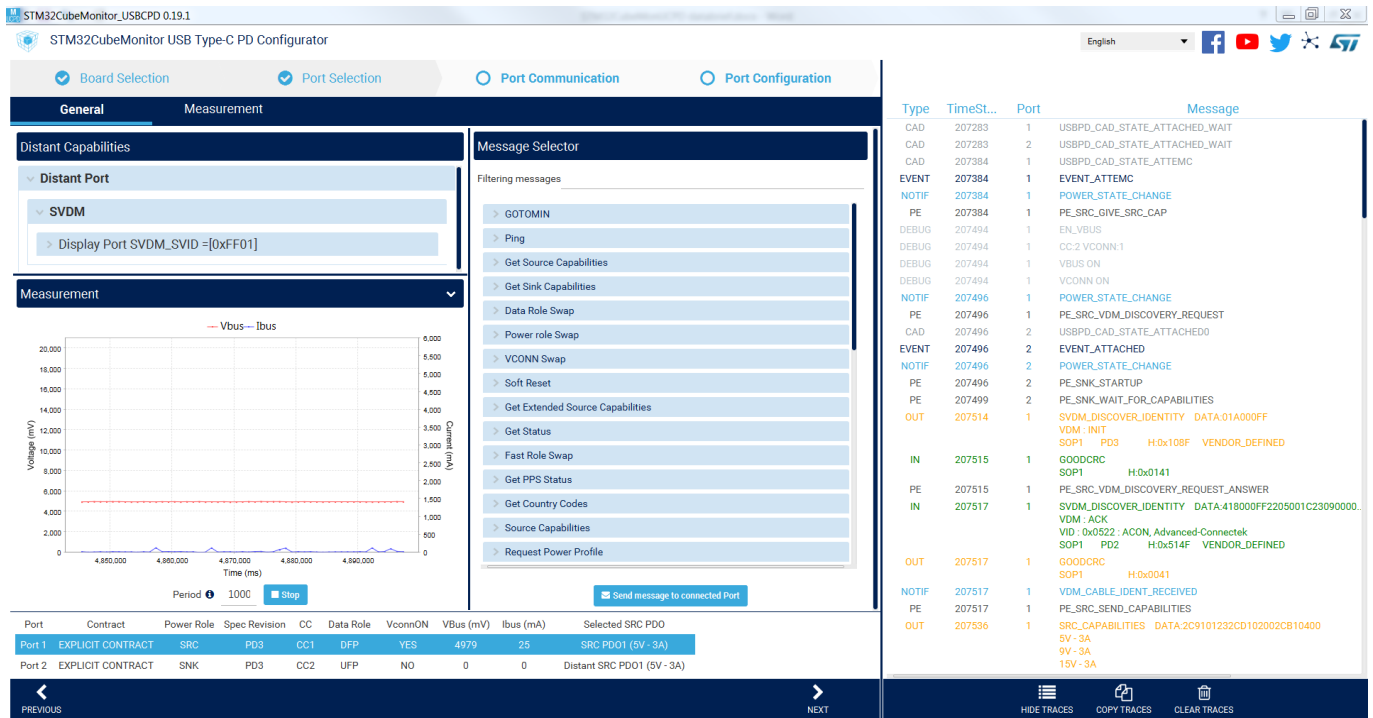


STM32CubeMonitor-UCPD software tool for USB Type-C™ Power Delivery port management



The screenshot displays the STM32CubeMonitor-UCPD software interface. It features several main sections:

- General / Measurement:** Includes a graph showing Voltage (mV) and Current (mA) over time. The graph plots Vbus (red dashed line) and Ibus (blue solid line). The period is set to 1000 ms.
- Message Selector:** A list of filtering messages such as GOTOMIN, Ping, Get Source Capabilities, Get Sink Capabilities, Data Role Swap, Power role Swap, VCONN Swap, Soft Reset, Get Extended Source Capabilities, Get Status, Fast Role Swap, Get PPS Status, Get Country Codes, Source Capabilities, and Request Power Profile.
- Message Log:** A table of events and messages with columns for Type, TimeSt..., Port, and Message. It shows various USB PD messages like USBD_CAD_STATE_ATTACHED_WAIT, POWER_STATE_CHANGE, and SVDM_DISCOVER_IDENTITY.
- Port Configuration Table:**

Port	Contract	Power Role	Spec Revision	CC	Data Role	VconnON	VBus (mV)	Ibus (mA)	Selected SRC PDO
Port 1	EXPLICIT CONTRACT	SRC	PD3	CG1	DFP	YES	4979	25	SRC PDO1 (5V - 3A)
Port 2	EXPLICIT CONTRACT	SNK	PD3	CC2	UFP	NO	0	0	Distant SRC PDO1 (5V - 3A)

Product status link

[STM32CubeMonUCPD](#)



Features

- Monitoring and configuring tool for USB Type-C™ and USB Power Delivery applications using STM32 microcontroller
- Support of USB Type-C™ 1.2 and USB PD 2.0/3.0 specifications
- Multi-pane including:
 - Port configuration pane for Power Delivery (PD) setting, vendor defined messages (VDM), standard operating procedures (SOP), source and sink capabilities
 - Port communication pane for V_{BUS} and I_{BUS} monitoring, distant port capabilities, message selector, and real-time traces
- Multi-OS support: Windows®, Linux®, and macOS®
- Multi-language support: English, Chinese, French, Arabic
- GUI responder for communication between the target board and STM32CubeMonitor-UCPD

Description

STM32CubeMonitor-UCPD (STM32CubeMonUCPD) is a free software analyzer to monitor and configure USB Type-C™ and Power Delivery applications. It applies to any STM32 microcontroller running ST USB PD middleware stack. The development and the debug are simplified by key messages of USB PD protocol accessible through a convivial user interface. The developer can visualize in-live status and capability of any USB Type-C™ port (such as sink, source, or dual-role port), and USB PD packet messages during contract negotiation. The user can interact with the application environment by sending USB PD commands to the target board. The power or data role swap is executed in one click. The selection or the creation of new sink or source power profiles is made simple. The monitoring of analog parameters such as V_{BUS} or I_{BUS} is displayed in a specific measurement pane to facilitate the debug of the final application while the in-live debug trace pane allows visualizing message exchanges between the two ports.

1 Ordering information

STM32CubeMonitor-UCPD (STM32CubeMonUCPD) is available for free download from www.st.com.

2 License

STM32CubeMonitor-UCPD ([STM32CubeMonUCPD](#)) is delivered under the Mix Ultimate Liberty+OSS+3rd-party V1 (SLA0048) software license agreement.

The STM32CubeMonitor-UCPD software tool runs on STM32 microcontrollers, based on Arm[®] cores.

Note: *Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.*



Revision history

Table 1. Document revision history

Date	Version	Changes
28-Nov-2018	1	Initial release.

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