Power consumption on Cisco Video Collaboration Devices

Measurements of power consumption on Cisco devices on different standby states

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webex by CISCO

Section 1 | Overview

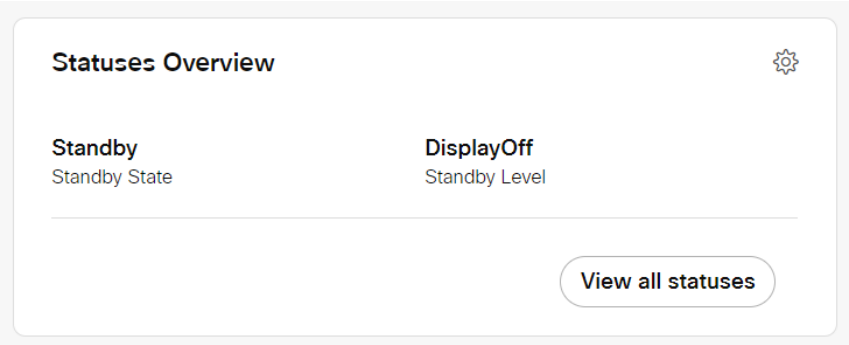
This document describes the different power states Cisco collaboration devices running RoomOS have.

Section 2 | Standby State and Standby Level overview

To know the Standby Level and Standby State of a device, use the command lines xStatus Standby State and xStatus Standby Level.

Control Hub can make the Standby State and Standby Level visible.

Standby State is visible by default in the Statuses Overview. Standby State and Standby Level can easily be added to the Statuses Overview in Control Hub. Allowing the administrator to have full control over the organization



Example of Standby State and Standby Level on Control Hub

Standby State: Shows whether a device is in standby state or not

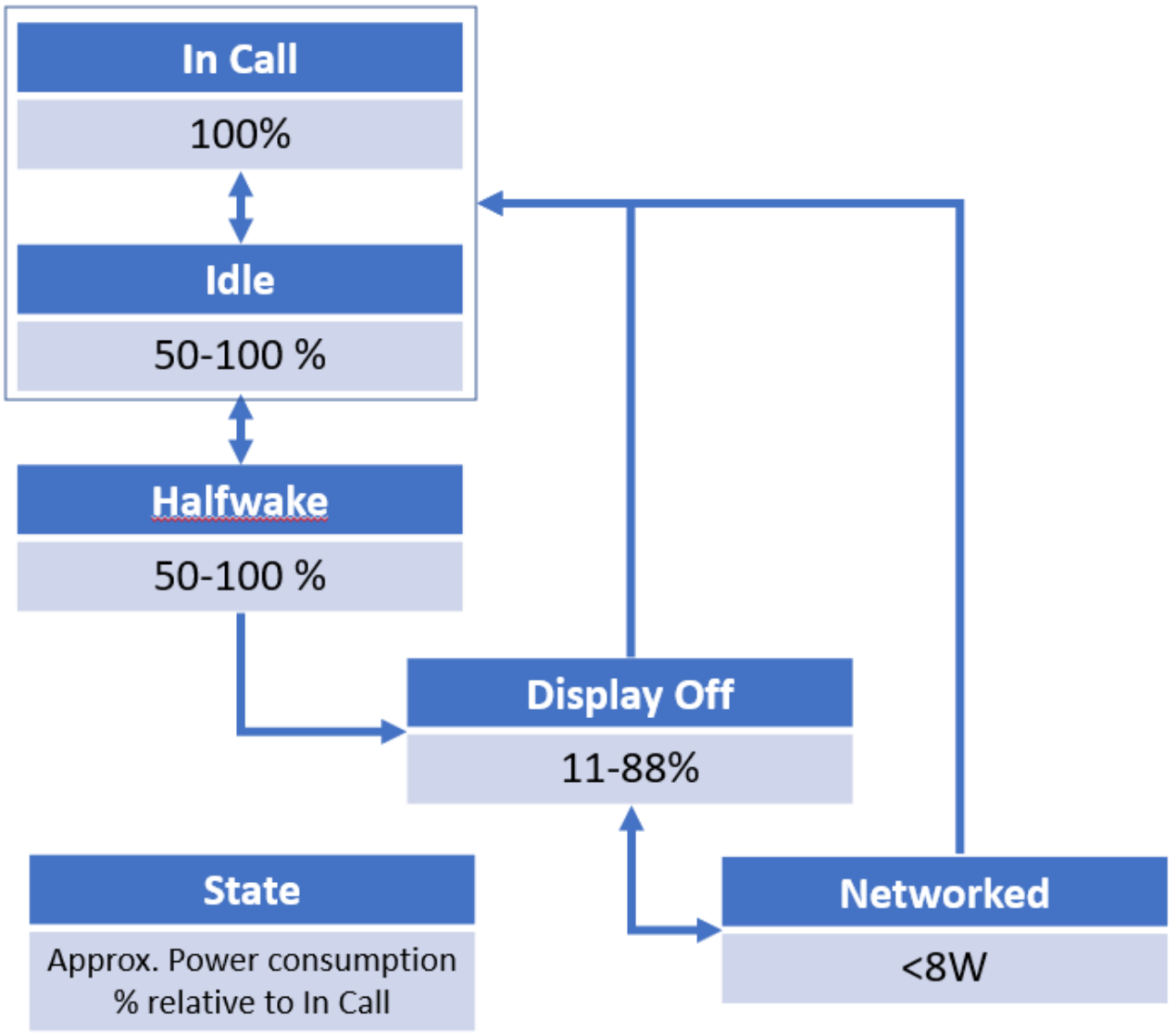
Standby Level: Specifies the level of standby the device is in. Not visible on personal devices

