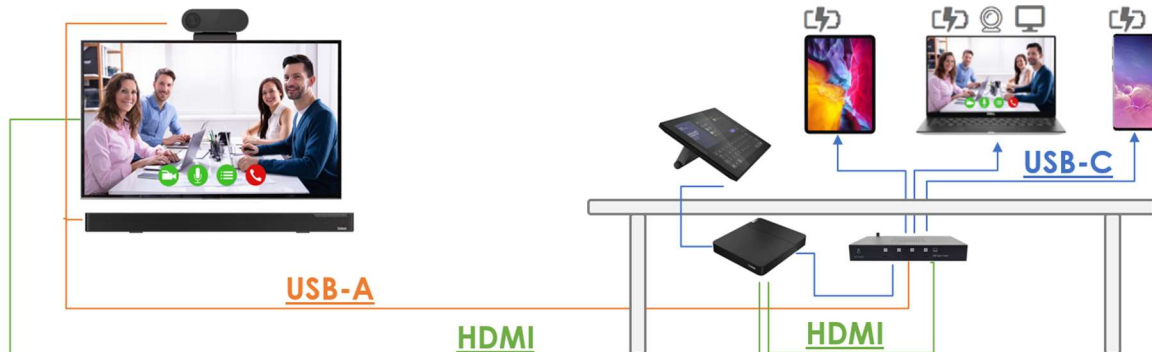# MTR / BYOD Switching: Lenovo Thinksmart Core Integration

Introduction

This guide describes how Ochno Power Conference 3 can be used together with Lenovo Thinksmart Core to provide:

- Connectivity to laptops using one or many USB-C cables instead of the default HDMI input cable for content sharing
- Support for switching between MTR-mode and BYOD (Bring-Your-Own-Device) mode.

Modes

- **MTR-Mode:** The connected USB-C cable provides charging and shares the laptops picture onto the screen. If there is an ongoing MTR-meeting, the video can be shared in the meeting as well.
- **BYOD-Mode:** The connected USB-C cable provides charging, shares the laptops picture onto the screen and connects the USB-based video conference equipment directly to the laptop so that the user can run a local video conference call with any VC-platform.

Depending on the size and type of the table and user preferences, there are 3 ways to expose the USB-C connectivity and the switching capabilities to the user. Regardless of mode, there will be 3 USB-C cables or sockets available that can be suitably distributed around the table for easy access.

User access variants

Type A

2 or 3 USB-C pull-out cables with separate functions assigned to each.

This setup are usefull when the cables are coming out from below the table in one place.

The user doesn't need to press any button, the system auto-switches betweem mode when the cable is inserted into the laptop.

A suitable label is attached to the cable which informs the user what mode the cable is associated with.

Regardless of mode, the laptop will always charge up to 100W.

Type B

Up to 3 USB-C pull-out cables that support both MTR content ingest and BYOD. Separate button for the user to select the mode.

This setup is useful when the cables are distributed throughout the table since it allows any cable to enter both mode.

The buttons used is the O-PC-LS-1 product which contains 4 LED-buttons that are inserted through an 8mm hole.

By clicking the button, the user can cycle through the different modes:

- Charging only (usually default mode)
- MTR-mode (charging + show picture)
- BYOD-mode (charging + show picture + access VC-devices)

See below for details on how to configure default mode and possible auto-switching as well.

Type C

Up to 3 Ochno LED Socket with integrated multi-color LED.

This solution provides maybe the most user-friendly and stylish experience.

The Ochno LED Socket (O-SWD-100-1, O-SWD-100-S-1) are used combined with the control adapter (O-SBC-200-1).

By clicking the button, the user can cycle through the different modes:

- Charging only. Faded white light.
- MTR-mode. Default is blue light
- BYOD-mode Default is orange light.

