

SEMI E170.1-0416

SPECIFICATION FOR SECS-II PROTOCOL FOR SECURED FOUNDATION OF RECIPE MANAGEMENT SYSTEM

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1 Purpose

1.1 The purpose of this Standard is to provide a mapping of the services and data of SEMI E170, Specification for Secured Foundation Of Recipe Management System 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 Secured Foundation Of Recipe Management System (SFORMS)

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

4 Terminology

4.1 None.

5 Mapping of SRSOBJ Services

Table 1 SRSOBJ Service Messages Mapping

<i>SRSOBJ Service Message Name</i>	<i>E39 Object Service Message Name</i>	<i>Stream, Function</i>	<i>SECS-II Name</i>
GetSRSAtributes	GetAttr	S14F1,F2	GetAttr Request/GetAttr Data
SetSRSSwitch	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
SetPEMFlag	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
ClearClass	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
DeleteRecipe	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
WriteRecipe	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
GetRecipeXIDList	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
ReadRecipe	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
PreSpecifyRecipe	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge

<i>SRSOBJ Service Message Name</i>	<i>E39 Object Service Message Name</i>	<i>Stream, Function</i>	<i>SECS-II Name</i>
PresetRecipeXID	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
Pre-ExeCheck	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
QueryRecipeXIDList	ObjectAction	S14F19,F20	Generic Service Request/Acknowledge
QueryRecipe Event	-	S6F11,F12	Event Report Send/Acknowledge
Pre-ExeCheck Event	-	S6F11,F12	Event Report Send/Acknowledge
QueryRecipeXIDList Event	-	S6F11,F12	Event Report Send/Acknowledge
PostRecipe Event	-	S6F11,F12	Event Report Send/Acknowledge

6 Mapping of SRSOBJ Parameter

Table 2 Parameter to SECS-II Data Items Mapping

<i>SRSOBJ Service Parameter</i>	<i>E39 Object Service Message Parameter</i>	<i>Range</i>	<i>SECS-II Data Item</i>
---	OperationID		OPID [5()]
---	ObjSpec		OBJSPEC [20]
---	ObjectAction	'SetSRSSwitch' 'SetPRMFlag' 'ClearClass' 'DeleteRecipe' 'WriteRecipe' 'GetRecipeXIDList' 'ReadRecipe' 'PreSpecifyRecipe' 'PresetRecipeXID' 'QueryRecipe' 'Pre-ExeCheck' 'QueryRecipeXIDList'	SVCNAME [20]
ObjID for GetSRSAttributes	ObjID	1-80 characters	OBJID
ObjID for other services	ObjectActionParameterRequest		L,2 1.<SPNAME> 2. <SPVAL> SPNAME= 'ObjID' SPVAL 1-80 characters
SRSSwitch	ObjectActionParameterRequest		L,2 1.<SPNAME> 2. <SPVAL> SPNAME= 'SRSSwitch' SPVAL [51] 0=Disabled 1=Enabled

<i>SRSOBJ Service Parameter</i>	<i>E39 Object Service Message Parameter</i>	<i>Range</i>	<i>SECS-II Data Item</i>
PEMFlagList	ObjectActionParameterRequest		L,2 1.<SPNAME> 2. <SPVAL> SPNAME= 'PEMFlagList' SPVAL L, n 1. <PEMFlag ₁ > : n. <PEMFlag _n > PEMFlag _n 0–16 characters 'Conventional', 'Production' or 'Production n'
SecurityID	ObjectActionParameterRequest		L,2 1.<SPNAME> 2. <SPVAL> SPNAME= 'SecurityID' SPVAL 0–16 characters

<i>SRSOBJ Service Parameter</i>	<i>E39 Object Service Message Parameter</i>	<i>Range</i>	<i>SECS-II Data Item</i>
RecipeXIDList	ObjectActionParameterRequest		L,2 1.<SPNAME> 2. <SPVAL> SPNAME= 'RecipeXIDList' SPVAL L, n 1.L,5 1. RecipeID₁ 2. VersionID₁ 3. SecurityID₁ 4. TypeID₁ 5. EquipmentID₁ : - n.L,5 1. RecipeID_n 2. VersionID_n 3. SecurityID_n 4. TypeID_n 5. EquipmentID_n RecipeID=RCPSPEC or PPID VersionID 0–256 characters SecurityID_n L,2 1. 'SecurityID' 2. SecurityID 0–16 characters TypeID 0–16 characters EquipmentID_n L,2 1. 'EquipmentID' 2. EquipmentID 0–256 characters

