

SEMI E58.1-0697 (Reapproved 0703) SECS-II PROTOCOL FOR AUTOMATED RELIABILITY, AVAILABILITY, AND MAINTAINABILITY STANDARD (ARAMS): CONCEPTS, BEHAVIOR, AND SERVICES

This standard was technically approved by the Global Information & Control Committee and is the direct responsibility of the North American Information & Control Committee. Current edition approved by the North American Regional Standards Committee on April 11, 2003. Initially available at www.semi.org May 2003; to be published July 2003. Originally published June 1997.

1 Purpose

1.1 This document maps the services and data of the Automated Reliability, Availability, and Maintainability Standard (ARAMS) to SECS-II streams and functions and data definitions.

2 Scope

2.1 This document applies to all implementations of ARAMS that use the SECS-II message protocol (SEMI E5).

NOTICE: This standard does not purport to address safety issues, if any, associated with its use. It is the responsibility of the users of this standard to establish appropriate safety and health practices and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards

3.1 SEMI Standards

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

SEMI E10 — Specification for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM)

SEMI E58 — Automated Reliability, Availability and Maintainability Standard (ARAMS): Concepts, Behavior, and Services

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

4 Services Mapping

4.1 Table 1 shows the specific SECS-II streams and functions that shall be used for SECS-II implementations of the services defined in ARAMS.

4.2 The ARAMSStateChange service may be mapped either to S2,F41/F42 or to S2,F49/F50 or both. The equipment supplier is required to document the mapping used.

Table 1 Services Mapping Table

Message Name	Stream, Function	SECS-II Message Name
ARAMSStateChange	S2,F41/F42 S2,F49/F50	Host Command Send/Acknowledge Enhanced Remote Command/Acknowledge
ResetAccumulators	S2,F41/F42 S2,F49/F50	Host Command Send/Acknowledge Enhanced Remote Command/Acknowledge
TableSend	S13,F13/F14	Table Data Send/Acknowledge
TableRequest	S13,F15/F16	Table Data Request/Table Data

5 Service Parameter Mapping

5.1 Table 2 shows the mapping between service parameters defined by ARAMS and the data items defined by SEMI E5. An additional mapping for the ARAMSStateChange and ResetAccumulators services is shown in Table 4 below.

Table 2 Service Parameter Mapping Table

<i>Parameter Name</i>	<i>SECS-II Data Item</i>
AttrData	ATTRDATA
AttrName	ATTRID
ColHdr	COLHDR
ErrorCode	ERRCODE
ErrorText	ERRTEXT
ObjSpec	OBJSPEC
RequestStatus	HACK
TableAck	TBLACK
TableCmd	TBLCMD
TableElem	TBLELT
TableID	TBLID
TableType	TBLTYP

5.2 Table 3 shows the data items in SECS-II messages that do not have a corresponding service parameter.

Table 3 Additional Data Item Requirement Table

<i>Function</i>	<i>SECS-II Data Item</i>
Used to satisfy SECS-II conventions for linking a multi block inquiry with subsequent multilock message.	DATAID
Used by S2F41 and S2F49 to indicate the ARAMSStateChange Service.	RCMD="ARAMSStateChange"
Used by S2F41 and S2F49 to indicate the ResetAccumulators Service.	RCMD="ResetAccumulators"

NOTE: The text strings specified in Table 3 for RCMD shall be recognized by the equipment, whether the equipment is or is not case-sensitive.

5.3 Table 4 provides the parameter mapping for the ARAMSStateChange and the S2,F41 and S2,F49 messages.

Table 4 Service Parameter Mapping (S2F41 and S2F49)

<i>Parameter Name</i>	<i>CPNAME</i>	<i>CPVAL/CEPVAL (Form)</i>
ARAMSCode	"ARAMSCode"	Text, 4 characters
ObjSpec	"ObjSpec"	Text. Conforms to data item OBJSPEC. NOTE: in S2,F49, ObjSpec maps directly to the data item OBJSPEC.
SymptomID	"SympID"	Unsigned integer
SymptomText	"SympText"	Text, 0–80 characters

NOTE: The text strings specified in Table 4 for CPNAME shall be recognized by the equipment, whether the equipment is or is not case-sensitive.