E4, E37.1, E5 and/or E30 standards.

X-CELL is ready to connect with any GEM compliant equipment by using the generic "GEM Machine" module that comes provided. Using .NET languages (C# and/or VB), an equipment-type module can be created and customized, so that any SECS messages in any scenario can be handled.

X-CELL comes with a GUI for secured access to manage users and equipment-connections as well as monitor SECS/GEM transactions "on-screen". SECS logs and traces are available at the controller level as well as on an individual equipment-connection basis.







Specifications

Installation Requirements

- Windows 7 Professional with .NET 4.x; 2GB RAM (minimum)
- Windows 8 & 10 Professional (32 & 64 bit); 4GB RAM (minimum)

Programming Environment & Data Storage

- Visual Studio 2008 or newer, with VB and/or C# (Necessary for the customization of equipment-type module, if required)
- By design, X-CELL stores information in SQLite database. However, the equipment modules can be easily modified
 to make use of of any preferred commercial database for storage purpose.

SEMI Standards Compliance

X-CELL adheres strictly to the following 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)

XML Standards Compliance

X-CELL describes SECS message body using a general notation called SECS extensible Markup Language (SXML) which
is developed by XYsoft. SXML is similar to the SML notation used in the SECS Standards documents but is based on the
XML syntax which is widely used.

Data Type Support

The following data types (SXML notation in parenthesis) are supported by X-CELL:

- Binary (B); Boolean (BOOL); ASCII (A)
- 1-byte signed integer (I1); 2-byte signed integer (I2); 4-byte signed integer (I4); 8-byte signed integer (I8)
- 1-byte unsigned integer (U1); 2-byte unsigned integer (U2); 4-byte unsigned integer (U4);
 8-byte unsigned integer (U8)
- 4-byte floating point (F4); 8-byte floating point (F8)

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