Normally auto-switching is not needed / reommended in this setup. The order of the modes can be configured.
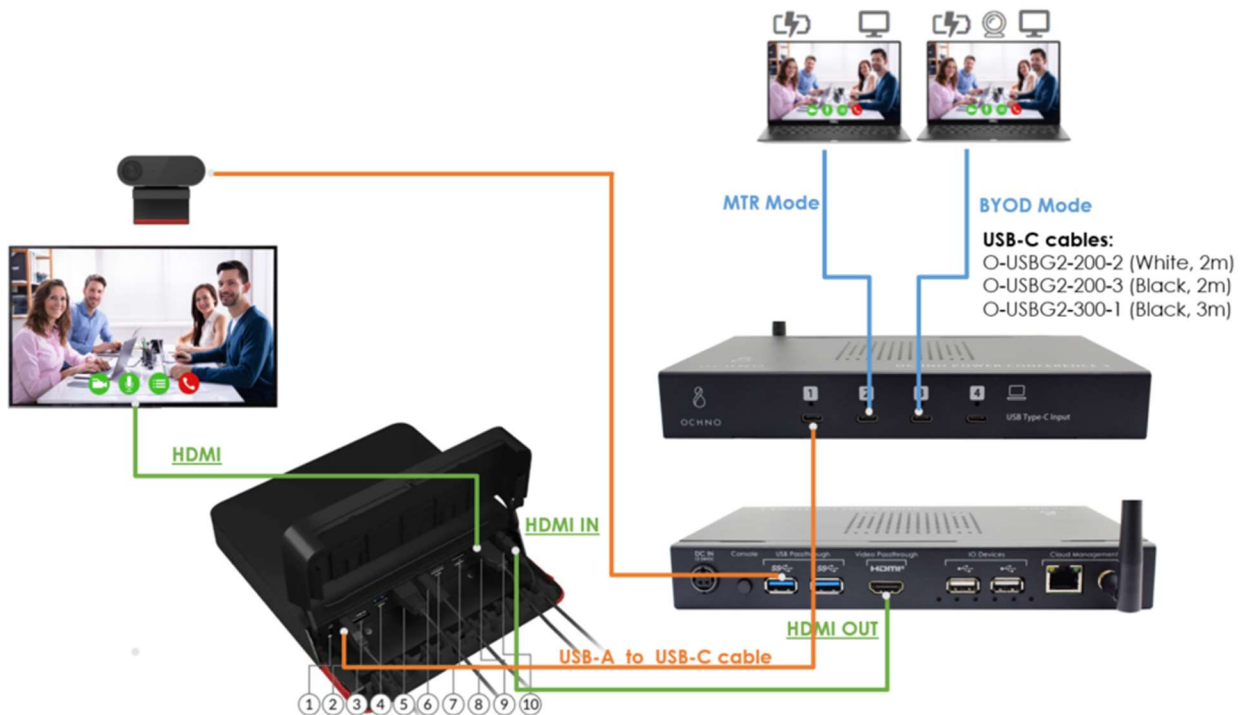
Wiring and configuration

The following diagrams shows how wiring and configuration the alternative solutions. Part of the solution is the same for the three options and is presented first. It is recommended to use the proposed ports since the system configuration examples are assuming that. When you have gained more experience in the system you can start changing the setup.

