TECHNICAL BULLETIN

HIKVISION®

Title:	DS-7716NI-SP/16 POE Distribution		Version:	1.1	Date:	02/04/15
Product:	DS-7716NI-SP/16					
Action Required:	None, Information Only					

Summary

DS-7716NI-SP/16 NVR has 16 POE ports with a total power bank of 200W. This means that each port will be able to provide 12.5W.

If the cameras draw more power than the NVR can supply, the POE ports will shut down beginning from the last one and the NVR will lose the connection to the cameras connected to those ports. To prevent this from happening, first find out the power consumption of each camera that is being connected to the NVR.

With the new firmware v3.1.3, Hikvision has added an option to reallocate power between ports. This is a very useful feature when less than 16 cameras are being connected to the NVR. In this case, the power that is allocated to the unused ports can be reallocated to the ports that need extra power. The unused ports will remain active, however they will not provide power to POE devices.

If 16 VALUE Series cameras (DS-2CD2xx2) are connected to the NVR and each camera is consuming 9W of power, then the total consumed power will be 144W, which is less than the maximum 200W (Figure 1).

Ports 1-16	9W	9W	9W	9W	9W	9W	9W	9W
	9W	9W	9W	9W	9W	9W	9W	9W

Figure 1

In case a camera with higher power consumption is connected to one of the NVR ports, the POE consumption chart would look like Figure 2 (in this example a camera with higher power consumption is plugged into port 5).

Ports 1-16	9W	9W	9W	9W	15W	9W	9W	9W
	9W	9W	9W	9W	9W	9W	9W	X

Figure 2

If all 16 cameras consume 15W, then the last 3 ports (port 16, 15 and 14) will not provide power, but the ports 1-13 will have enough power for the connected cameras (Figure 3).

Ports 1-16	15W	15W	15W	15W	15W	15W	15W	15W
	15W	15W	15W	15W	15W	X	X	X

Figure 3

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More examples are shown in Figure 4 below:

Ports 1-16	17W	17W	17W	17W	17W	17W	17W	17W
	17W	17W	17W	X	X	X	X	X

Ports 1-16	30W	30W	30W	30W	30W	30W	X	X
	X	X	X	X	X	X	X	X

Firmware v3.1.3 has also made it possible to manually turn off or change the POE status of any port on the NVR. The POE can be switched from its default **.at** mode to **.af** mode or even turn off the POE. The NVR will also show the current power consumption (updated every second) as well as which ports have devices connected to them (Figure 4). This feature is located under **MENU➔CAMERA SETUP➔PORT INFORMATION**
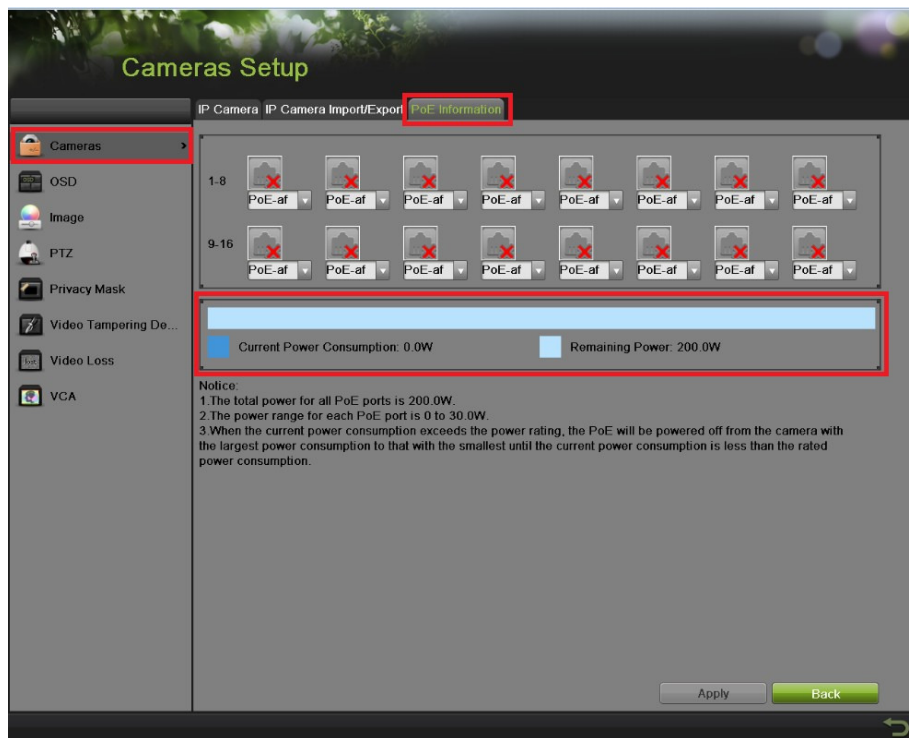

Figure 4

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The table below shows the power consumption of Hikvision cameras:

Series	Models	Power Consumption	Power Rating
VALUE	2xx2	5.5W – 9W	802.3af
PRO	72xx	<24W	802.3at
	82xx		
	7xxF-EZ	<9W	802.3af
	7xxF-EIZ	<12W	802.3af
	8x3F-E	8W	802.3af
	864F-E	8.5W	802.3af
	64xx	<6W	802.3af
SMART	40xx	<9W	802.3af
	41x2	11W	802.3af
	4124	14W	802.3at
	42xx	<13W	802.3at
	4A25	18W	802.3at
	43xx	12.3W	802.3af
	4525	17W	802.3at
PTZ	71x4	30W	HiPOE
	51x4	22W	802.3af
	4220	18W	802.3af
	2103	7W	802.3af
	8x30	50W	HiPOE
	6x30	40W	HiPOE
	52x6AEL	40W	HiPOE
	72x6	50W	HiPOE
	5220	25W	802.3at
	52x6AE3	25W	802.3at
	6223	40W	HiPOE
	8223	50W	HiPOE