Cost-optimized, Configure-free Gigabit Uplink PoE+ Switch for System Integrators.

Benchu group SP5200-8PFE2GE, an ideal Gigabit Uplink PoE Switch, provides a cost-effective advantage to local area networks of SMBs. Offering Layer 2 data packet switching and stable operation, this model also complies with IEEE 802.3at Power over Ethernet Plus (PoE+) at an affordable price.

By offering reliable switching technology and advanced networking features, the SP5200-8PFE2GE optimizes the installation and power management of network devices such as wireless access points, VoIP phones, and security cameras.

The SP5200-8PFE2GE is equipped with 8-10/100BASE-T Fast Ethernet ports and 2-10/100/1000BASE-T RJ45 interfaces with inner power system. Its 8 Fast Ethernet ports are integrated with an 802.3at PoE+ injector function. It offers a rack-mountable, safe and reliable power solution for SMBs deploying Power over Ethernet networks.

The PoE in-line power following the IEEE 802.3at/af standard makes the SP5200-8PFE2GE able to deliver 10/100M speed data and up to 30 watts of power per port to 8 PoE compliant powered devices (PDs) with a combined power output budget of up to 120 watts. Two 1Gb RJ45 and one 1Gb SFP+ ports   for aggregation to the network core.

The SP5200-8PFE2GE provides more flexibility in power requirement for all kinds of PDs with affordable installation costs.

Highlights

The Benchu group Unmanaged PoE+ Switches provides a great value, By offering reliable switching technology and advanced networking features, the PoE+ switch optimizes the installation and power management of network devices such as wireless access points, VoIP phones, and security cameras. It also eliminates time and cost of deployment by integrating power and data switching into one unit and freeing network devices from restrictions of power outlet locations and the additional AC wiring.

Key features include:

- Complies with IEEE 802.3af/at Power over Ethernet end-span PSE
- Up to 8 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 30 watts for each PoE port, all power up to 112W PoE budget.
- Each port supports 52V DC power to PoE powered device
- PD alive check function
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 250m
- Hardware-based 10/100Mbps and 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
- Flow control for full duplex operation and back pressure for half duplex operation
- Integrates address look-up engine, supporting 4K absolute MAC addresses
- Automatic address learning and address aging

Build a future-proof network with BENCHU:

- Solid performance with non-blocking architecture, 4K MAC addresses, 7.6Gbps Backplane bandwidth,4.17Mpps Switch Throughput
- Up to 8 ports of IEEE 802.3af/802.3at devices powered
- Distance Extended for Transmission of Power and Data to 250m
- Features port-based VLAN function that helps to prevent the IP camera's multicast or broadcast storm from influencing each other.
- PoE+ support on all ports，PoE power up to 30 watts for each PoE port

Fast Access

- The remote units provide the full line-speed forwarding capability. All ports support non-blocking data packet forwarding, providing users with high-speed access experience and meeting the requirements of high-bandwidth services such as HD video conferencing, online video, and large file download.

BENCHU Quality and Reliability

- Low power consumption, fanless, high-strength metal casing.
- high redundancy design, providing a long termand stable PoE power output.
- CE, FCC, RoHS, CB.
- The user-friendly panel can show the device status through the LED indicator of PWR, Link.

Easy operation and maintenance

- Hardware-based 10/100Mbps and 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X.
- Flow control for full duplex operation and back pressure for half duplex operation
- Supports Energy-Efficient Ethernet (EEE) function (IEEE 802.3az)
- Desktop installation, Silent design
- Plug and play, No configuration required

Hardware at a Glance

FRONT					REAR	SIDE
Model Name	10/100Base-T RJ45 ports	10/100/1000Base-T RJ45 ports	PoE+ 802.3at Ports	Power Budget	Power Supply	Fans
SP5200-8PFE2GE	8	2	8 PoE+	120W	1 internal PSU, fixed	Fanless

Performance at a Glance

Model Name	Packet buffer	Chip	Fabric	Switch Throughput@64bytes	MAC Address Table	Latency (Max Connection Speed)
SP5200-8PFE2GE	1MB	Realtek	7.6Gbps line-rate	4.17Mpps	4K	1G Copper: <3.35µs 1G Fiber: <2.5µs

