

Historic city, modern digital education



City of Worms enables 27 schools to have equal access to digital education with LANCOM

The city of Worms, with around 85,000 inhabitants, not only has a history spanning more than 2,000 years and a firm place in the Nibelung legend, but also a clear mission for the future: to reliably integrate digital education into everyday school life – regardless of school type, building condition, or budget. The DigitalPakt (a German government funding program for the digitalization of education) marked the starting point, but it quickly became clear: without a robust LAN and WLAN foundation, modern digital-based teaching cannot scale. Together with EWR AG as the contractor and Gasser GmbH, a standardized, centrally manageable school network was created for 27 schools across the city – from primary schools to vocational institutions, including two schools near the hospital. At the core of the approach: a comprehensive LANCOM solution, centrally managed via the LANCOM Management Cloud (LMC) and designed for security, stability, and consistency.

The challenge: diversity of schools, mixed buildings – and still a shared digital foundation

Before the project began, there was no comprehensive network infrastructure in Worms schools on which modern digital teaching could be built. As in many historic cities with long-established schools, there were often only a few data outlets in selected rooms

such as staff rooms or computer labs, and limited Wi-Fi availability – varying from school to school, with no consistent standard. There was also no security architecture in place using school firewalls.

In addition, there were very different structural conditions: new buildings, listed historic school buildings (including the more than 200-year-old Nibelungen School), temporary container solutions during renovations, and large sports halls that are also used by clubs – with the desire to share the Wi-Fi infrastructure. At the same time, public sector requirements (including GDPR and youth protection content filtering) had to be consistently addressed. The goal was to create a setup that allows individual rules and educational concepts for each school while still being centrally manageable.

The solution: a holistic, digitally sovereign and standardized school network from LANCOM

The target vision was clear: a fast, reliable network at all schools – homogeneous, centrally administrable, and with a strong price-performance ratio. The decision was made in favor of a complete LANCOM infrastructure from a single source: routers / VPN, switching, Wi-Fi, and firewalls, all controlled via centralized management in the LANCOM Management Cloud (LMC).

The foundation of connectivity is formed by fiber optic connections at all locations. Through close and effective collaboration between the city of Worms and EWR AG, symmetrical connections were implemented and costs were significantly optimized – an important lever, as individual site developments (e.g., those requiring civil engineering work) were not fully covered by funding from the DigitalPakt.



“Particularly pleasant is the fact that you are not just a number in the system, nor is the sole focus purely on sales interests, as is often the case with some American companies. In addition to the good price-performance ratio, LANCOM simply demonstrated a more constructive, equal partnership collaboration in the best interest of customers. We speak the same language when it comes to data protection and information security.”

Werner Zehe,
Head of IT Department,
City Administration of Worms

While cooperation among all project participants was characterized by accessibility, mutual respect, and a willingness to help, LANCOM devices impressed with their broad range of applications: interface-rich routers / gateways, aggregation and access switches, cost-effective Wi-Fi 6 access points, and firewalls for various performance requirements.

This made it possible to cover both simple primary school scenarios and more demanding requirements – such as those at vocational schools with IT-focused training programs. A key added value is the standardized management: all components can be managed via the LMC within a unified framework, ensuring consistent operation and further development across all schools.

The rollout: the right solution for every school

The project began in December 2020, based on a needs assessment covering the pedagogical concepts, structural and technical conditions, as well as the regulations of the individual schools. One key priority for everyone involved in the project was clear: “It was important to us to give all schools – regardless of their financial resources – the same opportunities to implement their educational concepts and thus promote a certain degree of social equity,” said Werner Zehe, Head of IT, City Administration of Worms.

Close collaboration between the city of Worms, EWR AG, and Gasser GmbH followed: requirements were consolidated, solutions evaluated, and the decision for a full LANCOM infrastructure was made. Gasser GmbH handled planning and rollout, while operation and maintenance are now centrally managed via the LMC by the city's IT team, supported by Gasser and LANCOM.

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Uniform, stable, recognized – and ready for large-scale digital education

Today, Worms has a unified management infrastructure that consistently provides WLAN and LAN across all schools – regardless of school type or building condition. Quality and availability are described as high: there are no complaints, and everyday school operations run smoothly. Although Worms is one of Germany's oldest and most

historic cities, it is also an impressive example of rapid and consistent digitalization in education – demonstrating how the DigitalPakt can be successfully implemented with the right partners. The result: a platform that supports educational goals and provides equal opportunities for all schools.

The customer

The city of Worms is a historic municipality in Rhineland-Palatinate with around 85,000 inhabitants and is responsible for the digital infrastructure of its schools. Together with EWR AG as its central infrastructure and implementation partner, it is actively driving forward the digitalization of the educational landscape. The project focused on creating a future-proof, standardized IT foundation for all schools, as well as ensuring equal opportunities, data protection, and cost-efficient operations.

The partner

Gasser GmbH is a regional IT system integrator with many years of experience in implementing complex infrastructure projects in the public sector. In this project, Gasser was responsible for the planning and rollout of the network solution and worked closely with the city of Worms and EWR AG. Key factors for success were the collaborative partnership on equal footing and the commitment to delivering a sustainable, centrally managed end-to-end solution. These standards were also applied to the products – and were met by LANCOM Systems.

At a glance

The customer



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The contractor

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The Partner

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Requirements

- Homogeneous, modern network for all schools instead of isolated solutions
- Reliable performance for digital teaching (from elementary school to vocational education)
- Centralized management of all products via LANCOM Management Cloud
- GDPR compliance and high standards of data protection and information security in the public sector
- Strong price-performance ratio and reliable support

Components used

Firewalls:

- LANCOM R&S® Unified Firewall: UF-260 / UF-300 / UF-360 / UF-500 / UF-560 / UF-760 / UF-910

Routers / VPN / SD-WAN:

- 1793VA / 1793VAW / 1906VA / 1926VAG / ISG-1000 / ISG-4000

Switches:

- GS-2310P+ / GS-2328F / GS-3126XP / GS-3152X / GS-3152XP / GS-3528XP / GS-3652XP / XS-5110F / XS-5116QF

WLAN / Access Points:

- LW-600

Network management:

- LANCOM Management Cloud (LMC)

