

General Comments

The definitions of the Port Speed Capabilities and Port Operating Speeds are inconsistent and cannot be implemented as described in FC-GS-7.

Detailed description of Comments

The definitions of the Port Speed Capabilities and Port Operating Speed are described as 2-byte entities. These attributes are augmented with “Extended” attributes of an additional 2-bytes in order to describe higher data rate capabilities, which effectively define the Port Speed Capabilities and Port Operating Speed attributes as 4-byte values (32-bits).

Given that the GPSC Accept payload provides only 2-bytes for each attribute, the full definition of the attribute cannot be included in the payload. That is, either the Port Speed Capabilities or the Extended Port Speed Capabilities values can be provided, but not both. The same issue applies to the Port Operating Speed and the Extended Port Operating Speed. Furthermore, there are no mechanisms supplied to describe the values for the attributes to allow the receiver to determine which values are reported in the payload (i.e. speed or “Extended” speed).

It is recommend that these attribute definitions be made consistent with the GPSC Accept definition.

Clause 6.2.3.3.8

The Port Speed Capabilities definition (see clause 6.2.3.3.8) defines the Port Speed Capabilities Format as two 2-byte fields. The first field defines the Port Speed Capabilities and the second field defines the Extended Port Speed Capabilities.

Table 126 – Port Speed Capabilities Format

Item	Size (Bytes)
Port Speed Capabilities	2
Extended Port Speed Capabilities	2

Table 127 describes the values of the Port Speed Capabilities as 16-bit values and Table 128 describes the values of the Extended Port Speed Capabilities as 16-bit values.

Clause 6.2.3.3.9

The Port Operating Speed definition (see clause 6.2.3.3.9) defines the Port Operating Speed Format as two 2-byte fields. The first field defines the Extended Port Operating Speed and the second defines the Port Operating Speed.

Table 129 – Port Operating Speed Format

Item	Size (Bytes)
Extended Port Operating Speed	2
Port Operating Speed	2

Table 130 describes the values of the Port Operating Speed as 16-bit values and Table 131 describes the values of the Extended Port Operating Speed as 16-bit values.

Clause 6.2.5.16

The Accept CT_IU payload for the Get Port Speed Capabilities command provides a response structure that includes two fields of 2-bytes each for the Port Speed Capabilities and the Port Operating Speed (see clause 6.2.5.16):

Table 177 – GPSC Accept CT_IU

Item	Size (Bytes)
CT_IU preamble	see 4.3
Port Speed Capabilities	2
Port Operating Speed	2

Clause 6.8.3.7.2.1

The Physical Port Object Attribute Entry Types describe the Port Speed Capabilities and the Port Operating Speed as values of 2-byte lengths.

Table 457 – Physical Port Object Attribute Entry Types and their associated Values

Tag (hex)	Description	Value			
		Length (Bytes)	Data Type	Required	Multiples allowed ^a
0001	Correlatable Identifier	1 to 255	ASCII	Yes	No
0002	Transport Type	1	Binary	Yes	No
0003	Name	8	Binary	No	Yes
0004	TX Type	1	Binary	Yes	No
0005	Module Type	1	Binary	No	No
0006	Physical Port Number	4	Binary	No	Yes
0007	Port State	2	Binary	Yes	No
0008	Port Speed Capabilities	2	Binary	Yes	No
0009	Port Operating Speed	2	Binary	Yes	No
0010	Physical Location	1 to 255	ASCII	No	No
0011	Parallel Lane Supported	1	Binary	Yes	No
0012	Parallel Lane Operational	1	Binary	Yes	No
0013	Parallel Lane Only	1	Binary	Yes	No
other values	Reserved				

^a If a Physical Port Attribute Block contains multiple types for a type that does not allow multiples the command shall be rejected with a reason code of 'Unable to perform command request' and a reason code explanation of 'Physical Port Object Attribute Block Contains Multiple Attributes of the Same Type'.

Clause 6.8.3.7.2.9

The Physical Port Object Port Speed Capabilities attribute is defined as a value of size 4-bytes (see clause 6.8.3.7.2.9, table 463).

Table 463 – Port Speed Capabilities Format

Item	Size (Bytes)
Port Speed Capabilities	4

Clause 6.8.3.7.2.10

The Physical Port Object Port Operating Speed attribute is defined as a value of size 4-bytes (see clause 6.8.3.7.2.10, table 465).

Table 465 – Port Operating Speed Format

Item	Size (Bytes)
Port Operating Speed	4

Resolution

GPSC Accept Payload

As currently defined, the GPSC Accept payload provides only 2-bytes to report the Port Speed Capabilities and 2-bytes Port Operating Speed. Consequently, the Extended Port Speed Capabilities and the Extended Port Operating Speed cannot be included in the payload. It is, therefore, recommended to

remove the definitions for the Extended Port Speed Capabilities and the Extended Port Operating Speed. This recommendation affects clause 6.8.3.3.8, tables 126 and 128 and clause 6.8.3.3.9, tables 129 and 131.

Physical Port Object Attribute Entry Types

As currently defined, the Physical Port Object Attribute Entry Types descriptions for the Port Speed Capabilities and the Port Operating Speed are specified as 2-byte lengths, but the definitions for the Port Speed Capabilities and Port Operating Speed attributes are specified as 4-byte lengths. It is recommended that the lengths for the Port Speed Capabilities and Port Operating Speed in the Physical Port Object Attribute Entry Types be changed to 4-bytes. This recommendation affects clause 6.8.3.7.2.1, table 457.

It is further recommended that the Port Speed Capabilities and Port Operating Speed attribute values defined in the Enhanced Fabric Configuration Server be consistent with the values for Port Speed Capabilities and Port Operating Speed in the Fabric Configuration Server. This recommendation affects clause 6.8.3.7.2.9, table 464 and clause 6.8.3.7.2.10, table 466.

Editor's Instructions

1. Clause 6.2.3.3.8
 - a. Replace "Extended Port Speed Capabilities" with "Reserved" in table 126
 - b. Delete table 128.
2. Clause 6.2.3.3.9
 - a. Replace "Extended Port Operating Speed" with "Reserved" in table 129.
 - b. Delete table 131.
3. Clause 6.8.3.7.2.1
 - a. Change "Port Speed Capabilities" length value from 2 to 4.
 - b. Change "Port Operating Speed" length value from 2 to 4.
4. Clause 6.8.3.7.2.9
 - a. Change the bits for the "Reserved" values from 13-1 to 17-1 in table 464 of the Port Speed Capabilities field bits
 - b. Remove the definitions for bits 14-17 in table 464
5. Clause 6.8.3.7.2.10
 - a. Change the bits for the "Reserved" values from 13-2 to 17-2 in table 466 of the Port Operating Speed field bits
 - b. Remove the definitions for bits 14-17 in table 466