

# High-Speed Campus Wi-Fi with 10 Gigabit Wired Backbone



### EXECUTIVE SUMMARY

<b>Customer</b>	Gottlieb-Daimler-School 1
<b>Industry</b>	Education
<b>Location</b>	Germany
<b>Challenge</b>	Updating Wired and Wireless Network
<b>Solution</b>	DXS-3600-32S, DGS-3420, DWC-2000, DWL-8610AP
<b>Results</b>	High-speed wireless connectivity, wired backbone network without bottlenecks

*Gottlieb-Daimler-School 1 offers a wide range of subjects and educational courses. The school brings a total of ten different course tracks together under one roof. Baden-Wuerttemberg school authority, where the school is located within, is particularly interested in encouraging the use of tablets in secondary schools.*

- Redundant dual 10 Gigabit connectivity to data centres and backbone network
- Network aggregation to each building
- Latest 802.11ac wireless connectivity
- Uninterrupted power support for services like VoIP/Wi-Fi

“This was a highly complex project which we had a wide range of requirements to accommodate. Thanks to D-Link devices and our collaboration with Conetis, it was completed with great success.”

Dirk Riebesell, IT director of GDS 1

## Challenge

With up to 32 tablets being used in each classroom, adequate wireless network needed to be in place as well as the supporting wired network infrastructure. At the same time, the school's phone system, originally installed in 1980, was in need of a complete overhaul. The existing wired network was experiencing bottleneck issues, along with outdated wireless access points that were installed 10 years ago.

## Solution

The project required extensive and precise planning to ensure that the school would be equipped for future requirements as well. They wanted to avoid cutting corners in terms of either quality or quantity, but always keeping the budget in mind. Conetis GmbH bid in on the project with network equipment and access points from D-Link, and was ultimately awarded the contract, to deliver:

- Multiple network connections in the staff rooms and classrooms

## Result

45 high-performance Wireless AC1750 Dual-Band Access Points (DWL-8610AP) was distributed throughout the school's two theory buildings, A and B. They are controlled centrally by a redundant pair of DWC-2000 Wireless Controllers. Each building includes a stack of four DGS-3420 series Gigabit Layer 2+ managed switches. Each of those stacks has a redundant 10Gb uplink connection to the central campus backbone. The backbone itself, in turn, comprises a stack of two redundant DXS-3600-32 series 10 Gigabit Layer 3 Managed Switches. Critical switches (backbone, PoE/VoIP) are also powered by Uninterruptible Power Supplies.

The next step will be continuously expanding the network's range of applications. Phase two of the network construction process will also continue, with the network being expanded to include other buildings. Thanks to foresight in project planning and consistent project realisation, Gottlieb-Daimler-School 1 is now exceptionally well prepared to implement new digital learning concepts.

## Products & Services

- DXS-3600-32S
- DGS-3420
- DWC-2000
- DWL-8610AP



DXS-3600-32S



DGS-3420



DWC-2000



DWL-8610AP