PRODUCT CATALOG

DESIGNED FOR YOUR SUCCESS

VIA Labs, Inc.

2024/5

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ABOUT VIA LABS, INC.

VIA Labs, Inc. (VLI), a subsidiary of VIA Technologies, is a leading supplier of USB-related controllers. In the 2024 product catalog, **VLI** expanded its product portfolio to include new DisplayPort video converters and USB Power Delivery controllers featuring the latest EPR standard for up to 240W charging, further strengthening the existing USB4®, SuperSpeed USB, and USB Type-C® product lines. **VLI**'s products suit various applications, from host systems to peripheral devices. With the introduction of certified USB4 and DisplayPort controllers, **VLI** now offers total in-house connectivity solutions for Data, Power, and Video functions.

With a strong track record of bringing new USB technologies and concepts to market, and through participation in standards development and compliance testing, **VLI** has demonstrated technology and industry leadership. **VLI** continues to pay attention to new technology trends and how emerging and existing technologies may overlap. By proactively considering and eliminating potential end-user pain points, **VLI** solutions have been designed to work seamlessly to create a unified platform.

威鋒電子（VIA Labs, Inc., VLI），為威盛集團之子公司，身為 USB 行業領導廠商，致力於 USB 相關晶片之技術發展。在 2024 年產品型錄中，威鋒擴展的產品組合方案包含：最新的 DisplayPort Video Converters 和採用 EPR 標準的 USB PD 晶片，實現高達 240W 的充電功率，進一步強化現有的 USB4®、SuperSpeed USB 和 USB Type-C® 產品線。威鋒產品可廣泛應用於主機端和周邊裝置等，並憑藉具備認證的 USB4 和 DisplayPort 產品，打造完整自有晶片方案，完美串連資料、電源、影像三項功能。

威鋒電子憑藉著新穎的 USB 技術及概念，積極參與 USB-IF 協會標準規格之制定，並取得各項產品標準認證，屢屢證明優異之研發能力和領先地位。威鋒電子持續關注最新科技趨勢，重視新舊科技交疊所帶來之可能性，我們以前瞻眼光不斷致力於消弭使用者痛點、優化應用經驗，讓各項產品在單一架構中完美協用，為客戶帶來良好體驗。

VL716

VL716 Evaluation Board

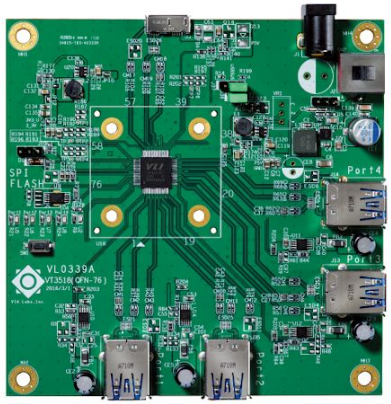
The World's First Single-Chip Native USB-C to SATA Bridge to Achieve USB-IF Certification

VL811+

VL811+ Evaluation Board

The World's First USB3 Hub to Achieve USB-IF Certification

VL820



VL820 Evaluation Board

The World's First USB-IF Certified SuperSpeed USB 10Gbps Hub

VP302
(15W, 18W, 27W)

VP302 Evaluation Board (15W, 18W, 27W)

The World's First USB-IF Certified PD 3.0 with PPS Power Brick

USB-IF KGD / KGH / KGS

VL830 / VL832 ***USB4 End Point Device***

FCCSP 10x10mm

Integrated SuperSpeed USB 10Gbps Hub
Integrated USB Billboard
Supports HID Buttons
HW Support for Digitally Signed Firmware (256-bit ECDSA)
DisplayPort 1.4 Support
* 4-Lane HBR3@USB4 Tunneled Mode
* 2-Lane + USB / 4-Lane UHBR10@10Gbps DP Alt-Mode
Second I2C slave support for IOT application (VL832)

