



SmartHub data sheet

Highlights

The SmartHub4 is a programmable USB 2.0 compatible hub able to pilot 4 device ports with standard USB Type-A connectors, SmartHub4 is compatible with two host connections using USB mini-B connectors.

The SmartHub4 is perfect for environments where multiple devices need to be shared or switched between two host computers, and where charging needs to be controlled.

Best example of use case is smartphone testing and especially battery, charging, USB device charge, device burn in and even production testing.

Software is compatible with Mac 10.8 and above, Linux and Windows 8.1 and above.

Features

- Each port can be individually enabled and disabled
- Data and power lines on each port can be turned on or off
- Programmable controlled current limit up to 2.5A on each port
- 4 individually -controllable USB ports (Type-A connectors)
- 2 separate upstream USB ports (mini-B connectors)
- 12VDC, 5A Power Supply Included

Software control

Controlling software for SmartHub4 includes API integrated into Python & C/C++ libraries.

List of main functions:

- setPortEnable / setPortDisable to Enable or Disable each Port
- setDataEnable / setDataDisable to turn On or Off data of each port
- setHiSpeedDataEnable / setHiSpeedDataDisable to turn On/Off data of each port
- setPowerEnable / setPowerDisable to turn On or Off power on each port
- getPortVoltage to measure Power information on each port
- getPortCurrent to measure Power information on each port
- getPortCurrentLimit to measure Power information on each port
- setPortCurrentLimit to programme Current limit on each port

- setPortMode/getPortMode to manage operational mode of each port (mode can be “Standard” with a limited charging at 500mA or “Charging” mode for current over 500mA)

Demo scripts of SmartHub4 control are provided within synchroviSer tools.



Exhaustive list of commands

Entity Class	Entity Option	Variable notes
Store [0-1]	getSlotState	
	loadSlot	
	unloadSlot	
	slotEnable	
	slotDisable	
	slotCapacity	
	slotSize	
System [0]	Save	
	Reset	
	setLED	
	getLED	
	setSleep	
	setBootSlot	
	getBootSlot	
	getInputVoltage	
	getVersion	
	getModuleBaseAddress	
	getModuleSoftwareOffset	
	setModuleSoftwareOffset	
	setHBInterval	
	getHBInterval	
	getRouterAddressSetting	
	getModule	
	getSerialNumber	
setRouter		
getRouter		
getModel		
timer [0-8]	getExpiration	
	setExpiration	
	getMode	
	setMode	
USB [0]	setPortEnable	Channel can be 0, 1, 2, or 3

	setPortDisable	Channel can be 0, 1, 2, or 3
	setDataEnable	Channel can be 0, 1, 2, or 3
	setDataDisable	Channel can be 0, 1, 2, or 3
	setHiSpeedDataEnable	Channel can be 0, 1, 2, or 3
	setHiSpeedDataDisable	Channel can be 0, 1, 2, or 3
	setPowerEnable	Channel can be 0, 1, 2, or 3
	setPowerDisable	Channel can be 0, 1, 2, or 3
	getPortVoltage	Channel can be 0, 1, 2, or 3
	getPortCurrent	Channel can be 0, 1, 2, or 3
	getPortCurrentLimit	Channel can be 0, 1, 2, or 3
	setPortCurrentLimit	Channel can be 0, 1, 2, or 3
	setPortMode	Channel can be 0, 1, 2, or 3
	getPortMode	Channel can be 0, 1, 2, or 3
	getHubMode	
	getHubState	Bank is always 0
	setHubState	Bank is always 0
	getHubErrorStatus	Bank is always 0
	getSystemTemperature	
	setEnumerationDelay	
	getEnumerationDelay	
	clearPortErrorStatus	Channel can be 0, 1, 2, or 3
	getUpstreamMode	
	getUpstreamState	
	setUpstreamBoostMode	
	setDownstreamBoostMode	
	getUpstreamBoostMode	
	getDownstreamBoostMode	

SmartHub family

- SmartHub4 (programmable 4 ports USB hub)
- SmartHub8 (programmable 8 ports USB hub)
- SmartBoard10 (programmable 10 SIM slots and USB Power switch)

