

Sil7012/Sil7013/Sil7014 USB Type-C Port Controllers

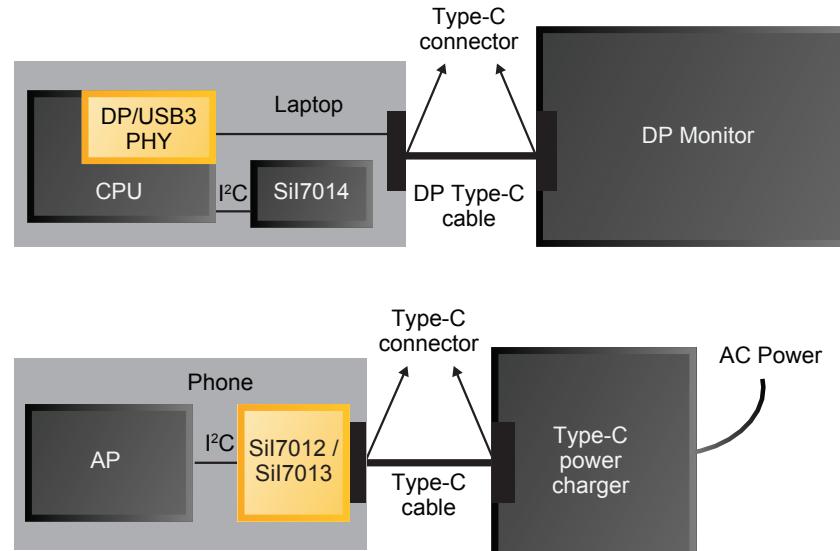
Port Controllers Compliant with USB Type-C 1.1 with Flexible Alt Mode and Unstructured VDM Support

The Sil7012 and Sil7013 port controllers offer a single integrated solution that can detect and decode configuration channel (CC) and biphase mark code (BMC) messaging over USB Type-C connectors without the need for discrete components. These ICs work in conjunction with existing Application Processors (AP) and Embedded Controllers (EC) to provide cost-optimized USB Type-C port controllers. These solutions are compliant with the latest PD and CC requirements defined in the USB specifications and capable of DisplayPort Alt mode and MHL Alt mode support. The Sil7012 comes in a small CSP package suitable for smartphones, whereas the Sil7013's QFN package is ideal for notebooks and accessories. The Sil7014 IC supports the auxiliary channel (AUX) and Hot Plug Detect (HPD) signal required to implement DisplayPort over USB Type-C. In addition, both the Sil7013 and Sil7014 support multiple Type-C ports that are required for notebooks.

Applications	Channel Configuration	Packaging
<ul style="list-style-type: none"> - Mobile phones - Laptops - Dongles - Docks - Monitors 	<ul style="list-style-type: none"> ■ Cable detection ■ Establish and manage DFP & UFP connection 	<ul style="list-style-type: none"> ■ 2 x 2 mm CSP ■ 3 x 3 mm QFN
Key Features	Power Delivery	Deliverables
<ul style="list-style-type: none"> - Role and power swap - DP Alt mode and MHL Alt mode capable - Dead battery support - A complete power profile - Flexible Vendor Defined Message (VDM) - 1.8V logic support for control pins - AUX/HPD support (Sil7014) 	<ul style="list-style-type: none"> ■ BMC messaging ■ Power swap, role swap ■ Vendor Defined Message (VDM) ■ DP and MHL Alternate mode 	<ul style="list-style-type: none"> ■ C-code for Policy Manager ■ C-code for PD stack ■ Platform layer code ■ Silicon solution for PD/CC only
Benefits Summary		
<ul style="list-style-type: none"> - Space, cost and power efficient designs provide flexibility and enable rapid market adoption CC/PD PHY with different feature sets provides application design flexibility. - Integrated solution and simple design - Multiple USB Type-C port support for laptops (Sil7013/Sil7014) 		
Supported Standards		
Compliance		
<ul style="list-style-type: none"> - Type-C 1.1 - PD 2.0 		

Applications Support

techsupport@latticesemi.com



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