



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

Benchu group SP5200-4PGE1GE1GF, an ideal Gigabit 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 SP5200-4PGE1GE1GF optimizes the installation and power management of network devices such as wireless access points, VoIP phones, and security cameras.

The SP5200-4PGE1GE1GF is equipped with Five 10/100/1000BASE-T Gigabit Ethernet ports and 1-1000BASE-X SFP interfaces with inner power system. Its 4 Gigabit 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 SP5200-4PGE1GE1GF able to deliver Gigabit speed data and up to 30 watts of power per port to 4 PoE compliant powered devices (PDs) with a combined power output budget of up to 65 watts. The SP5200-4PGE1GE1GF provides more flexibility in power requirement for all kinds of PDs with affordable installation costs.

Highlights

The Benchu group Gigabit 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 4 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 30 watts for each PoE port, all power up to 58W PoE budget.
- PD alive check function
- Each port supports 52V DC power to PoE powered device
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m
- Hardware-based 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
- Supports Energy-Efficient Ethernet (EEE) function (IEEE 802.3az)

Build a future-proof network with BENCHU:

- Solid performance with non-blocking architecture, 4K MAC addresses, 24Gbps Backplane bandwidth, 8.93Mpps Switch Throughput, 9216 bytes Jumbo Frame
- Up to 4 ports of IEEE 802.3af/802.3at devices powered
- PoE+ support on all ports, PoE power up to 30 watts for each PoE port
- 1 Dedicated SFP fiber uplink, Extends network distance up to 2KM/20KM/40KM/60KM/80KM/120KM with optical fiber.

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 term and 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 10/100/1000Mbps 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 Operation
- Plug and play, No configuration required



Hardware at a Glance

| FRONT | | | | | REAR | SIDE |
|-------------------|------------------------------|--------------------------|--------------------|--------------|-----------------------|---------|
| Model Name | 10/100/1000Base-T RJ45 ports | 1GBASE-X Fiber SFP Ports | PoE+ 802.3at Ports | Power Budget | Power Supply | Fans |
| SP5200-4PGE1GE1GF | 5 | 1 | 4 PoE+ | 65W | 1 internal PSU, fixed | Fanless |

Performance at a Glance

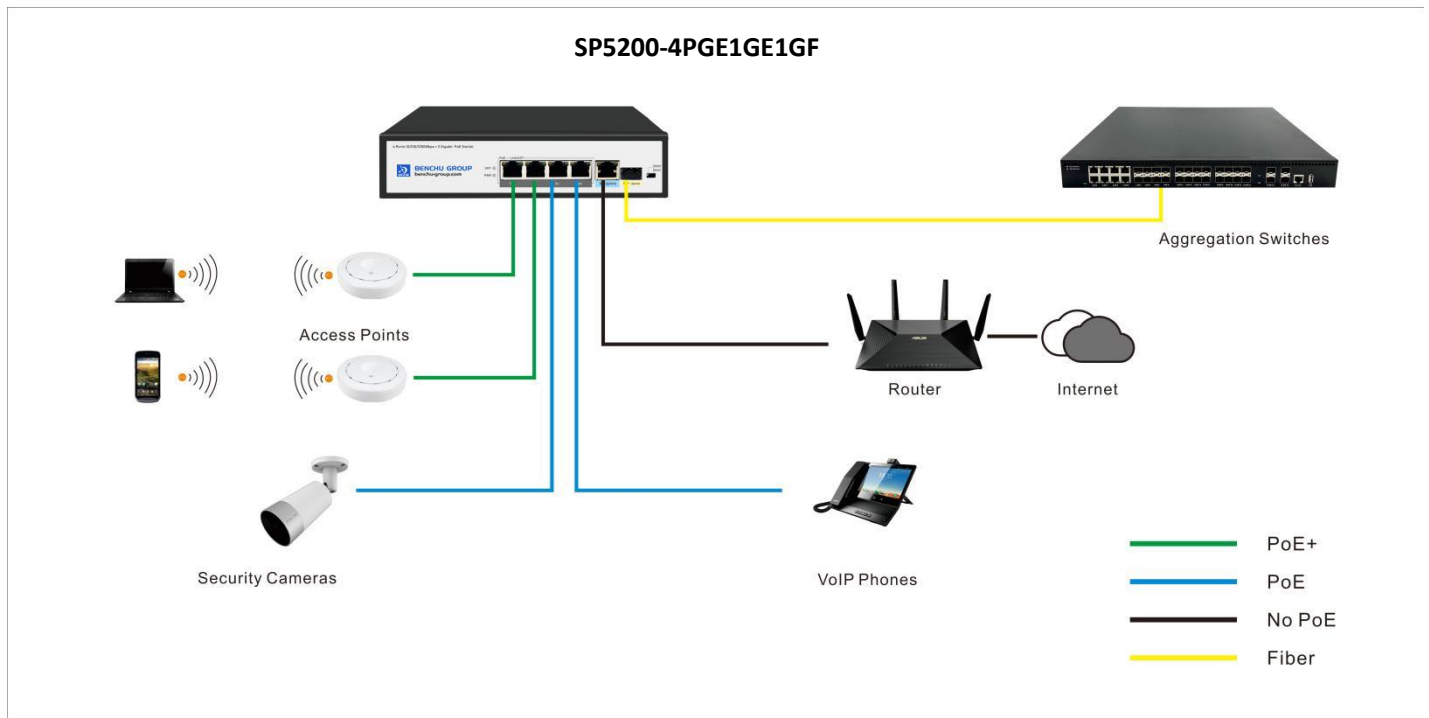
| Model Name | Packet buffer | Chip | Fabric | Switch Throughput@64bytes | MAC Address Table | Jumbo Frame | Latency (Max Connection Speed) |
|-------------------|---------------|---------|------------------|---------------------------|-------------------|-------------|--|
| SP5200-4PGE1GE1GF | 1.2MB | Realtek | 24Gbps line-rate | 8.93Mpps | 4K | 9216 bytes | 1G Copper: <3.35μs 1G Fiber: <2.5μs |

