PRODUCT
CATALOG

DESIGNED FOR YOUR SUCCESS

VIA Labs, Inc.

CONTENTS

ABOUT VIA LABS, INC.

VIA Labs, Inc. (VLI), a subsidiary of VIA Technologies, is a leading supplier of USB-related controllers. In the 2023 product catalog, **VLI** expanded its product portfolio to include 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 to cables. With the introduction of 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 2023 年產品型錄中，威鋒擴展了產品組合方案，包括 DisplayPort Video Converters 和採用最新 EPR 標準的 USB PD 晶片，實現高達 240W 的充電功率，進一步加強現有的 USB4®、SuperSpeed USB 和 USB Type-C® 產品線。威鋒的產品適用於各種應用，涵蓋主機端、周邊裝置及傳輸線。隨著 USB4 和 DisplayPort 產品的推出，威鋒提供了完整的自有晶片產品方案，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。
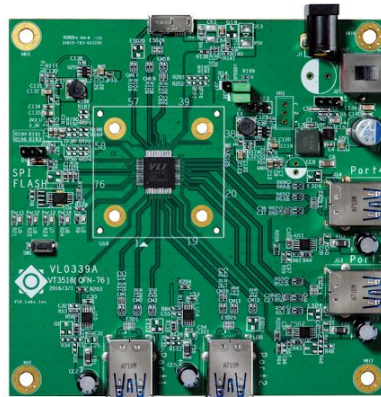
VL716

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

VL152 (Rev.C)

DFN8 2x3mm
WLCSP-6

Electronic Marker

Supports PD 2.0 & PD 3.0 SOP' Endpoint
Integrated Diode & Ra
Supports VCONN Power 2.7~5.5V
CC, VCONN1 and VCONN2 Pin Short to
Vbus Protection
Automatic Ra Removal for Power Savings
OTP Programming through I2C or CC Pin

VL153

WLCSP-6

Electronic Marker

Supports USB PD 3.1 & USB4
SOP' Endpoint
Supports Thunderbolt Passive Cable VDO
Integrated Diode & Ra
Supports VCONN Power 2.7~5.5V
CC, VCONN1 and VCONN2 Pin Short to
Vbus Protection
Automatic Ra Removal for Power Savings
OTP Programming through I2C or CC Pin

VL162

QFN28 3.5x4.5mm

USB Data Switch with CC Logic

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

VL163

QFN28 3.5x4.5mm

USB Data Switch

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

VL171

QFN28 3.5x4.5mm

Crossbar Switch

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

VL181

QFN40 4x6mm

Re-driver

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

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

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

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

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
More GPIOs and I2C FW Update

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

⚡ Supports USB PD   ⊘ Supports USB-C ®

VP226
DFN10 3x3mm

USB-C DFP CC Controller

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

VP246
DFN10 3x3mm

USB-C UFP CC Controller

USB-C Current Mode Detection
Dead Battery Support
Direction Indication

VL320
QFN20 4x4mm

PD Sink Controller

Supports USB-C & USB PD 3.0
Supports Qualcomm® Quick Charge™ 2.0 Sink
Operating Voltage from 4V to 24V
Driving NMOS for VBUS Load Switch for 3A
Application by Using Internal Charge Pump
Driving PMOS for VBUS Load Switch for 5A
Application by Using GPIO Port
Support External NTC for Thermal Protection

VL830 / VL832
FCCSP 10x10mm

USB4 End Point Device

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 (VL832 only)

VL600
QFN60 7x7mm

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

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

⚡ Supports USB PD   Supports USB-C ®

VL805 (4-Port)

QFN68 8x8mm

VL806 (2-Port)

QFN48 7x7mm

USB Host

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

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

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

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)

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

⚡ Supports USB PD   ⊘ Supports USB-C ®

VL711

QFN48 6x6mm
QFN44 5x6mm

USB 3.2 Gen1 SATA Bridge

USB 3.2 Gen1 to SATA III Bridge
Low Power Design
Built-in DC-DC

VL716

QFN48 6x6mm

🖱

USB 3.2 Gen2 SATA Bridge

USB 3.2 Gen2 to SATA III Bridge for USB-C
Integrated CC Logic & Switch Function
Low Power Design
Built-in DC-DC

VL717

QFN48 6x6mm

⚡ 🖱

USB 3.2 Gen2 SATA with PD Sink

USB 3.2 Gen2 to SATA III Bridge for USB-C
Integrated CC Logic & Switch Function & PD Sink
PD Sink to Ask Max Power from Host
Better Random R/W Speed
Pin-Compatible with VL716
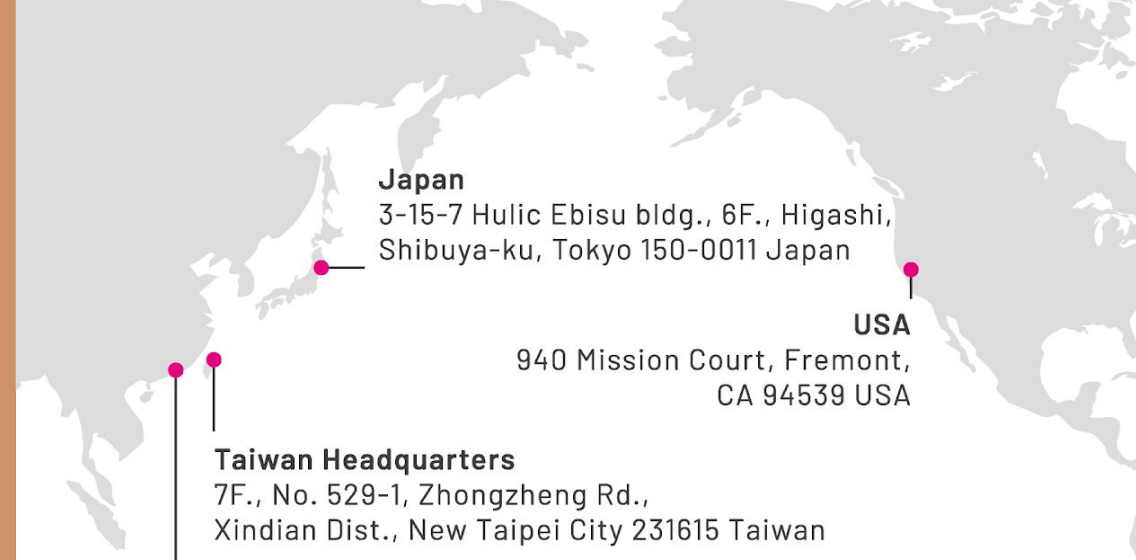
VL631

QFN48 6x6mm

VL632

QFN56 7x7mm

USB Audio Controller

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
I2C & GPIO Interface
* VL631 Supports 2 Channel Stereo Playback &
   2 Channel Recording
* VL632 Supports 2 Channel Stereo Playback &
   4 Channel Recording

VL717

⚡ Supports USB PD   🖱 Supports USB-C ®

CONTACT

Japan
3-15-7 Hulic Ebisu bldg., 6F., Higashi,
Shibuya-ku, Tokyo 150-0011 Japan

USA
940 Mission Court, Fremont,
CA 94539 USA

Taiwan Headquarters
7F., No. 529-1, Zhongzheng Rd.,
Xindian Dist., New Taipei City 231615 Taiwan

China
4F., No. 9966, Shennan Avenue,
Nanshan Dist., Shenzhen 518057, China

威鋒電子股份有限公司 **VIA Labs, Inc.**
231615 新北市新店區中正路529之1號7樓

📞 886-2-2218-1838

🖨 886-2-2218-2553

WEBSITE

CONTACT US