

USB4 1.0 ENGINEERING CHANGE NOTICE FORM

Title: Thunderbolt 3 VSEC6 Common Region
Applied to: USB4 Specification Version 1.0

Brief description of the functional changes:

The Common Region description is updated not to include the VSEC6 header DWs. The Common Region is part of the VSEC6 in the Router CS of a USB4 Device that is a TBT3 compatible.

Benefits as a result of the changes:

Accurate description of the eco system and the HW requirement for a USB4 device which is a TBT3 compatible.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
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None.

An analysis of the hardware implications:
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Implement the VSEC6 in the Router CS.

An analysis of the software implications:
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An analysis of the compliance testing implications:
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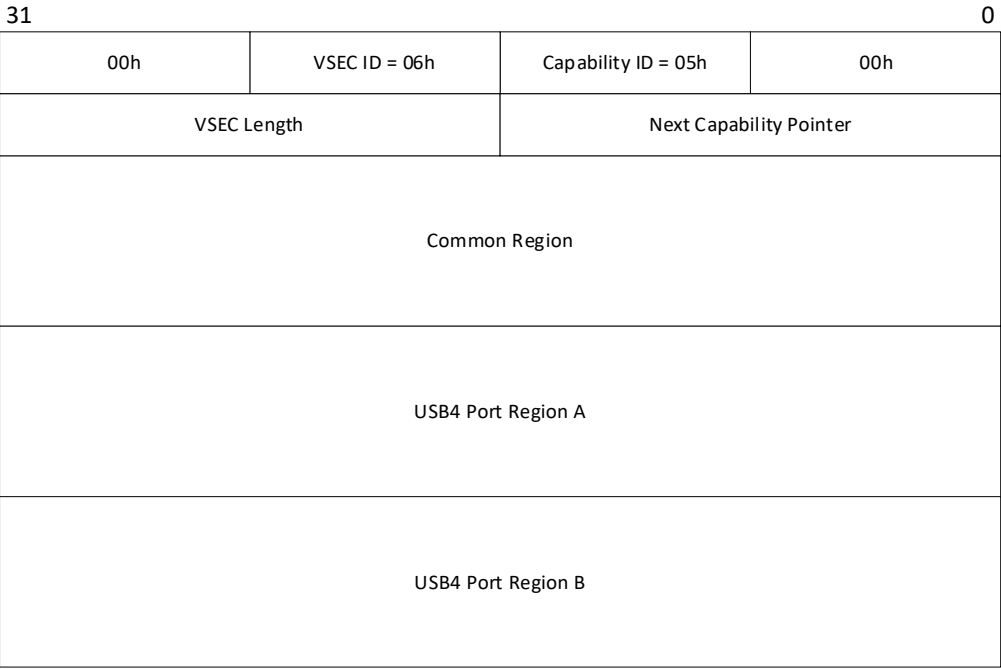
None.

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Actual Change

A Vendor Specific Extended 6 Capability shall have the structure depicted in Figure 13-6 and the fields defined in Section 13.6.1.5.1 and Section 13.6.1.5.2.

