

# SEMI E170.1-0215

## SPECIFICATION FOR SECS-II PROTOCOL FOR PRODUCTION RECIPE CACHE

This Standard was technically approved by the Information & Control Global Technical Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on February 10, 2015. Available at [www.semiviews.org](http://www.semiviews.org) and [www.semi.org](http://www.semi.org) in February 2015.

### 1 Purpose

1.1 The purpose of this Standard is to provide a mapping of the services and data of SEMI E170, Specification for Production Recipe Cache to SECS-II message protocol.

### 2 Scope

2.1 The scope of this Standard is to map the services and data of SEMI E170 to SECS-II streams, functions, and items.

**NOTICE:** SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

### 3 Referenced Standards and Documents

#### 3.1 SEMI Standards and Safety Guidelines

SEMI E5 — SEMI Equipment Communications Standard 2 Message Content (SECS-II)

SEMI E30 — Generic Model for Communications and Control of Manufacturing Equipment (GEM)

SEMI E39 — Object Services Standard: Concepts, Behavior, and Services

SEMI E39.1 — SECS-II Protocol for Object Services Standard (OSS)

SEMI E40 — Standard for Processing Management

SEMI E170 — Specification for Production Recipe Cache (PRC)

**NOTICE:** Unless otherwise indicated, all documents cited shall be the latest published versions.

### 4 Terminology

4.1 None.

### 5 Mapping of PEMJ Services

**Table 1 PEMJ Service Messages Mapping**

| Service Message Name | E39 Object Service Message Name | Stream, Function | SECS-II Name                        |
|----------------------|---------------------------------|------------------|-------------------------------------|
| SetPEMJState         | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| GetPEMJState         | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |

### 6 Mapping of PEMJ Parameter

**Table 2 Parameter to SECS-II Data Item Mapping**

| PEMJ Service Parameter | E39 Object Service Message Parameter | Range | SECS-II Data Item |
|------------------------|--------------------------------------|-------|-------------------|
| ---                    | OperationID                          |       | OPID [5()]        |

| PEMJ Service Parameter | E39 Object Service Message Parameter | Range                                                                    | SECS-II Data Item                                                                                                                                                                                     |
|------------------------|--------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ---                    | ObjSpec                              |                                                                          | OBJSPEC [20]                                                                                                                                                                                          |
| ---                    | ObjectAction                         | 'SetPEMJState' or 'GetPEMJState'                                         | SVCNAME [20]                                                                                                                                                                                          |
| ObjID                  | ObjectActionParameter Request        | SPNAME='OBJID'                                                           | L,2<br>1.<SPNAME><br>2. <SPVAL><br><br>SPNAME [20]<br>SPVAL [20] 1-80 characters                                                                                                                      |
| PEMJState              | ObjectActionParameter Result         | SPNAME='PEMJState'<br><br>SPVAL:<br>FALSE for PEM Off<br>TRUE for PEM On | L,2<br>1.<SPNAME><br>2. <SPVAL><br><br>SPNAME [20]<br>SPVAL [11]                                                                                                                                      |
| ---                    | ObjectActionStatus                   |                                                                          | L,2<br>1.<SVCACK><br>2. Status<br><br>SVCACK [10]                                                                                                                                                     |
|                        | Status                               | ERRTEXT:                                                                 | L,n<br>1.L,2<br>1.<ERRCODE <sub>i</sub> ><br>2.<ERRTEXT <sub>i</sub> ><br>:<br>n.L,2<br>1.<ERRCODE <sub>n</sub> ><br>2.<ERRTEXT <sub>n</sub> ><br><br>ERRCODE [5( )]<br>ERRTEXT [20] 1-120 characters |
| ---                    | ObjectLinkID                         |                                                                          | LINKID [54]                                                                                                                                                                                           |

## 7 Mapping of PRCOBJ Services

**Table 3 PRCOBJ Service Messages Mapping**

| PRCOBJ Service Message Name | E39 Object Service Message Name | Stream, Function | SECS-II Name                        |
|-----------------------------|---------------------------------|------------------|-------------------------------------|
| SetPRCAAttributes           | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| GetPRCAAttributes           | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| ClearPRC                    | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| GetRecipeIDList             | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| DeleteRecipe                | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| WriteRecipe                 | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| ReadRecipe                  | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |
| Pre-ExeCheckAck             | ObjectAction                    | S14F19,F20       | Generic Service Request/Acknowledge |