

# USB4 2.0 ENGINEERING CHANGE NOTICE FORM

**Title: Thunderbolt 3 VSEC6 Common Region**  
**Applied to: USB4 Specification Version 2.0**

<b>Brief description of the functional changes:</b>
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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.
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<b>Benefits as a result of the changes:</b>
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Accurate description of the eco system and the HW requirement for a USB4 device which is a TBT3 compatible.
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<b>An assessment of the impact to the existing revision and systems that currently conform to the USB specification:</b>
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None.
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<b>An analysis of the hardware implications:</b>
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Implement the VSEC6 in the Router CS.
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<b>An analysis of the software implications:</b>
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<b>An analysis of the compliance testing implications:</b>
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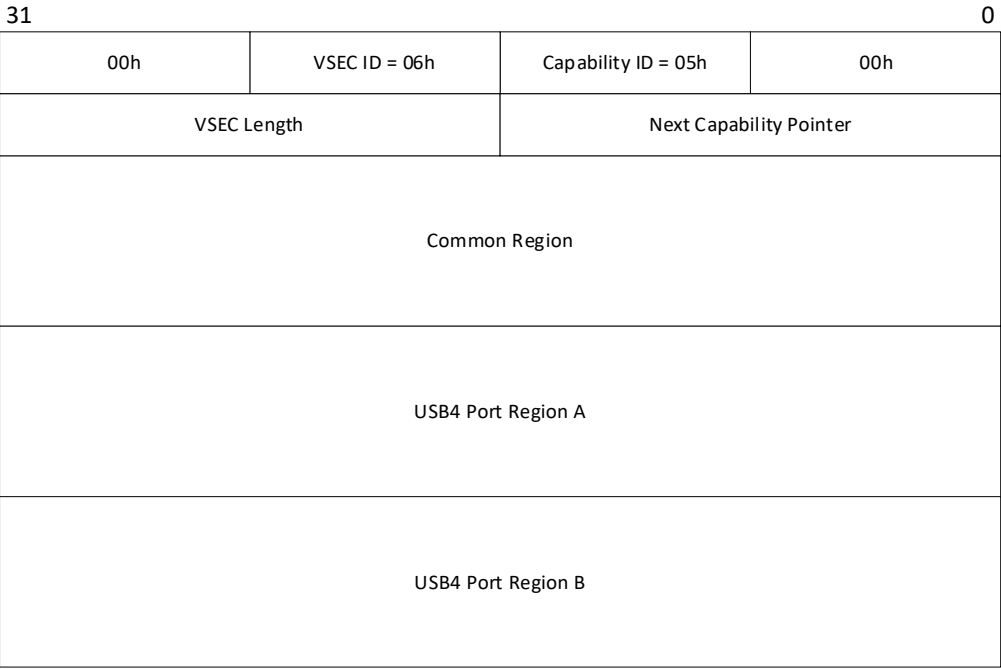
None.
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## Actual Change