VL600 ***USB-C DP Alt Mode to HDMI 2.0b Protocol Converter***

QFN60 7x7mm

DP 1.4 to HDMI 2.0 Protocol Converter
Integrated 1-Port USB PD 3.0 Supporting DP Alt Mode & USB Billboard
Built-in DSC V1.2a Decoder for Triple Bandwidth
HDCP 2.3 and HDCP 1.4 Repeaters with On-chip Keys

VL605 ***USB-C to HDMI 2.1 Protocol Converter***

QFN68 8x8mm

DP 2.1 HBR3 to HDMI 2.1 Protocol Converter
Integrated 2-Port USB PD 3.1 EPR Controller
Supports DP Alt Mode & USB4 DP Tunneling w/i Charge Through
Secure FW Update
DP 2.1 Source-controlled Mode

USB-C, USB4, PCON

VP226 ***USB-C DFP CC Controller***

DFN10 3x3mm

Selectable USB-C Current Setting
VCONN Switch with OCP
Direction Indication

VP246 ***USB-C UFP CC Controller***

DFN10 3x3mm

USB-C Current Mode Detection
Dead Battery Support
Direction Indication

VL320 ***PD Sink Controller***

QFN20 4x4mm

Supports USB-C & USB PD 3.0
Supports Qualcomm® Quick Charge™ 2.0 Sink
Operating Voltage from 4V to 24V
Supports External NTC for Thermal Protection

Supports USB PD

Supports USB-C ®

VL102
QFN48 6x6mm

DisplayPort Alternate Mode and PD 3.0 Controller

One USB-C UFP and One USB-C DRP DFP
Supports Fast Role Swap
Supports QC-to-PD Charge Through
Crystal-less and Can Share SPI Flash with VLI Hub Controller

VL103
QFN32 5x5mm
QFN48 6x6mm

DisplayPort Alternate Mode with Auto-Standby and PD 3.0 Controller

Auto-Standby for Ultra Low Idle Power
One USB-C UFP and One USB-C DRP DFP
Supports QC-to-PD Charge Through
Crystal-less and Can Share SPI Flash with VLI Hub Controller
Pin-Compatible with VL100-Q3 & VL102-Q4

VL105 / VL105H
QFN60 7x7mm
QFN48 6x6mm

DisplayPort Alternate Mode with Interchangeable DFPs and PD 3.0 Controller

One USB-C UFP and Two USB-C DRP DFPs
Interchangeable USB-C DFPs
* VL105 Supports QC-to-PD Charge Through
* VL105H Supports Huawei SCP/FCP-to-PD Charge Through

USB-C, USB4, PCON

VL107
QFN48 6x6mm

DisplayPort Alternate Mode with Secure FW Update Console and PD 3.1 Controller

One USB-C UFP and One USB-C DRP DFP
Built-in ECDSA256 / SHA256 for Secure FW Update
Secure FW Update 3rd Party Controllers by I2C or SPI I/F
Supports USB PD 3.1 Extended Power Range

VL108
QFN60 7x7mm
QFN48 6x6mm

DisplayPort Alternate Mode and 3-Port PD 3.1 Controller

One USB-C UFP and Two USB-C DRP DFPs
Interchangeable USB-C DFPs
Supports USB PD 3.1 Extended Power Range
Supports D+/D- Adapter to USB PD
17 GPIOs and I2C FW Update

VL109 / VL109S
QFN60 7x7mm
QFN48 6x6mm

3-Port USB PD 3.1 Controller for Docking

One USB-C UFP and Two USB-C DRP DFPs
Supports USB PD 3.1 Extended Power Range
8-CH ADC or GPIOs
20 GPIOs and I2C FW Update
VL109S for Self-powered APPs

