

# HP Z230 USB Charging Port



On the Z230 tower workstation we include a special USB 2.0 port that will allow some devices (cell phones, tablets, etc.) to charge faster. This USB 2.0 port is called a Charging port. This port supports up to 1.5A of charging current under normal operation, sleep, hibernate, and shutdown modes. The USB charging port is on the front panel, and can be identified by the lightning bolt icon shown below. This port follows the USB-IF's USB Battery Charging Specification v1.2 (USB BC 1.2)\*, and also the Chinese Telecommunications Industry Standard YD/T 1591-2009.

## Symbol of Charging Port



## Charging Modes

- Standard Downstream Port (SDP)  
SDP is a traditional USB port that supplies 500 mA (USB 2.0) or 900 mA (USB 3.0). USB communication is supported in this mode.
- Charging Downstream Port (CDP)  
CDP is not only a traditional USB port, but it also follows the USB BC 1.2 Specification. This allows the USB port to supply 1.5A. Simultaneous USB communication and charging is supported in this mode.
- Dedicated Charging Port (DCP)  
DCP follows the USB BC 1.2 Specification and provides 1.5A. In this mode the DCP does not support USB communication.

\* HP's implementation of the Battery Charging Specification on the Z230 tower is on a USB 2.0 port; however, it is also possible to add this functionality to a USB 3.0 port.

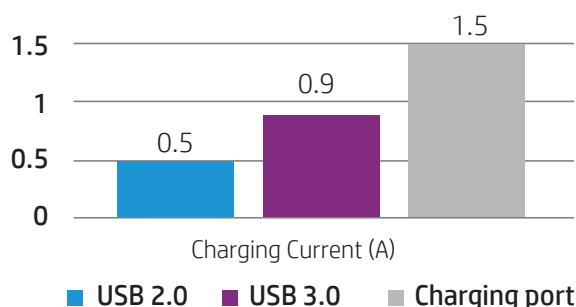
## Modes Setup

Operating mode	Charging Mode	Maximum Current	Data Communication
<b>Normal Operation</b>	SDP/CDP *	0.5 A or 0.9 A / 1.5 A	Yes
<b>Sleep</b>	DCP	1.5 A	No
<b>Hibernate</b>	DCP	1.5 A	No
<b>Shutdown</b>	DCP	1.5 A	No

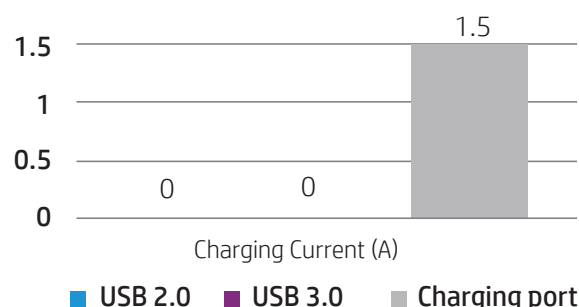
\*The portable device will communicate with the on-board charger automatically for mode setup. If the portable device doesn't accept or support CDP mode, then the charger will go into general SDP mode. Some tablets might show no charge under this condition.

## Performance

**Maximum charging current comparison in Operation mode**



**Maximum charging current comparison in Sleep/Hibernate/Shutdown mode**



## Recommendations and Notes

The Z230 USB charging port is recommended for portable devices supporting battery charging. It is a safe and efficient charging solution, providing more current, and better over-current protection than a general USB port. Portable devices are able to talk to the on-board charger and select a suitable charging mode and current based on real application needs through a common communication protocol.

### Learn more

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