

### Hubitat Installation Instructions

<b>Note</b>	These instructions are based on a manual installation from the GitHub Site. A pdf copy of these instructions are contained at the GitHub location: "https://github.com/DaveGut/Hubitat-TP-Link-Integration"
<b>1</b>	Open up Hubitat Environment (HE) and go "Apps Code"
<b>2</b>	Select "New App" in the upper right-hand corner.
<b>3</b>	Go to the Application folder on GitHub, open the application, and copy all of the code.
<b>4</b>	Past the code into the app window on HE. Select Save.
<b>5</b>	Open up the "Drivers Code" on HE.
<b>6</b>	Go to the DeviceDrivers folder on GitHub. Reference the list below for the drivers you will need to install. For each of those drivers, complete the following steps.
<b>7</b>	Select "New Driver" in the upper right-hand corner
<b>8</b>	Open the relevant driver on the GitHub folder and copy all of the code.
<b>9</b>	Paste the code into the window on HE. Select Save.
<b>10</b>	When done installing the required drivers, go the the HE "Apps" page.
<b>11</b>	"Select Add User App" and select the app "TP-Link Integration" from the list.
<b>Note</b>	The app will take about 3 minutes to load. Because of the discovery method, it is HE resource intensive. The resources will fully recover after about 5 minutes; however, during that time, HE performance may be impacted.
<b>Note</b>	The discovery method is rather arcane and during discover, you will see a lot of "Error occurred with UDP message: SocketTimeoutException: Receive timed out". This is normal and only occurs during the start-up of the application.
<b>12</b>	On the TP-Link/Kasa Device Manager page, select "Install Kasa Devices".
<b>13</b>	Select the devices to install and select DONE.
<b>Note</b>	If you select no devices, exit the application using the "App List". Otherwise you will get an error.
<b>REC</b>	RECOMMEND that you assign a STATIC IP address in your router for your TP Link Devices. See note "Updating IP Addresses" for more information.

### Hubitat Driver File Nomenclature

TP-Link Model			Command Group	Driver File
HS-100	HS-103	HS-105	<b>1</b>	TP-LinkPlug-Switch(Hubitat).groovy
HS-200	HS-210	KP-100		
HS-107	KP-200	KP-400	<b>1</b>	TP-LinkMulti-Plug(Hubitat).groovy
HS-220			<b>2</b>	TP-LinkDimmingSwitch(Hubitat).groovy
HS-300			<b>3</b>	TP-LinkEM-Multi-Plug(Hubitat).groovy
HS-110	HS-115		<b>3</b>	TP-LinkEM-Plug(Hubitat).groovy
KB-100	LB-100	LB-110	<b>4</b>	TP-LinkWhiteBulb(Hubitat).groovy
KL-110	LB-200			
LB-120	KL-120		<b>5</b>	TP-LinkCTBulb(Hubitat).groovy
KB-130	LB-130	KL-130	<b>6</b>	TP-LinkColorBulb(Hubitat).groovy
LB-230				

### IP Address Update

<b>Note</b>	Routers will occasionally change IP addresses; particularly when they reboot. When this occurs, the device will not be controllable through HE without first running the TP-Link Integration application. To preclude this, it is <b><i>strongly recommended</i></b> that the TP-Link devices be assigned <b>static IP addresses</b> in your router. To update the addresses if you do not do this, do the following procedures.
<b>1</b>	Go to the HE Apps page.
	Select and run TP-Link Integration
	After the discovery completes, select "DONE". This will update the addresses.

### Commands

Commands	Input	Note
On/Off		Groups: All.

Refresh		Groups: All.
Set Level	Level (percent)	Groups: 2, 4, 5, 6.
Start Level Change	up / down	Groups 4, 5, 6. Change level by 2% every 1/2 second.
Stop Level Change		Groups 4, 5, 6.
Set Circadian		Groups 5, 6. Starts bulb-internal Circadian Program which sets the Color Temperature to match natural daylight (sort of).
Set Color Temperature	Color Temp	Groups 5, 6. Sets the color temperature. Group 5 range: (2700 to 6500) Group 6 range: (2500 to 9000)
Set Color	hue, saturation, level (percent)	Group 6.
Set Hue	hue (percent)	Group 6. Changes hue while maintaining current level and saturation
Set Saturation	saturation (percent)	Group 6. Changes saturation will maintaining current level and hue
Commands		
<b>Attributes</b>		
<b>Attribute</b>	<b>Value</b>	<b>Note</b>
switch	on/off/OFFLINE	Groups: All. OFFLINE, if persistent, indicates a device or device IP problem that should be resolved.
level	percent	Groups 2, 4, 5, 6
circadian State	normal / circadian	Groups 5, 6
colorTemperature	Range of command	Group 5, 6
color	hue, saturation, level	Group 6
colorMode	CT / RGB	Group 6.
colorName		Group 6. Programmed color or color temperature name.
power	Watts	Group 3.
energy	Kilo-watt Hours	Group 3. Energy used today.
currMonthTotal	Kilo-watt Hours	Group 3. Total as of end of previous day.
currMonthAvg	Kilo-watt Hours	Group 3. Total divided by days in month minus 1
LastMonthTotal	Kilo-watt Hours	Group 3. Last month total hours.
LastMonthAvg	Kilo-watt Hours	Group 3. Last month total/days. Will be low for incomplete months.
<b>Preferences</b>		
Device IP (Current = )		Groups: all. Appears only during a manual installation.
Number of the plug (00, 01, 02, etc.)		All multi-plugs. Note that the numbering starts at 00 (from device data). In the Kasa App, the number starts at 1
Device Refresh Rate		Groups: all. The basic refresh rate for the device. Default is 30 minutes.
Default Transition time (seconds)		Groups 4, 5, 6. Period of time for a bulb to fade on or off.
High Resolution Hue Scale		Group 6. Used to define if a controlling application uses high resolution hue, vice the bulb low resolution.
Enable debug logging		Groups: all. Turns on a detailed level of logging. Default is false.
Enable description text logging		Groups: all. Turns on a description test logging. Default is true.
Synchronize Names		Groups: all. Enables updating naming between the Kasa App and Hubitat when preferences are saved. Default is "Don't Synchronize". Options: Kasa (device) alias master: The Hubitat label (name) will be changed. Hubitat label master: The Kasa alias (name) will be changed.
shortPoll		Plug-switch and EM plug only. Not recommended. Sets 5 second polling as follows: a. for the standard plug-switch: polls on-off state to capture some turning on/off switch. b. for the EM plug: polls power level to determine (for example) if a dryer cycle has finished.

Enable energy monitoring features	EM Plug and EM Multi-Plug only. Default is false. Enable the collection of energy statistics for the device.
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