Features and Benefits

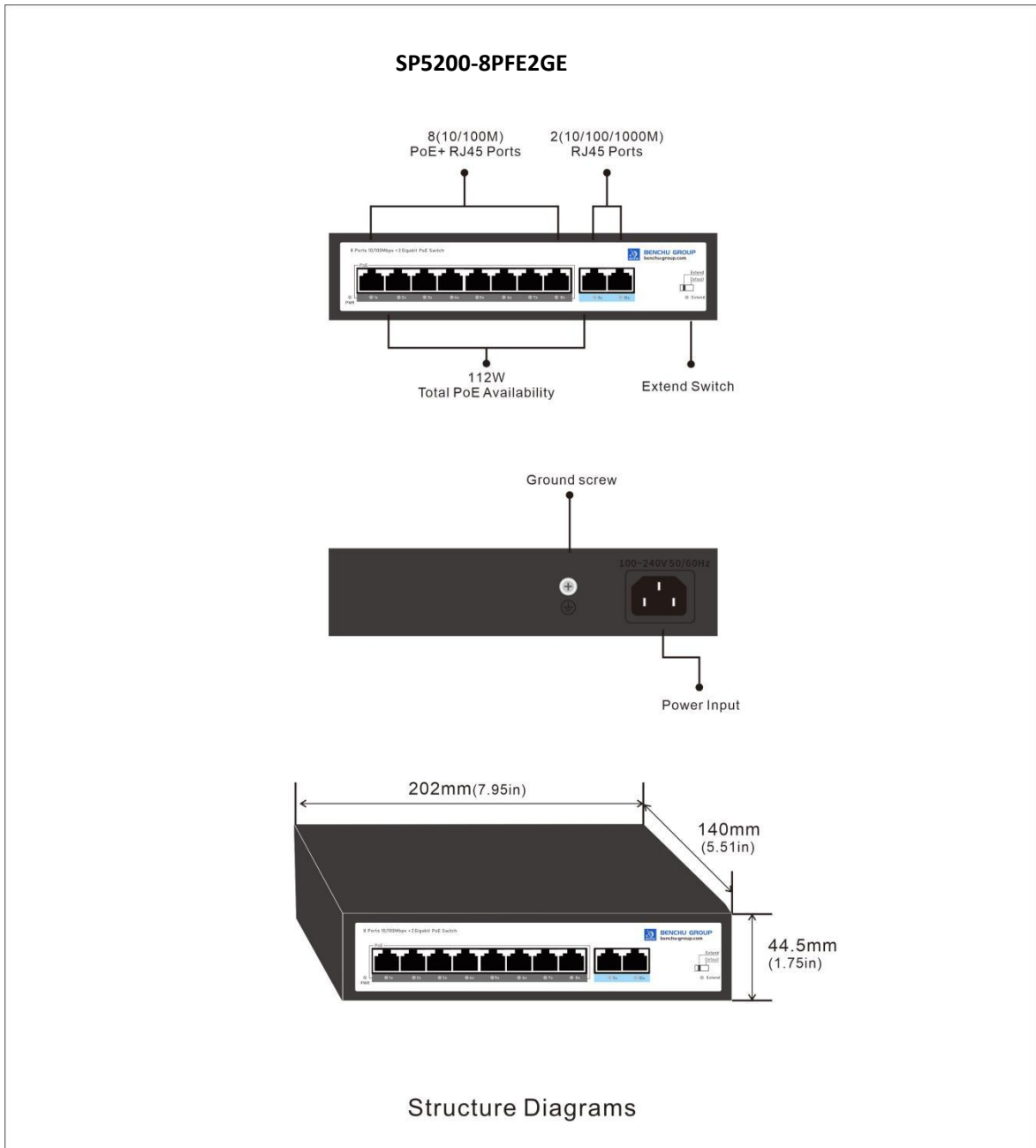| Hardware Features	
100BASE-T Copper Ethernet PoE+ connections	Support VoIP, Surveillance and Wi-Fi AP deployments, scal-able for future growth. Never face the risk of running out of PoE ports.
1000BASE-T Copper Ethernet connections	Two 1G RJ45 ports for aggregation to the network core. Support for Fiber and Copper modules.
Great choice of PoE port counts and PoE power budgets that can adapt to the business's needs	112W PoE budget available across 8 – 100Mbps PoE+ ports (802.3at) – Connect multiple power demanding devices to your network with a single wire for power and connectivity.
Energy Efficient Ethernet (IEEE 802.3az)	Maximum power reduction for onging operational cost savings.