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**

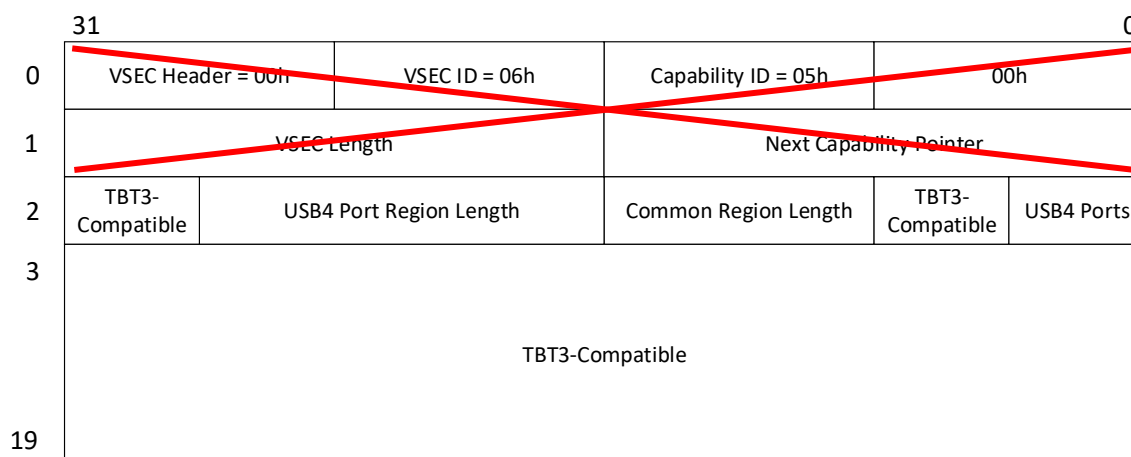


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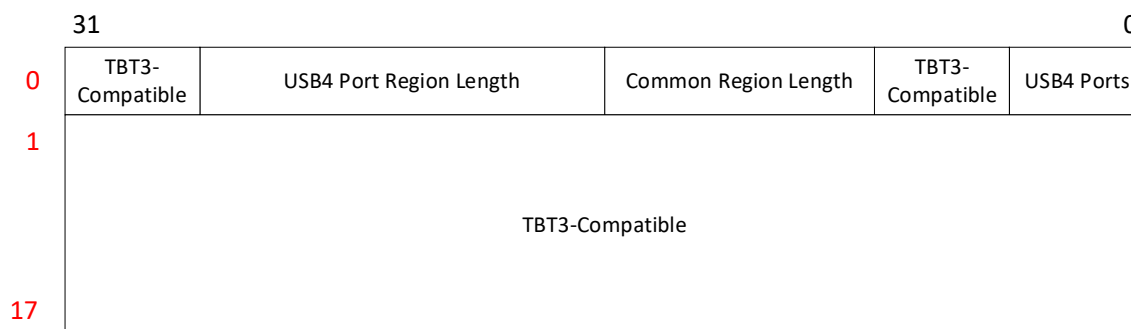
## (a). Figure 13-7. Structure of the Common Region

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

Table13-18 Common Region Fields

DW	Register Name	Bit(s)	Field Name and Description	Type	Default Value
<del>0</del>	<del>VSEC_CS_0</del>	<del>7:0</del>	<del>Reserved</del>	<del>Rsvd</del>	<del>00h</del>
		<del>15:8</del>	<del>Capability ID</del> <del>This field shall contain the value 05h indicating this is the start of a Vendor Specific Capability.</del>	<del>RO</del>	<del>05h</del>
		<del>23:16</del>	<del>VSEC ID</del> <del>This field shall contain the value 06h indicating this is a Vendor Specific Extended 6 Capability.</del>	<del>RO</del>	<del>06h</del>
		<del>31:24</del>	<del>VSEC Header</del> <del>This field shall be set to 00h to indicate that the Capability is an Extended Capability.</del>	<del>RO</del>	<del>00h</del>
<del>1</del>	<del>VSEC_CS_1</del>	<del>15:0</del>	<del>Next Capability Pointer</del> <del>This field contains the Doubleword index of the next Capability in Router Configuration Space.</del> <del>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.</del>	<del>RO</del>	<del>Vendor Defined</del>
		<del>31:16</del>	<del>VSEC Length</del> <del>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.</del>	<del>RO</del>	<del>256*(USB4 Ports)+20</del>
<del>20</del>	CAP_STRUC T	3:0	<b>USB4 Ports</b> 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	<b>TBT3-Compatible</b>	TBT3	0
		15:8	<b>Common Region Length</b> This field shall contain the size (in Doublewords) of the Common Region <u>+2</u> .	RO	14h
		27:16	<b>USB4 Port Region Length</b> This field shall contain the size (in Doublewords) of a single USB4 Port Region.	RO	100h
		31:28	<b>TBT3-Compatible</b>	TBT3	0
<del>3 to 191 to 17</del>		31:0	<b>TBT3-Compatible</b>	TBT3	0