

6.2.3.3.7 Port State

The values of the Port State attribute shall be as shown in table 125.

Table 125 – Port State encoding

Encoded value (hex)	Description
00	Unknown
01	Online - a frame may be passed through the FC_Port
02	Offline - a frame is not able to be passed through the FC_Port
03	Testing - FC_Port is in a test state
04	Fault - FC_Port is not operational
E0-FF	Vendor specific
all others	Reserved

This standard does not define how this attribute is registered with the Fabric Configuration Server. The null Port State attribute value is set to 'Unknown'.

6.2.3.3.8 Port Speed Capabilities

The Port Speed Capabilities field identifies the data transfer rate capabilities of the LCF within the FC_Port. The format of the Port Speed Capabilities attribute shall be as shown in table 126.

Table 126 – Port Speed Capabilities Format

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

All the LCF's potential data transfer speed operating points are indicated by setting the appropriate bit to one. More than one bit may be set at a time. Valid bits are as shown in table 127 and ~~table 128~~.

Table 127 – Port Speed Capabilities field bits

Bit Position	Description
15	1 GFC
14	2 GFC
13	4 GFC
12	10 GFC ^a
11	8 GFC
10	16 GFC
9	20 GFC
8	32 GFC
7	40 GFC ^a
6	10 GE
5	40 GE
4	100 GE
3	128 GFC
2	25 GE
1	Reserved
0	Unknown

^a Legacy implementations may have used this bit for Ethernet.

Table 128 – ~~Extended Port Speed Capabilities field bits~~

Bit Position	Description
15	50 GE
14	400 GE
13	64 GFC
12	256 GFC
11-0	Reserved

6.2.3.3.9 Port Operating Speed

The Port Operating Speed field identifies the current operating data transfer rate of the LCF within an FC_Port. The format of the Port Operating Speed attribute shall be as in table 129.

Table 129 – Port Operating Speed Format

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

When a bit is set to one, it indicates the LCF is operating at the designated speed. Only one bit shall be set at a time. If the operating speed has not been established, then the “Speed not established” bit is set to one. If the LCF’s operating speed isn’t identifiable, then the “Unknown” bit is set to one. Valid bits are as shown in table 130 ~~and table 131~~.

Table 130 – Port Operating Speed field bits

Bit Position	Description
15	1 GFC
14	2 GFC
13	4 GFC
12	10 GFC ^a
^a Legacy implementations may have used this bit for Ethernet.	

Table 130 – Port Operating Speed field bits(Continued)

Bit Position	Description
11	8 GFC
10	16 GFC
9	20 GFC
8	32 GFC
7	40 GFC ^a
6	10 GE
5	40 GE
4	100 GE
3	128 GFC
2	25 GE
1	Unknown
0	Speed not established
^a Legacy implementations may have used this bit for Ethernet.	

Table 131 – ~~Extended Port Operating Speed field bits~~

Bit Position	Description
15	50 GE
14	400 GE
13	64 GFC
12	256 GFC
11-0	Reserved

6.8.3.7.2 Physical Port Object Attributes

6.8.3.7.2.1 Overview

The Physical Port Object Attribute Entry Types and their associated values are depicted in table 457.

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

Tag (hex)	Value				
	Description	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	4 2	Binary	Yes	No
0009	Port Operating Speed	4 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".

6.8.3.7.2.2 Physical Port Object Correlatable Identifier attribute

A printable ASCII string, terminated with a null (00h), that uniquely identifies the Physical Port Object.

This standard does not define how this attribute is registered with the Enhanced Fabric Configuration Server. The contents of the Physical Port Object Correlatable Identifier shall not be restricted by the Enhanced Fabric Configuration Server.

All the LCF's potential data transfer speed operating points are indicated by setting the appropriate bit to one. More than one bit may be set at a time. Valid bits are as shown in table 464.

Table 464 – Port Speed Capabilities field bits

Bit Position	Description
31	1 GFC
30	2 GFC
29	4 GFC
28	10 GFC ^a
27	8 GFC
26	16 GFC
25	20 GFC
24	32 GFC
23	40 GFC ^a
22	10 GE
21	40 GE
20	100 GE
19	128 GFC
18	25 GE
17	50 GE
16	400 GE
15	64 GFC
14	256 GFC
13 -1	Reserved
0	Unknown
^a Legacy implementations may have used this bit for Ethernet.	

6.8.3.7.2.10 Physical Port Object Port Operating Speed attribute

The Port Operating Speed field identifies the current operating data transfer rate of the LCF within an FC_Port. The format of the Port Operating Speed attribute shall be as in table 465.

Table 465 – Port Operating Speed Format

Item	Size (Bytes)
Port Operating Speed	4

When a bit is set to one, it indicates the LCF is operating at the designated speed. Only one bit shall be set at a time. If the operating speed has not been established, then the “Speed not established” bit is set to one. If the LCF’s operating speed isn’t identifiable, then the “Unknown” bit is set to one. Valid bits are as shown in table 466.

Table 466 – Port Operating Speed field bits

Bit Position	Description
31	1 GFC
30	2 GFC
29	4 GFC
28	10 GFC ^a
27	8 GFC
26	16 GFC
25	20 GFC
24	32 GFC
23	40 GFC ^a
^a Legacy implementations may have used this bit for Ethernet.	

Table 466 – Port Operating Speed field bits(Continued)

Bit Position	Description
22	10 GE
21	40 GE
20	100 GE
19	128 GFC
18	25 GE
17	50 GE
16	400 GE
15	64 GFC
14	256 GFC
13-2	Reserved
1	Unknown
0	Speed not established
^a Legacy implementations may have used this bit for Ethernet.	

6.8.3.7.2.11 Physical Port Object Physical Location attribute

The Physical Location is a printable ASCII string, terminated with a null (00h), that is a label for a port supporting administrative identification.

This standard does not define how the attribute is registered with the Enhanced Fabric Configuration Server.

6.8.3.7.2.12 Physical Port Object Parallel Lane Supported attribute

If the Physical Port Object Parallel Lane Supported attribute is set to one, then:

- a) this physical port supports parallel lanes (see FC-FS-4); and
- b) the Physical Port Object Parallel Lane Operational attribute and the Physical Port Object Parallel Lane Only attribute are used to indicate the parallel lane operational mode of this physical port.

If the Physical Port Object Parallel Lane Supported attribute is set to zero, then:

- a) this physical port does not support parallel lanes; and
- b) the Physical Port Object Parallel Lane Operational attribute and the Physical Port Object Parallel Lane Only attribute are not meaningful.