30. Loading Module Management Format

30.1 Loading Module Placement

30.1.1 Loading Module Storage Order

name [Loading Module Storage Order]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0			Loading Module Management Frame	(1)	c
2	free			Loading Module Code	(2)	c

(1) If there is no loading module code, there is no loading module management frame either.

(2) The size of the loading module code is an integer multiple of the block size.

30.1.2 Relationships Between the Loading Module Management Frame and Module Code

The following chart shows the relationships between the loading module management frame and code.

Management Frame			Code
Number of Accommodated Systems (n)			
System Identification Information #1	Manufacturer identifier #1		
	Number of Accommodated modules (m1)		
:	:		
System Identification Information #n	Manufacturer Identifier #n		
	Number of Accommodated Modules (mn)		
System Management Information #1	Module Identification Information #1		
	Module Identification Information #2		
	:		
	Module Identification Information #m1		
	Module Management Information #1	→	Module Code #1
	Module Management Information #2	→	Module Code #2
	:		:
	Module Management Information #m1	→	Module Code #m1
:	:		
:	:		
:	:		
System Management Information #n	Module Identification Information #1		
	Module Identification Information #2		
	:		
	Module Identification Information #mn		
	Module Management Information #1	→	Module Code #1
	Module Management Information #2	→	Module Code #2
	:		:
	Module Management Information #mn	→	Module Code #mn

30.2 Loading Module Management Frame

name [Loading Module Management Frame]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0	2	N	Number of Accommodated Systems (n)	(1)	a
2	2	2		(RESERVED)		
3	4	B1		A Sequence of System Identification Information (#1 to #n)		a
4	O1	B2		A Sequence of System Management Information (#1 to #n)		a

(1) This field describes the number of accommodated systems.

30.2.1 System Identification Information

name [System Identification Information]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0	12	MID	Manufacturer Identifier		a
2	12	2	N	Number of Accommodated Modules (mn)	(1)	a
3	14	2		(RESERVED)		

(1) This field describes the number of accommodated modules for each manufacturer identifier.

30.2.2 System Management Information

name [System Management Information]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0	B1		A Sequence of Module Identification Information (#1 to #mn)		a
2	O1	B2		A Sequence of Module Management Information (#1 to #mn)		a

30.2.2.1 Module Identification Information

This table holds the information necessary to identify a module.

name [Module Identification Information]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0	1	N:N::N	Module Category		a
2	1	3		(RESERVED)		
3	4	52	C	Module Name	(1)	a
4	56	8	C	Module Version Number	(2)	b

(1) This field describes the name of the module.

(2) This field describes the version number of the module.

30.2.2.1.1 Module Category

name [Module Category]

No.	Bit	Description				Remarks	Classification
1	7	Diagnostic Service Module flag	Bit 7			(1)	a
			0	Not diagnostic service module			
			1	Diagnostic service module			
2	6	Test Module Flag	Bit 6			(2)	a
			0	Not test module			
			1	Test module			
3	5 to 2	(RESERVED)					
4	1 to 0	Module Category Flag	Bit 1	Bit 0		(3)	a
			0	0	Initial program		
			0	1	Program		
			1	0	Library		
			1	1	Data		

(1) The term "diagnostic service module" generically refers to any module used in troubleshooting after shipment. The operation of diagnostic service modules is not guaranteed to users.

(2) The term "test module" generically refers to any module used in development, manufacturing, and inspection. The operation of test modules is not guaranteed to users.

(3) The term "initial program" refers to a program for which the system performs the following:

1) If an initial program has a version number that is greater than that held in the system, it is loaded to the hot start point of the system.

2) The program is hot-started.

3) A search is made for module identification information again, and steps 1) and 2) are repeated for all initial programs that are supported by the system.

The term "program" refers to any non-initial program.

30.2.2.2 Module Management Information

This table holds information necessary to manage modules.

name [Module Management Information]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0	2	N	Date when the function of the module becomes valid	(1)	b
2	2	2	N	Date when the function of the module becomes invalid	(2)	b
3	4	64	CC	Module Title	(3)	b
4	68	182		Manufacturer-dependent Information	(4)	b
5	250	4	DSA	Address of the Module Code	(5)	a
6	254	2	BS	Size of the Module Code	(6)	a

(1) This field describes the date on which the function of the module becomes valid. The date is represented with the number of days counted from January 1, 1997 as day 0 based on the UTC. The item shall be set with "00(16)" if no date is specified.

(2) This field describes the date on which the function of the module becomes invalid. The date is represented with the number of days counted from January 1, 1997 as day 0 based on the UTC. The item shall be set with "00(16)" if no date is specified.

(3) This field is used to shows the description of the module to the user.

(4) This field is used by the manufacturer of the module to indicate information specific to the manufacturer.

(5) This field describes the storage position of the code (if there is) of the module. It is valid only when the module has the code.

(6) This field holds a value (rounded up) obtained by dividing the size of the code of the module by the block size. It is valid only when the module has the code.

30.3 Loading Module Code

name [Loading Module Code]

No.	Offset	Data length	Data type	Item name	Remarks	Classification
1	0	B1		A Sequence of Loading Module Codes		a

30.3.1 Loading Module Code

This area holds loading module codes.

The area size must be an integer multiple of the block size.