<i>SRSOBJ Service Parameter</i>	<i>E39 Object Service Message Parameter</i>	<i>Range</i>	<i>SECS-II Data Item</i>
RecipeList	ObjectActionParameterRequest ObjectActionParameterResult		L,2 1.<SPNAME> 2. <SPVAL> SPNAME= 'RecipeList' SPVAL L, n 1.L,6 1. RecipeID₁ 2. VersionID₁ 3. SecurityID₁ 4. TypeID₁ 5. EquipmentID₁ 6. RecipeBody₁ : n.L,6 1. RecipeID_n 2. VersionID_n 3. SecurityID_n 4. TypeID_n 5. EquipmentID_n 6. RecipeBody_n RecipeID=RCPSPEC or PPID VersionID 0–256 characters SecurityID_n L,2 1. 'SecurityID' 2. SecurityID 0–16 characters TypeID 0–16 characters EquipmentID_n L,2 1. 'EquipmentID' 2. EquipmentID 0–256 characters RecipeBody User defined
CheckInformation	ObjectActionParameterRequest		L,2 1. <SPNAME> 2. <SPVAL> SPNAME= 'CheckInformation' SPVAL User defined

<i>SRSOBJ Service Parameter</i>	<i>E39 Object Service Message Parameter</i>	<i>Range</i>	<i>SECS-II Data Item</i>
Pre-ExeCheckResult	ObjectActionParameterRequest		L,2 1. <SPNAME> 2. <SPVAL> SPNAME= 'Pre-ExeCheckResult' SPVAL [51] 0=OK 1=NG
SetSRSSwitchResp	ObjectActionParameterRequest		L,2 1. <SPNAME> 2. <SPVAL> SPNAME= 'SetSRSSwitchResp' SPVAL [51] 0=OK 1=NG
SetPEMFlagResp	ObjectActionParameterResult		L,2 1. <SPNAME> 2. <SPVAL> SPNAME= 'SetPEMFlagResp' SPVAL [51] 0=OK 1=NG
ClearClassResp	ObjectActionParameterResult		L,2 1. <SPNAME> 2. <SPVAL> SPNAME= 'ClearClassResp' SPVAL [51] 0=OK 1=NG
DeleteRecipeResp	ObjectActionParameterResult		L,2 1. <SPNAME> 2. <SPVAL> SPNAME= 'DeleteRecipeResp' SPVAL [51] 0=OK 1=NG

<i>SRSOBJ Service Parameter</i>	<i>E39 Object Service Message Parameter</i>	<i>Range</i>	<i>SECS-II Data Item</i>
WriteRecipeResp	List of ObjectActionParameterResult	List of RecipeTransferResult List of EachRecipeTransfer	L,2 1.L,2 1. <SPNAME> 2. <SPVAL> 2.L,n 1.L,2 1. <SPNAME ₁ > 2. <SPVAL ₁ > : n.L,2 1. <SPNAME _n > 2. <SPVAL _n > SPNAME='RecipeTransferResult' SPNAME _n ='EachRecipeTransfer' SPVAL [51] 0=Done 1=Error 2=Full SPVAL _n [51] 0=OK 1=NG
RecipeCheckNotifResp	List of ObjectActionParameterResult		L,n 1.L,2 1. <SPNAME ₁ > 2. <SPVAL ₁ > : n.L,2 1. <SPNAME _n > 2. <SPVAL _n > SPNAME _n ='EachRecipeCheck' SPVAL _n [51] 0=OK 1=NG
GetRecipeXIDListResp	ObjectActionParameterResult		L,2 1. <SPNAME> 2. <SPVAL> SPNAME='GetRecipeXIDListResp' SPVAL [51] 0=OK 1=NG