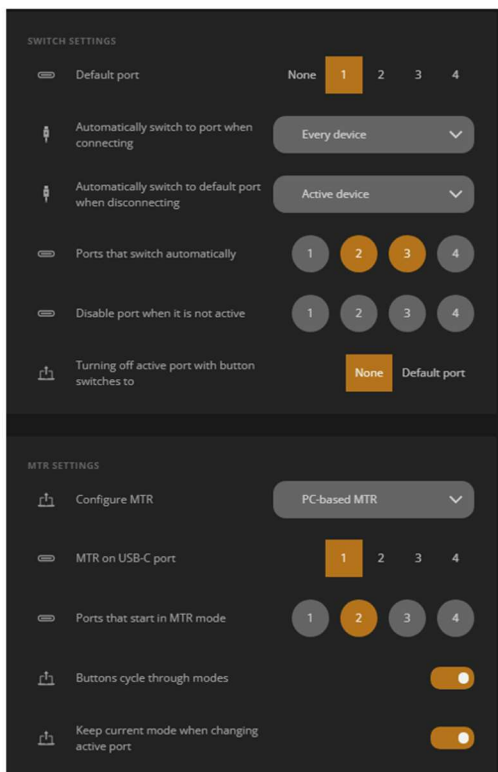## Thinksmart Core <> OPC3 connection

- HDMI output from OPC3 goes into HDMI in on Thinksmart Core.
- USB-C Port 1 from OPC3 goes into any of the USB-A ports on Thinksmart Core
- TVs / projectors are directly connected to Thinksmart Core.
- All USB-devices are connected to OPC3. USB-hubs can be used to aggregate and optimize cabling.
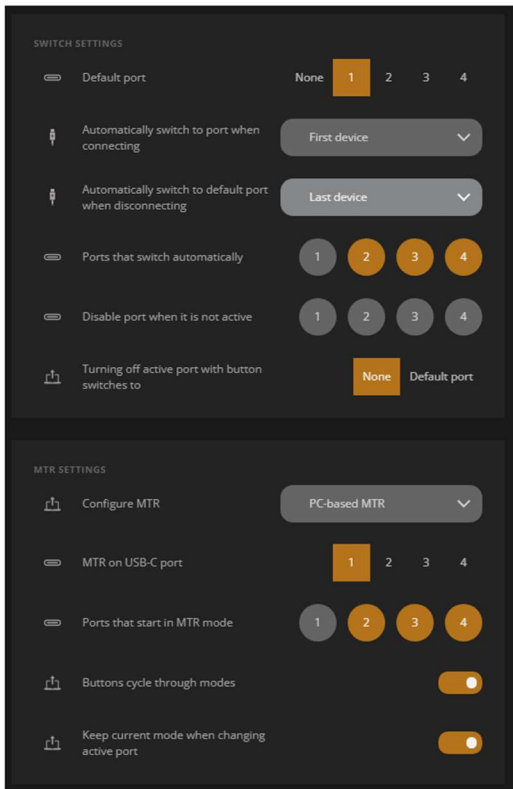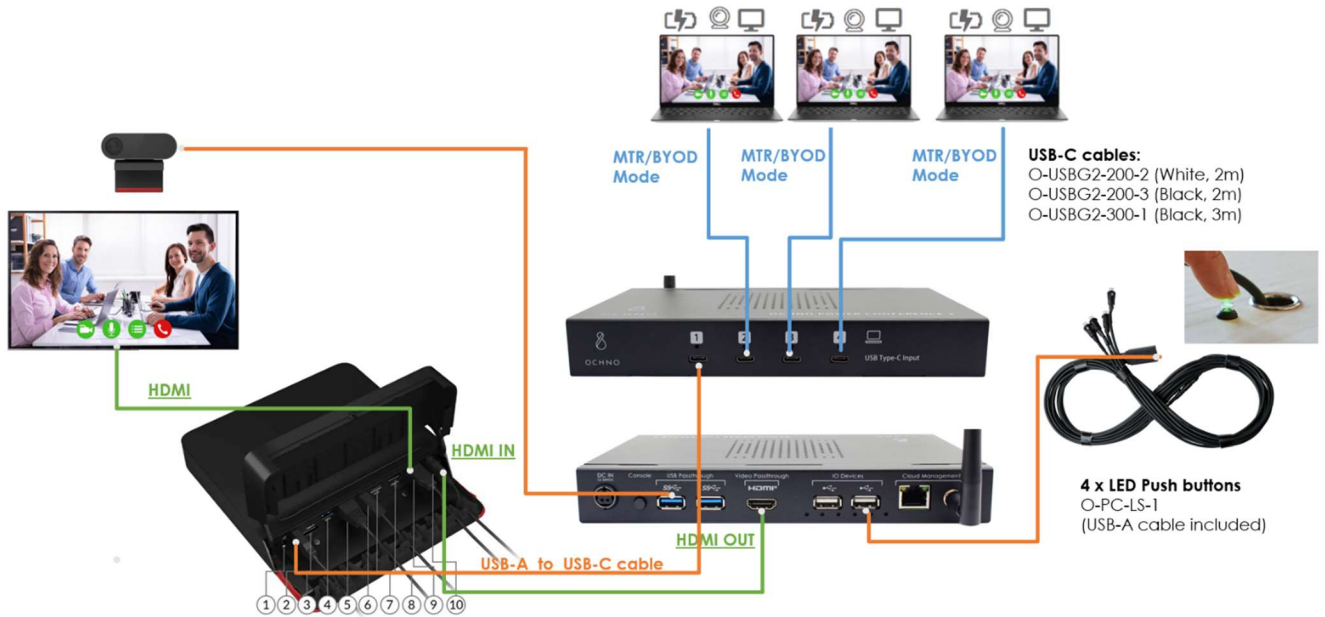
Type A cabling and configuration

The following configuration should be applied for this topology. [Download Ochno Management Console here.](#)