Supports USB PD
Supports USB-C ®

VL152 (Rev.C) ***Electronic Marker***

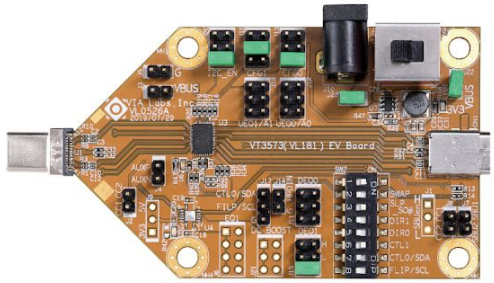
DFN10 3x3mm

Supports PD 2.0 & PD 3.0 SOP' Endpoint
Supports VCONN Power 2.7~5.5V
CC, VCONN1 and VCONN2 Pin Short to Vbus Protection

VL153 ***Electronic Marker***

DFN10 3x3mm

Supports USB PD 3.1 & USB4 SOP' Endpoint
Supports Thunderbolt Passive Cable VDO
Supports VCONN Power 2.7~5.5V
CC, VCONN1 and VCONN2 Pin Short to Vbus Protection



VL181

Supports USB PD

Supports USB-C ®

VL162 ***USB Data Switch with CC Logic***

QFN28 3.5x4.5mm

USB 3.2 2:4 USB-C Data Switch
UFP Mode Features USB-C Current Detection
DFP Mode Features Settable USB-C Current
VCONN Switch with OCP
Enhances Insertion Loss to 1.4dB@10G

VL163 ***USB Data Switch***

QFN28 3.5x4.5mm

USB 3.2 2:4 USB-C Data Switch
Low Insertion Loss: 1.4dB@10G

VL171 ***Crossbar Switch***

QFN28 3.5x4.5mm

4:6 Crossbar Switch
SBU Supports for DP Alternate Modes
Supports USB 3.2 & DP 1.4
Low Insertion Loss: 1.8dB@10G
Pin-Compatible with HD3SS460

VL181 ***Re-driver***

QFN40 4x6mm

4 Channels Bi-Directional Linear Re-driver
Supports Data Rates up to 10Gbps
GPIO and I2C Control for Channel Direction and EQ
Integrated Termination Networks

USB-C, USB4, PCON

VL805 (4-Port)

QFN68 8x8mm

VL806 (2-Port)

QFN48 7x7mm

USB Host

xHCI 1.0
Supports UASP & USB Debug Capability
Windows Inbox Driver Support

VL122

QFN28 5x5mm (4-Port)
QFN24 4x4mm (2-Port)

USB2 480Mbps Hub

Single Transaction Translator (STT)
Integrated 5V to 3.3V regulator
Management the configuration through EEPROM
Low Power Design

VL211 (1+3Port)

QFN48 6x6mm

SuperSpeed USB 5Gbps Hub with USB PD Support (1x 5Gbps, 3x USB 2.0)

Supports USB-C & USB PD, Up to 5-Ports via TCPCI
Supports Multi-Port Charger & DP Alt-Mode
Optimized for Small Form Factor
Integrated USB Billboard
Supports HID Buttons
Integrated DC-DC
Management Interface & Smart Charging
Pin-Compatible with VL210

VL817

QFN76 9x9mm (4-Port)
QFN56 7x7mm (2-Port)

SuperSpeed USB 5Gbps Hub

Integrated USB Billboard
Supports HID Buttons
Integrated DC-DC
Management Interface & Smart Charging

VL822

QFN88 10*10mm (4-Port)
QFN76 9*9mm (4-Port)
QFN56 7*7mm (2-Port)

SuperSpeed USB 10Gbps Hub with USB PD Support

Supports USB-C & USB PD, Up to 5-Ports via TCPCI
Supports Multi-Port Charger & DP Alt-Mode
Integrated USB Billboard
Supports HID Buttons
Management Interface & Smart Charging
Integrated Mux for UFP & 2x DFP (QFN88)