Section 2 | Cisco devices power states

On mode	Idle	In call
State description	Display shows home screen, local share or whiteboard All web apps closed Out of call	In call through any method, SIP, Webex, Microsoft Teams, WebRTC, etc.
Devices	All devices	All devices
Standby State	Off	Off
Standby Level	None	None

Standby	Display Off	Standby Halfwake mode	Standby Signage mode	Networked Standby mode
State description	Display Off All other processes running as usual	The default after connecting to power Screen displays the "Hello experience" Greets the user when presence is detected by motion or proximity app	Also known as "Digital Signage" Displays content from a URL. Power consumption similar to Halfwake but greatly depends on the content of the URL Web engine is interactive on devices with touch screen	High reduction in power consumption while it remains remote manageable though Control Hub Video, Touch screens, HDMI and USB-C ports do not work Can receive Calls
Devices	Desk Series Board Series	All devices	All devices	Desk, Desk Mini, Room Bar
Standby State	Standby	Halfwake	Halfwake	Standby
Standby Level	Display Off	None	None	Networked Standby Mode

Section 2 | Power and Standby states



Notes:

- Power consumption varies depending on product. See section 5 for specific product values
- Display Off power consumption in this document does not include the power consumption of external screens. Depending on the screen model, power savings could be considerable.
- Networked Standby is always less than 8 watts, regardless of product (see section 4)
- Idle state can be Home screen, local share, whiteboard

Section 3 | Transitions into standby states

From	To	Trigger	Transition Time (approx.)
In Call	Idle	End call	< 1sec
Idle	Halfwake	Automatic after inactivity timer and no motion detection, 2 min default Standby button will trigger Default Standby Level (section 4)	< 1sec
Halfwake	Display Off	Automatic after inactivity timer and no motion detection, 2 min default	< 1sec
Display Off	Networked	Automatic after inactivity timer and no motion detection, 2 min default Office Hours settings	3 sec

Section 3 | Wake up transitions

From	To	Trigger	Transition Time (approx.)
Networked	Display Off	Motion detection	3 sec
Networked	On mode	Receive call Standby button	3 sec
Display Off	Idle	Touch screen Touch Room Navigator or Touch 10 Motion detection*	< 1sec
Halfwake	Idle	Touch screen Touch Room Navigator or Touch 10 Motion detection* Remote control	< 1sec
Idle	In Call	Enter call event	

Notes:

- Motion detection, depending on device can be ultrasound, App pairing, stylus sensor, or radar
- Touch screen trigger refers only to products with integrated screens
- On mode refers to either Idle or In Call

Section 4 | Cisco devices power consumption measurements

Device Power State	In call	Idle	Halfwake	Default standby level		SW version
Desk Pro	52.5	50	48	18	(display off)	RoomOS 10.21.0
Desk	33	28	27	7	(networked standby)	RoomOS 10.21.0
Desk Mini	17	12	12	6.5	(networked standby)	RoomOS 10.21.0
Quad Camera	44	43.5	43.5	31.5	(display off)	RoomOS 10.20.0
Room Navigator	7.9	8.0	7.9	5.9	(display off)	RoomOS 10.21.0
Room Bar	14.3	8.2	8.2	7	(networked standby)	RoomOS 11.1.0
Room Bar Pro	24.5	16.5	16	12.7	(networked standby)	RoomOS 11.5.0.7
Board Pro 55	137	127	126	55	(display off)	RoomOS 10.21.0
Board Pro 75	205	201	184	67	(display off)	RoomOS 10.21.0
Codec EQ	18	17.3	16.5	14.6	(display off)	RoomOS 11.1.0
Codec Pro	37.5	36.5	36.5	33	(display off)	RoomOS 11.1.0
Room Kit Mini	14.5	8.5	8.5	7	(display off)	RoomOS 10.20.0
Codec Plus	19	18	18	14.3	(display off)	RoomOS 11.1.0
Room Kit	23	18.5	18.5	16.5	(display off)	RoomOS 10.20.0
Board 55S	141	139	137	31	(display off)	RoomOS 10.21.0
Board 70S	157	157	154	27	(display off)	RoomOS 10.19.0
Board 85S	287	285	284	32	(display off)	RoomOS 10.21.0
Room 55	108.5	105.5	92.3	32.4	(display off)	RoomOS 10.21.0
DX80	24.4	25.1	23.3	9.4	(display off)	RoomOS 9.15.15
Desk Hub	7.6	7.3	7.1	6	(networked standby)	RoomOS 10.21.0
	In Watts, measured at power outlet. Last update Jan 10, 2023					

Notes on power consumption:

- Room Navigator is remotely paired; hence its power consumption is not reflected in the measurements.
- All codecs are connected to one screen via HDMI out, one external microphone and a Cisco Quad Camera. The power consumption of the screen is not included in the measurements.
- All kits and bars are connected to one screen via HDMI out.
- Interactive content is not available on devices without integrated touch screens
- The default standby level depends on the hardware and software version.
- Only Idle, In Call, Halfwake and Default Standby are measured as these are considered the most representative for power consumption
- In Call is measured as 1:1 cloud call on Webex, 80% screen brightness, no virtual background or noise removal
- Variations on RoomOS release may influence power consumption
- Screens on devices with integrated screens, brightness is set at 80%.

Section 4 | Office Hours Settings

By default, the office hours are set to Monday to Friday from 07:00 in the morning to 19:00 in the afternoon. To change the Office Hours, follow this help article: Using the Office Hours Settings:
https://help.webex.com/article/nge8zpq/

Using the Office Hours Settings in combination with the different standby settings can substantially reduce power consumption in the organization without affecting the user experience.