Figure 13-6 Structure of the Vendor Specific Extended 6 Capability

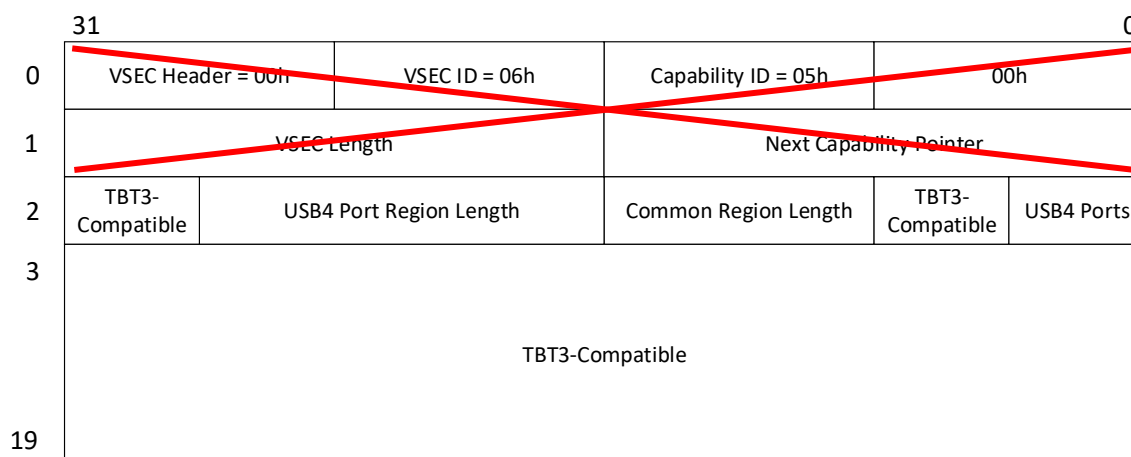


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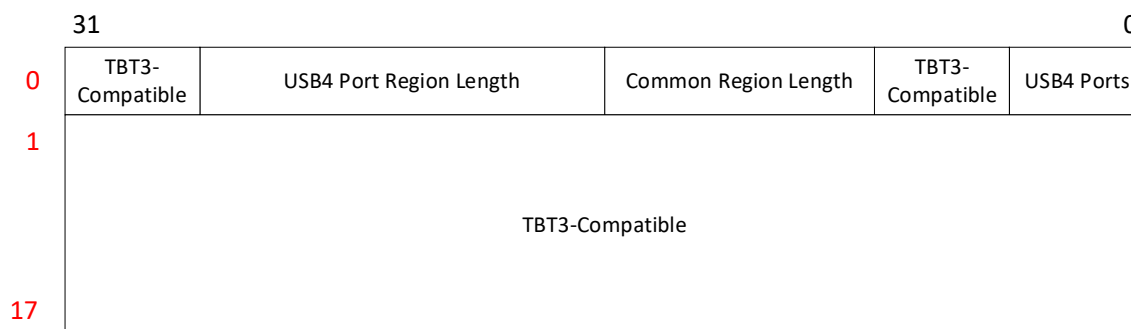
(a). Figure 13-7. Structure of the Common Region

Remove the first two DWs from the Common Region description as it is already described in the previous section.

From:



TO:



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(b). Table 13-18. Common Region Fields

Table 13-18 Common Region Fields

DW	Register Name	Bit(s)	Field Name and Description	Type	Default Value
0	VSEC_CS_0	7:0	Reserved	Rsvd	00h
		15:8	Capability ID This field shall contain the value 05h indicating this is the start of a Vendor Specific Capability.	RO	05h
		23:16	VSEC ID This field shall contain the value 06h indicating this is a Vendor Specific Extended-6 Capability.	RO	06h
		31:24	VSEC Header This field shall be set to 00h to indicate that the Capability is an Extended Capability.	RO	00h
1	VSEC_CS_1	15:0	Next Capability Pointer This field contains the Doubleword index of the next Capability in Router Configuration Space. It shall be set to 00h if the Vendor Specific Capability is the final Capability in the linked list of Capabilities in Router Configuration Space.	RO	Vendor Defined
		31:16	VSEC Length This field shall contain the total number of Doublewords in the VSEC structure including Doubleword 0, Doubleword 1, and the Vendor Specific Doublewords that follow.	RO	256*(USB4 Ports)+20
20	CAP_STRUC T	3:0	USB4 Ports This field shall contain the number of USB4 Ports supported by the Router. 1h – Single USB4 Port 2h – More than one USB4 Port All other values are reserved.	RO	Vendor Defined
		7:4	TBT3-Compatible	TBT3	0
		15:8	Common Region Length This field shall contain the size (in Doublewords) of the Common Region ± 2 .	RO	14h
		27:16	USB4 Port Region Length This field shall contain the size (in Doublewords) of a single USB4 Port Region.	RO	100h
		31:28	TBT3-Compatible	TBT3	0
3 to 191 to 17		31:0	TBT3-Compatible	TBT3	0