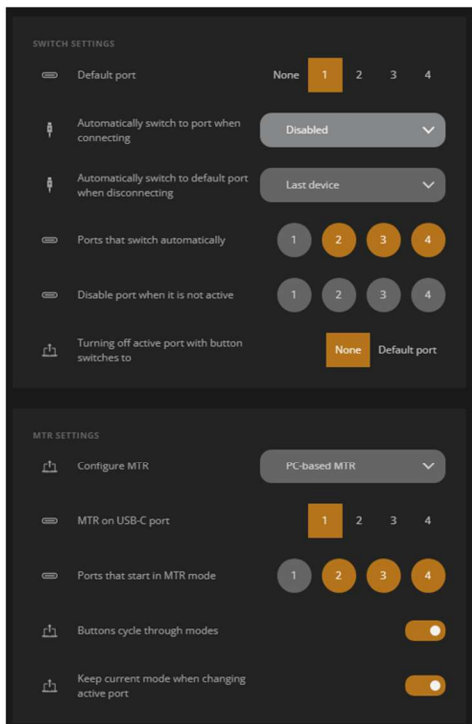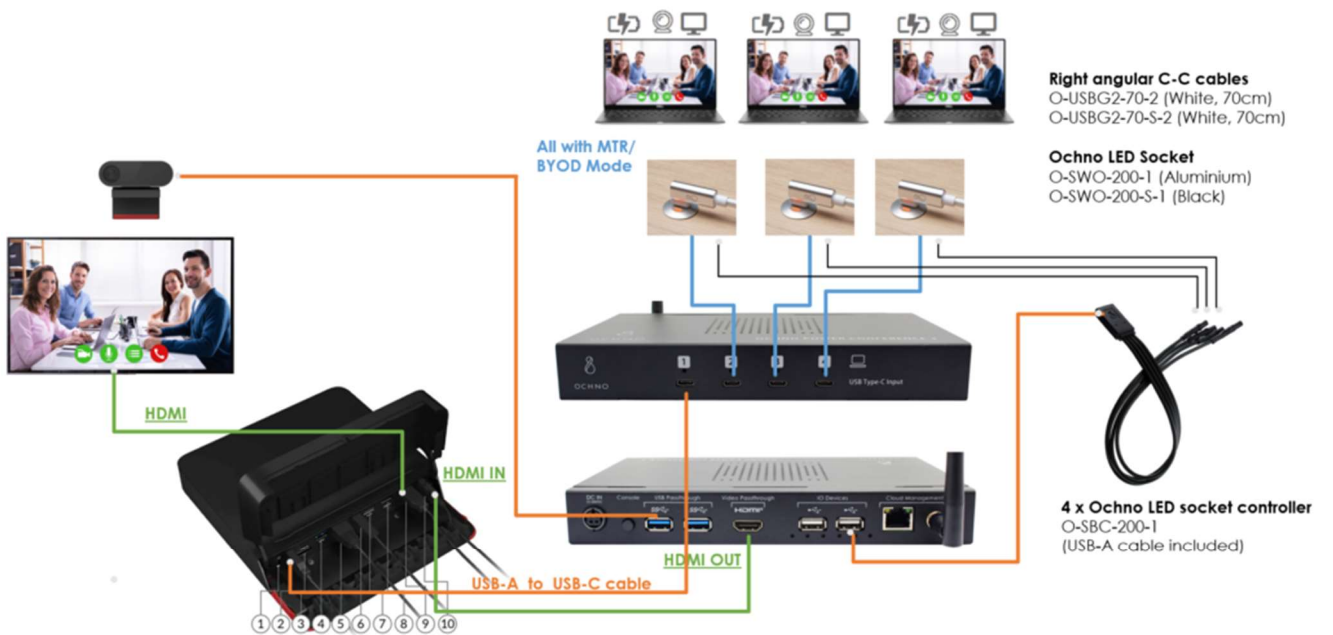|		
		Auto-switch when inserting USB-C cable
		Auto-switch to default when removing USB-C cable
		Select ports that should have auto-switch. Add Port 4 if needed.
		Configure the system to use the PC-based MTR topology
		Configure which port has the MTR system connected
		Configure that Port 2 starts in MTR mode and Port 3 in BYOD mode

Type B cabling and configuration

USB-C cables:
O-USBG2-200-2 (White, 2m)
O-USBG2-200-3 (Black, 2m)
O-USBG2-300-1 (Black, 3m)

4 x LED Push buttons
O-PC-LS-1
(USB-A cable included)

Recommended configuration is that first user that connects gets auto-switch. Second user will only charge until the first disconnects OR presses button.

Configure the system to use the PC-based MTR topology

Configure which port has the MTR system connected

Recommended is to default ports to show video only and MTR, with the user clicking again to enter BYOD mode and bring over USB devices

Depending on user-preferences, more or less auto-switching can be used in this configuration. Discuss sutiable setup with user. The above setup is a compromise between manual switching and full auto-switch where only the first user connecting their laptop will get the auto-switch.

Type C cabling and configuration

One alternative is no auto-switching when connecting, but by selecting **Last Device** on disconnect, any selected button will be turn off when the last user leaves the room.

Configure the system to use the PC-based MTR topology

Configure which port has the MTR system connected

Recommended is to default ports to show video only and MTR, with the user clicking again to enter BYOD mode and bring over USB devices

The same considerations in terms of auto-switch or manual switching applies here as for Type B. In the above example there is slight difference in regards to auto-switch from Type B.