Advantech AE Technical Share Document

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Category	■FAQ □ SOP	Related OS	N/A		
Abstract	The PoE output power limitation of Advantech PoE switch.				
Keyword	Managed PoE Switch, PSE, PoE Output Power, Power Budget, IEEE 802.3af, IEEE 802.3at				
Related Product	EKI-7710E-2CP, EKI-7710E-2CPI, EKI-7710G-2CP, EKI-7710G-2CPI, EKI-7712E-4FP, EKI-7712E-4FPI, EKI-7712G-4FP, EKI-7712G-4FPI, EKI-7428G-4CPI, EKI-7659CPI, EKI-9312P, EKI-9316P				

Problem Description:

- 1. How much is the output power limitation of PoE managed switch on each port (EKI-7659CPI and EKI-7710-2CPI)?
- 2. What is the meaning of power budget?

■ Answer:

Advantech PoE managed switch is a power source equipment (**PSE**) that supplies power of network device (PD). Based on IEEE 802.3af and IEEE 802.3at which output power are different. IEEE 802.3af is less than 15.4W called PoE. And IEEE 802.3at is called PoE+ which output power is less than 30W. Limitation of output power is related with chip, **Table.1.** shows all PoE managed switches and corresponded value.

Table.1. PoE Managed Switch Model and Power Limitation

Model	Chip	Power Input	Output Power Limit	Power Budget
EKI-7710E-2CP EKI-7710E-2CPI EKI-7710G-2CP EKI-7710G-2CPI	Realtek	24~48VDC	30W/Port Configured	120W
EKI-7712E-4FP EKI-7712E-4FPI EKI-7712G-4FP EKI-7712G-4FPI	Realtek	48VDC	30W/Port Configured	240W

EKI-7428G-4CPI	Realtek	48VDC	30W/Port Configured	685W
EKI-7659CPI (EOL)	Marvell	48VDC	15.4W/Port Configured	NO
EKI-9312P	Broadcom	48VDC	30W/Port Configured	181.6W
EKI-9316P	Broadcom	48VDC	30W/Port Configured	272.4W

In Table.1. it is the maximum default value in output power limit. Users can configure it on the Web GUI "Power over/of Ethernet". Fig.1. shows the configuration on EKI-7428G-4CPI.

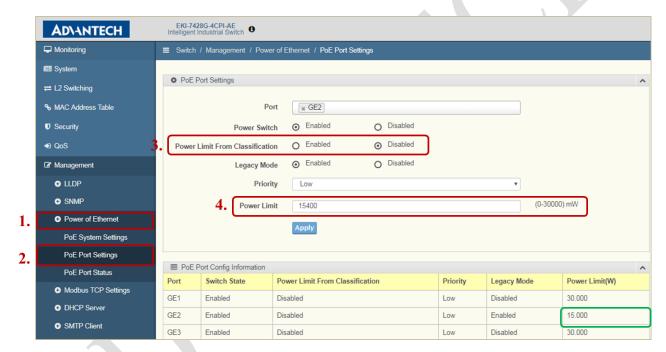


Fig.1. EKI-7428G-4CPI Power Limit Setting

■ Power Budget:

"Power Budgets "means pure for PoE power usage. Take EKI-7710G-2CPI as an example. It power budget is 120W and the maximum PoE output power of each port is 30W. As users connect a Powered device which power consumption is 30W to EKI-7710G-2CPI, it only can connect 4 same PoE devices. Because total PoE output consumption has reached 120W, the fifth PoE device can not work if it connected to switch.

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