Target Application

Network Convergence
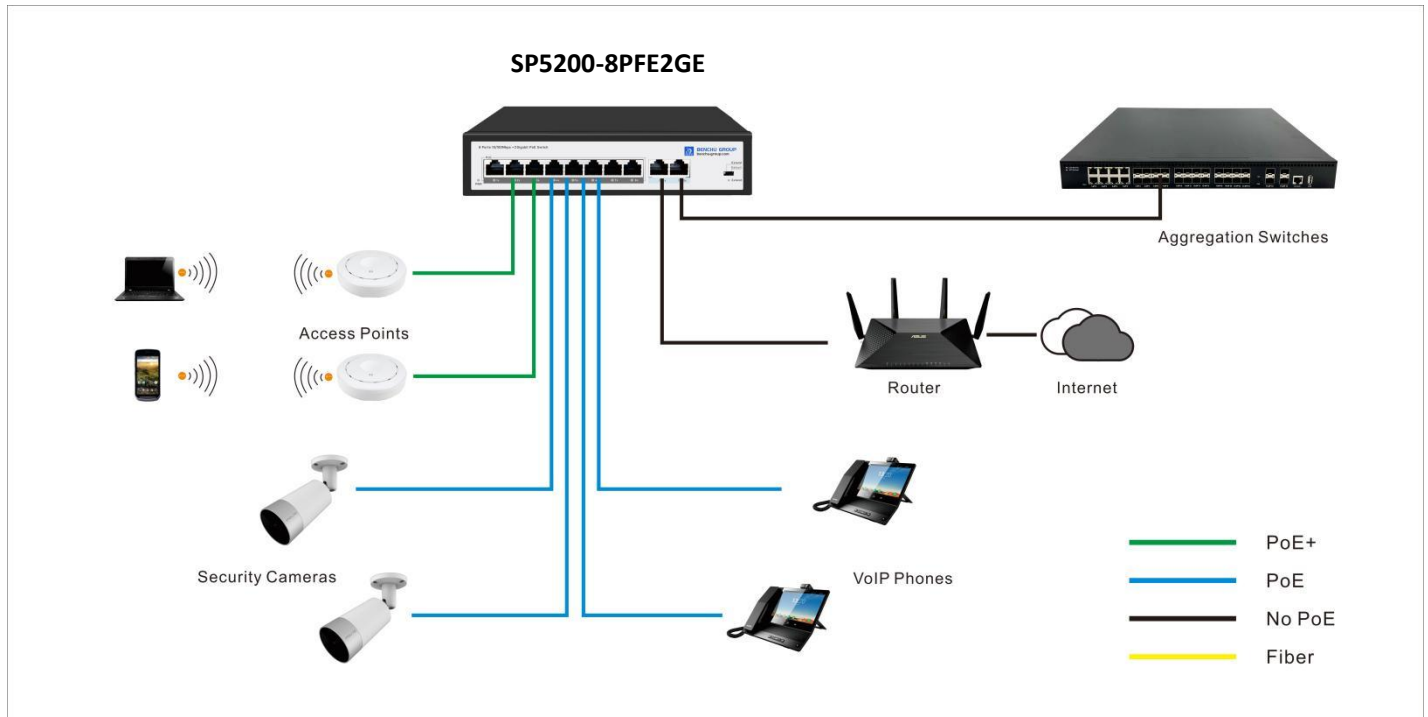
Within small and medium-sized organizations — especially in the hospitality, catering, education, and retail industries — there is growing deployment of VoIP phones, IP security cameras, video-over-IP endpoints, proximity sensors, LED lighting, secure access door locks, and other IoT devices. The dense proximity of these devices requires network switches capable of supporting PoE so a network manager can add power-hungry devices to the network with a single wire for power AND connectivity. Wave 2 802.11ac wireless access points and pan-tilt-zoom HD surveillance cameras with features such as night vision and built-in motion tracking also require PoE+ power (802.3at), increasing the power demands on PoE switches.

The new 8-port BENCHU GROUP PoE+ Switches support dense deployments of these modern high-power PoE+ devices. with enhanced performance and a focus on usability within commercial environments:

- 112W PoE budget across 8 x 100M PoE+ ports
- 2 x 1Gb RJ45 Ports for aggregation to the network core to facilitate users' flexible networking
- Comply with IEEE 802.3 af/at PoE power supply standard, automatically identify PoE equipment for power supply.
- PoE ports support priority mechanism. When the remaining power is insufficient, priority is given to ensuring the power supply of high-priority ports to avoid equipment overload.
- Support non-blocking wire-speed forwarding.
- Plug and play, no configuration, simple and convenient.
- Limited Lifetime* Warranty, Tech support