Features and Benefits

| Hardware Features | |
|--|--|
| 1000BASE-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. |
| 1GBASE-X Fiber SFP ports | One 1Gb SFP 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 | 58W PoE budget available across 4 Gigabit 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 ongoing operational cost savings. |

Target Application

Network Convergence

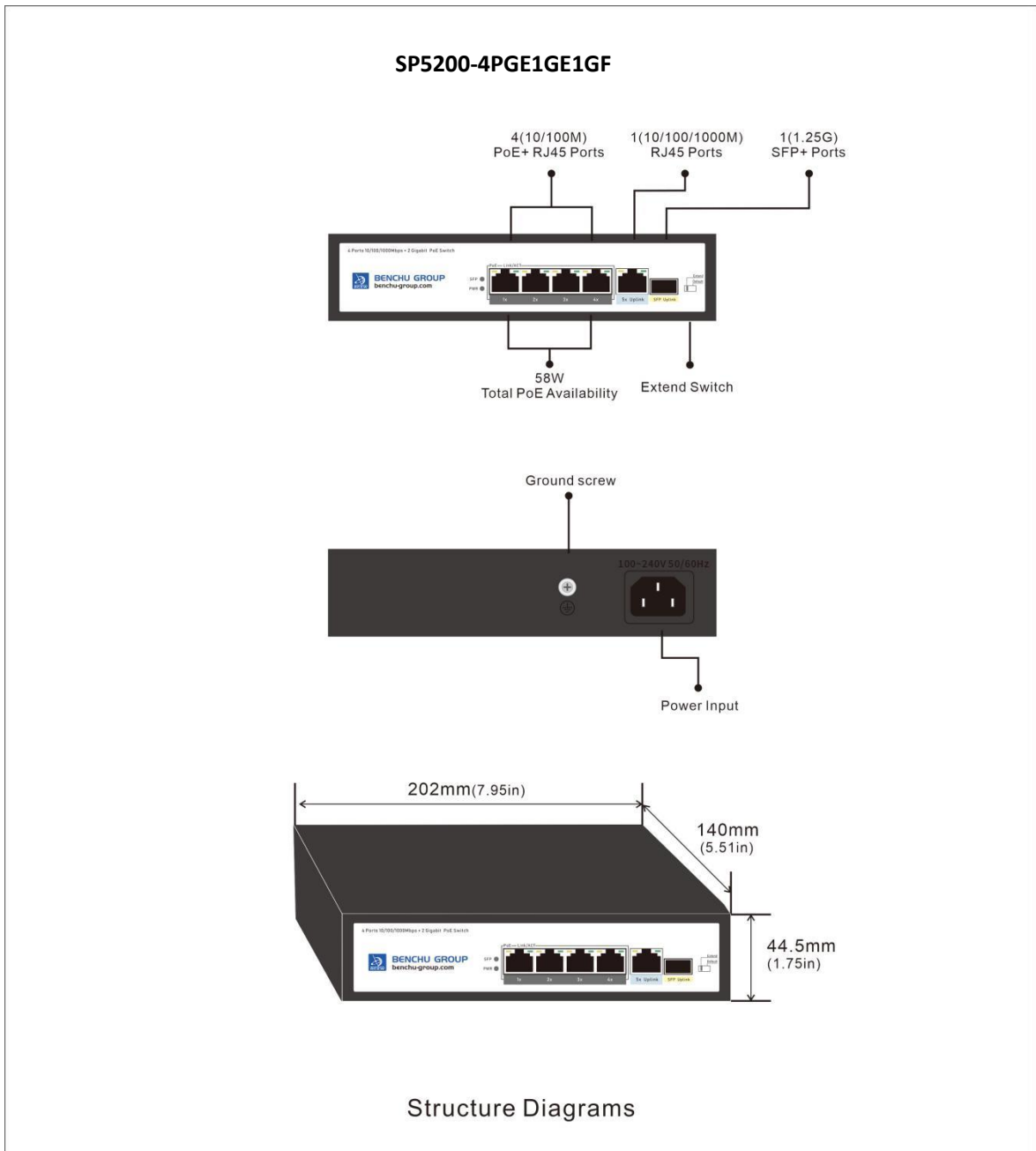


Within small and medium-sized organizations — especially in the hospitality, catering, education, and retail industries — there is growing deployment of VoIP phones, IP security cameras, video-over-IP endpoints, proximity sensors, LED lighting, secure access door locks, and other IoT devices. These devices require 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 4-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:

- 58W PoE budget across 4 Gigabit PoE+ ports
- 1 x 1Gb RJ45 and 1 x Gb SFP fiber 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



Structure Diagrams



| Technical Specifications | SP5200-4PGE1GE1GF |
|--|---|
| 10M/100M/1G RJ-45 copper ports | 5 |
| PoE / PoE+ ports | 4 PoE+ |
| 1G SFP (fiber) ports | 1 |
| 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 | 58 Watts |
| Number of PDs, 7 watts | 4 |
| Number of PDs, 15 watts | 4 |
| Number of PDs, 30 watts | 2 |
| Performance Specification | |
| Chip | Realtek |
| Packet buffer memory (Dynamically shared across only used ports) | 1.7 Mb |
| Forwarding modes | Store-and-forward |
| Bandwidth | 24 Gbps |
| Packet forwarding rate (64 byte packet size) (Mpps) | 8.93Mpps |
| MAC address database size (48-bit MAC addresses) | 4K |
| Jumbo frame support (bytes) | Up to 9K packet size |
