48-PORT POE SWITCH + 4 SFP PORTS (1 unit)

Item	Requirement	Description	Compliance
1	Network Interface	Proposed switch must have (48) 10/100/1000 Mbps RJ45 Ethernet Ports (4) 1/10 Gbps SFP+ Ethernet Ports	Comply
2	Management Interface	Ethernet In-Band	Comply
3	Non-Blocking Throughput	Must at least provide 88 Gbps	Comply
4	Switching Capacity	Must at least provide 176 Gbps	Comply
5	Forwarding Rate	Must at least provide 130.944 Mbps	Comply
6	Maximum Power Consumption	The network switch must have a maximum power of 60W excluding PoE output.	Comply
7	PoE Interfaces	Must have 48 PoE ports which supports PoE+ IEEE 802.3af/at and 60W PoE++ IEEE 802.3af/at/bt	Comply
8	Max. PoE Wattage	At least 32 W per port - 802.3at 64 W per port - 802.3bt	Comply
9	Voltage Range 802.3at/bt Mode	Must have at least 50-57V	Comply
10	Voltage Range 802.3af Mode	Must have at least 44-57V	Comply
11	Power Supply	AC/DC, Internal, 660W	Comply
12	Operating Temperature	-5 to 40° C (23 to 104° F)	Comply
13	Operating Humidity	10 to 90% Noncondensing	Comply
14	ESD/EMP Protection	Air: ±16 kV, Contact: ±12 kV	Comply
15	Mounting	Rackmount	Comply
16	Shocks and vibration	Must conform with ETSI300-019-1.4 Standard	Comply
17	Certifications	CE, FCC, IC	Comply
18	Software Management	The switch must have a wireless network management software solution that allows to manage multiple wireless networks using a web browser.	Comply
19	Brand/Standard	The technology or brand must either be American or European for a more Global Standard compliance.	Comply
20	Local Support	The brand must have local 2nd level support via its distributor that is compliant with global standard like ISO or Duns and Bradstreet to maintain a quality-of-service (QOS) delivery.	Comply

SFP TRANSCEIVER (80 units)

Item	Requirement	Description	Compliance
1	Supported Media	Single-mode Fiber	Comply
2	Connector Type	(2) LC	Comply
3	TX Wavelength	1310 nm	Comply
4	RX Wavelength	1310 nm	Comply
5	Data Rate	10 Gbps SFP+	Comply
6	Max. Power Consumption	1W	Comply
7	Cable Distance	10 km	Comply
8	Operating Temperature	0 to 70° C (32 to 158° F)	Comply