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USB-C ALT-MODE AUTO-DISABLED WITH CPU GTO

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USB-C Alt-mode auto-disabled with CPU GTO

Provide a mechanism to disabled USB-C 3.1 Alt-mode of Flex Port module if a CPU GTO without physical display output ability is detected in the system. A CPU GTO could be detected by BIOS, and USB-C 3.1 Alt-mode of Flex Port module could be disabled through USB Type-C PD controller.

Today, USB-C 3.1 Alt-mode Flex Port module is not limited to be installed with CPU GTO which does not support iGFX output routed to USB-C 3.1 Alt-mode Flex Port module on HP Workstation Z2 G4. Customers would confuse that there is no display output and no response from connected display monitor if their system was installed CPU GTO and USB-C 3.1 Alt-mode Flex Port module both. A service call might be triggered if there was no any messages delivered to customers.

If USB-C 3.1 Alt-mode of Flex Port module is disabled to be USB data-only mode by BIOS (Fig. 2), a warning message (Fig. 1) would pop out in Windows OS via UCSI (USB Type-C Software Interface) to remind customers that USB-C port does not support Alt-mode with display output after customers trying to connect the USB-C port to a DisplayPort monitor. It would be helpful to customers understand that the USB-C 3.1 Alt-mode of Flex Port module is not available with CPU GTO and reduce the confusions leading service calls.

Advantages

- Easy implementation through BIOS update
- Reduce customer’s confusions leading service calls

Table 1

USB-C 3.1 Alt mode Flex Port connected to DP monitor	HP Workstation Z2 G4
CPU GT2/4 installed	Support DP output
CPU GTO installed With Alt-mode enabled	No display and response
CPU GTO installed With Alt-mode disabled	A warning message (Fig. 1) would pop out to remind customers the limitation

Fig. 1

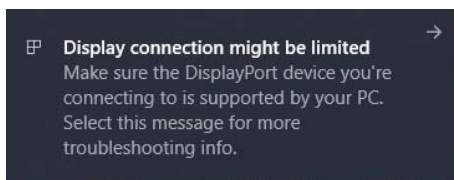
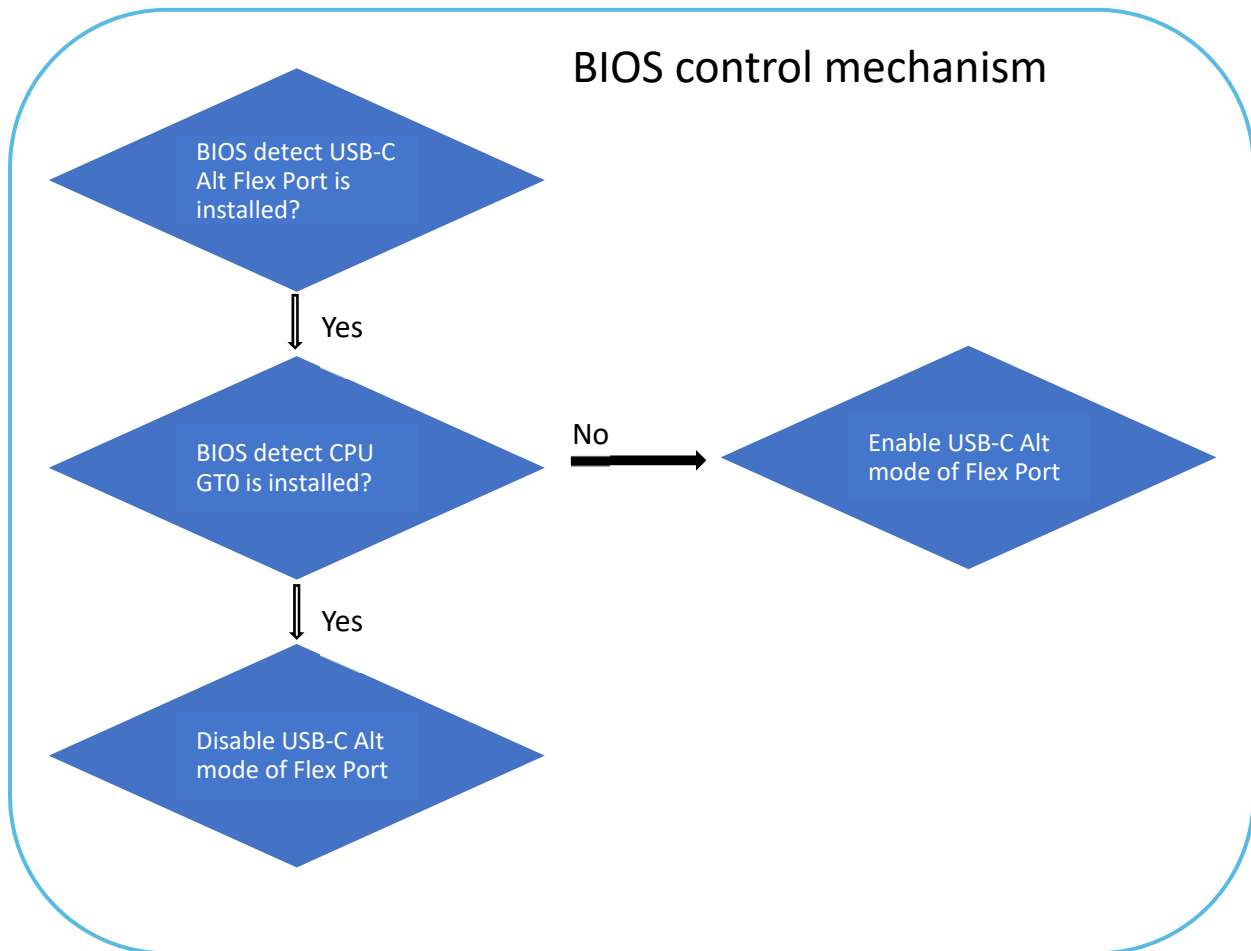


Fig. 2, BIOS control flow chart



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