| Forwarding Mode | Store and Forward(Full Wire Speed) |
| Mean Time Between Failures (MTBF) @ 25°C | 126,320 hours |
| 100M Copper Latency (64-byte; 1518-byte; 9216-byte frames) | 8.312µs; 8.413µs; 8.454µs |
| 1G Copper Latency (64-byte; 1518-byte; 9216-byte frames) | 3.515µs; 3.546µs; 3.627µs |
| 1G Fiber Latency (64-byte; 1518-byte; 9216-byte frames) | 2.986µs; 3.103µs; 3.181µs |



| IEEE Network Protocols | SP5200-4PGE1GE1GF |
|---|--|
| <ul style="list-style-type: none">• IEEE 802.3 Ethernet• IEEE 802.3u 100BASE-T• IEEE 802.3ab 1000BASE-T• IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX | <ul style="list-style-type: none">• IEEE 802.3af PoE• IEEE 802.3at PoE+• IEEE 802.3az Energy Efficient Ethernet (EEE)• 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 | 0.95 kg (2.09 lb) |
| Power Requirements | AC 100~240V 50/60Hz |
| Power Consumption (when all ports used, line-rate traffic and max PoE) | 65W |
| Max power (worst case, all ports used, full PoE, line-rate traffic) (Watts) | 7W |
| Idle 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 | <p>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</p> |
|----------------|---|

Safety

| | |
|----------------|---|
| Certifications | <p>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)</p> |
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Warranty and Support

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|--|-------------------|
| 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 | <p>Smart PoE Switch AC Power cord with C13 connector (localized to region of sale) Rubber protection caps, which are already installed in the SFP sockets Installation guide User's manual</p> |
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