Structure Diagrams

SP5200-8PFE2GE

8(10/100M)
PoE+ RJ45 Ports

2(10/100/1000M)
RJ45 Ports

112W
Total PoE Availability

Extend Switch

Ground screw

100~240V 50/60Hz

Power Input

202mm(7.95in)

140mm
(5.51in)

44.5mm
(1.75in)

Structure Diagrams

Technical Specifications	SP5200-8PFE2GE
10M/100M RJ-45 copper ports	8
10M/100M/1G RJ-45 copper ports	2
PoE / PoE+ ports	8 PoE+
Power over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus/PSE； Backward compatible with IEEE 802.3af Power over Ethernet
PoE Power Supply Type	End-span: 1/2 (+), 3/6 (-)
PoE Power Output	Per port 52V DC, 300mA. max. 15.4 watts (IEEE 802.3af)； Per port 52V DC, 600mA. max. 30 watts (IEEE 802.3at)
PoE Power Budget	112 Watts
Number of PDs, 7 watts	8
Number of PDs, 15 watts	7
Number of PDs, 30 watts	3
Performance Specification	
Chip	Realtek
Packet buffer memory (Dynamically shared across only used ports)	1 Mb
Forwarding modes	Store-and-forward
Bandwidth	7.6 Gbps
Packet forwarding rate (64 byte packet size) (Mpps)	4.17Mpps
MAC address database size (48-bit MAC ad-dresses)	4K
Forwarding Mode	Store and Forward(Full Wire Speed)
Mean Time Between Failures (MTBF) @ 25°C	109,563 hours
100M Copper Latency (64-byte; 1518-byte; 9216-byte frames)	8.821μs; 8.722μs; 8.635μs
1G Copper Latency (64-byte; 1518-byte; 9216-byte frames)	3.643μs; 3.552μs; 3.433μs

IEEE Network Protocols	SP5200-8PFE2GE
• IEEE 802.3 Ethernet	• IEEE 802.3af PoE
• IEEE 802.3u 100BASE-T	• IEEE 802.3at PoE+
• IEEE 802.3ab 1000BASE-T	• IEEE 802.3az Energy Efficient Ethernet (EEE)
• IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX	• IEEE 802.3x Full-Duplex Flow Control
Monitoring	
LEDs	Yes
Per port	Speed, Link, Activity; PoE in different mode
Per device	Power
Physical Specifications	
Dimensions	202 x 140 x 44.5mm (7.95 x 5.51 x 1.75 in)
Weight	1.1 kg (2.53 lb)
Power Consumption (when all ports used, line-rate traffic and max PoE)	120W
Max power (worst case, all ports used, full PoE, line-rate traffic) (Watts)	8W
Iddle power consumption (all ports link-down standby) (Watts)	5W
Energy Efficient Ethernet (EEE) IEEE 802.3az	Yes (deactivated by default)
Fan	Fanless
Environmental Specifications	
Operating	
Operating Temperature	-20° to 50°C (-4° to 122°F)
Humidity	90% maximum relative humidity (RH), non-condensing
Altitude	10,000 ft (3,000 m) maximum
Storage	
Storage Temperature	−20° to 70°C (− 4° to 158°F)
Humidity (relative)	95% maximum relative humidity, non-condensing
Altitude	10,000 ft (3,000 m) maximum

Electromagnetic Emissions and Immunity	
Certifications	CE mark, commercial
	FCC Part 15 Class A, VCCI Class A
	Class A EN 55022 (CISPR 22) Class A
	Class A C-Tick
	EN 55024
	CCC
	47 CFR FCC Part 15, SubpartB, Class A ICES-003: 2016 Issue 6, Class A
	ANSI C63.4:2014
	IEC 60950-1:2005 (ed.2)+A1:2009+A2:2013 AN/NZS CISPR 22:2009+A1:2010 CLASS A

Safety	
Certifications	CB mark, commercial
	CSA certified (CSA 22.2 #950)
	UL listed (UL 1950)/cUL IEC 950/EN 60950
	EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 IEC 60950-1:2005
	(ed.2)+A1:2009+A2:2013
	AN/NZS 60950.1:2015
	CCC (China Compulsory Certificate)

Warranty and Support	
Hardware Limited Warranty	Limited Lifetime*
Technical Support via Phone and Email*	Limited Lifetime*
Limited Lifetime* 24x7 Online Chat Technical Support	Limited Lifetime*

Package Contents	
All models	Smart Switch
	AC Power cord with C13 connector (localized to region of sale)
	Brackets and screws for rack mounting
	Rubber protection caps, which are already installed in the SFP sockets Installation guide

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