Supports USB PD

Supports USB-C ®

USB HOST, HUB, DEVICE

VL711 — *SuperSpeed USB 5Gbps SATA Bridge*

QFN48 6x6mm
QFN44 5x6mm

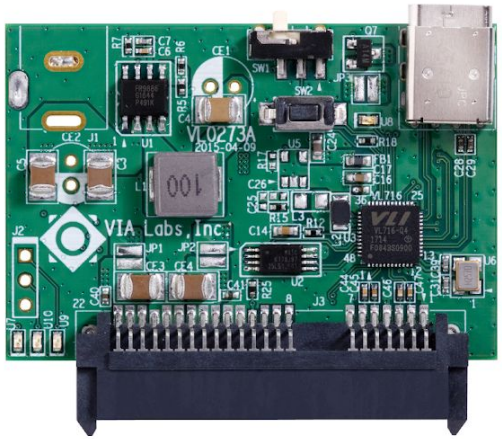
SuperSpeed USB 5Gbps to SATA III Bridge
Low Power Design
Built-in DC-DC

VL711

VL716 — *SuperSpeed USB 10Gbps SATA Bridge*

QFN48 6x6mm

SuperSpeed USB 10Gbps to SATA III Bridge for USB-C
Integrated CC Logic & Switch Function
Low Power Design
Built-in DC-DC



VL716

VL631 — *USB Audio Controller*

QFN48 6x6mm

VL632

QFN56 7x7mm

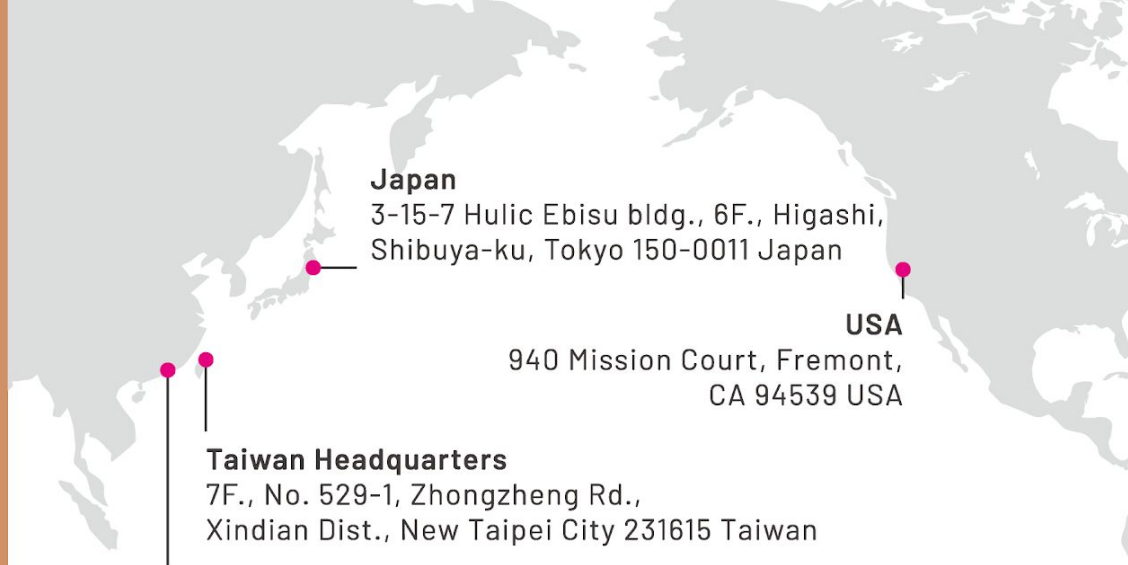
Single Chip with USB Audio, Audio Codec & Headphone Amplifier
Integrated Flash & OSC
DAC SNR 100dB, ADC SNR 95dB
Supports Up to 24-bit/192k Hz Resolution
Supports HID Buttons
* VL631 Supports 2 Channel Stereo Playback & 2 Channel Recording
* VL632 Supports 2 Channel Stereo Playback & 4 Channel Recording

Supports USB PD

Supports USB-C ®

USB HOST, HUB, DEVICE

CONTACT



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