



# SAW Esports Arena

SAW Esports Arena is the first infrastructure in Portugal exclusively dedicated to a professional eSports team. Resulting from a €1.5 million investment by the SAW organization, the 800 m² arena was inaugurated in October 2024 and marks a new milestone in the professionalization of the sector in Portugal.

Located in Vila Nova de Gaia, it offers an immersive experience for players and fans, with multiple technical and functional zones:

- Pro Arena (100 spectator capacity, UHD transmission technology);
- Gaming Rooms (training and bootcamps with professional hardware);
- Streaming Rooms (live content production);
- Media Room (ledwall for visual content);
- Lobby Eat.Drink (social and dining area).

This project materializes SAW's mission to strengthen the national eSports community through high-performance connectivity and excellent infrastructure, designed to host training, bootcamps, events, and educational sessions.

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## Customer

SAW Esports Arena

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## Integrator Partner

The structured cabling installation was carried out by Renato Simões, Unipessoal Lda, a specialist in electrical and telecommunications installations. The infrastructure certification was handled by Justbit, official barpa integrator, with extensive experience in high-performance network solutions.

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## Location

Vila Nova de Gaia, Portugal

### Implemented Solution

The infrastructure was designed to support high-demand environments such as LAN games and simultaneous streaming for multiple platforms, with the following elements:

- Backbone in barpa OM5 fiber optics, with 12-fiber cables per link, star topology and ring redundancy — allowing up to 6 channels of 100 Gbps.
- 3 barpa Norma 3 floor-standing racks, strategically distributed for maximum efficiency and accessibility.
- 120 Cat.8 S/FTP network points, for traffic up to 40 Gbps with minimal latency.
- 20 Cat.6A U/FTP network points, dedicated to high-performance Access Points (10 Gbps).

The solution ensures scalability, robustness, and readiness for future technological upgrades.

### Challenge

The most critical technical limitation was the maximum distance of Cat.8 cabling, which allows up to 24 meters for Permanent Link (30 meters channel). To meet this condition, rigorous planning of the physical topology and rack locations was required.

In the main technical room, a 38U rack (800×800 mm) from the Norma 3 series was installed. For secondary distribution points, more compact racks (15U and 20U) were used, maintaining 800 mm depth to accommodate switches and cable management. The perforated doors provide adequate passive airflow — essential for continuous operation environments.

### Choosing our Partner

Justbit's recommendation as the integrator came directly from barpa to the installer Renato Simões, following a technical visit to the arena's facilities. During that visit, the complete solution was presented — including components, certification, and compatibility with the arena's requirements.

The collaboration between barpa, the installer, and the arena's technical director, Joaquim Regadas, allowed validation of all technical aspects and ensured a high-quality, rigorously executed installation, focused on infrastructure reliability and performance.

## SAW Esports Arena Case Study

### Installation

#### Method

The infrastructure was implemented with a backbone in OM5 fiber optics, using 12-fiber cables and the fusion method, ensuring stability, performance, and low attenuation. The entire network was designed in accordance with international standards EN 50173 / 50174, TIA/EIA-568, and ISO/IEC 11801, ensuring a reliable, scalable structure prepared for high-demand technological environments.

#### Reason

The high standards of SAW Esports Arena, with distributed technical zones and large volumes of real-time data, required a structured network with redundancy, low latency, and interference immunity. The barpa solution met these requirements with high technical precision.

#### Execution

The installation phase involved close coordination between specialties, particularly networks, electricity, and AV. Tests and validations were carried out with critical equipment such as the modular LED screen, gaming computers, streaming systems, and all audiovisual switching, ensuring full compatibility and operational reliability.



## SAW Esports Arena Case Study

### Result

The installed network infrastructure fully met technical and operational requirements, demonstrating high performance and reliability. Certification carried out by Justbit, barpa integrator, confirmed full compliance with international standards and the defined technical objectives.

The use of shielded Cat.8 cabling (S/FTP) enabled transmissions of up to 40 Gbps at maximum required distances (24 m Permanent Link / 30 m Channel), with extremely low latency — ideal for critical applications. Its shielding ensured protection against EMI and effective elimination of Alien Crosstalk (AXT) — an essential factor in an environment densely populated with electronic equipment.

The optical backbone, in turn, provided resilience and bandwidth for future expansion, supporting control, AV, security, and content production systems without compromising the performance of the main network.

**This project marked a milestone in technology infrastructure for spaces dedicated to eSports in Portugal. The integration of barpa's connectivity solutions, combined with effective coordination between implementation and certification teams, allowed us to deliver a high-performance, reliable network ready to support the challenges of such a demanding environment. We are proud to see SAW Esports Arena operate with complete confidence in the infrastructure we helped bring to life.**

**João Anjos**

Technical Director • Justbit