



End-to-End Private 5G Network

Introduction

D-Link's end-to-end private 5G network solutions include the 5G core network (D-5GCore), Open Radio Access Network (O-RAN)-based Radio Units (RU) and Baseband Units (BBU), small cells, 5G industrial routers, IIoT gateways, modems, and Ethernet switches. Advanced 5G technology brings unmatched speed and versatility, unlocking new possibilities in various sectors.

O-RAN connectivity offers broad enterprise network coverage with benefits such as interoperability, cost savings, improved resiliency, scalability through disaggregation, and enhanced security. In crowded areas, integrated small cells enable rapid, cost-effective 5G deployment with minimal maintenance and virtually limitless scalability.

D-Link offers budget-friendly backhaul switches for high-speed data and IEEE 1588v2 time sync. D-Link private 5G solution supports innovation in education, healthcare, entertainment, manufacturing, retail, and more.

D-Link Connectivity Features



High-Speed Connectivity

Private 5G networks offer ultra-fast data transfer speeds for high-throughput applications like AR (Augmented Reality), VR (Virtual Reality), 4K/8K video streaming, and high-resolution content transfer.



Low Latency

5G technology offers lower latency compared to previous wireless standards. This is essential for real-time applications like remote control of machinery, telemedicine, autonomous vehicles, and industrial automation.



Reliability

Private 5G networks are highly reliable, making them suitable for mission-critical applications. They offer consistent performance and low packet loss, which is important for applications that cannot afford disruptions.



Dedicated and Secure

Private 5G networks offer dedicated, secure communication infrastructure isolated from public networks, crucial for industries with sensitive data like finance, healthcare, and government.



IoT and Industry 4.0

Private 5G is an ideal platform for deploying large-scale IoT solutions and Industry 4.0 initiatives. It enables smart factories, smart agriculture, and other IoT-driven applications.

Connection Diagram

D-Link's Private 5G Network solution is an one-stop solution to quickly deploy optimized private 5G networks for a wide range of low-latency application scenarios, providing your opportunity to connect everyone and everything.

D-5GCore

Tailored for Private Networks to maximize efficiency and connectivity.

O-RAN

Flexible Compliant Radio & Baseband Units with All-in-One Small Cells for scalable network expansion.

5G CPEs

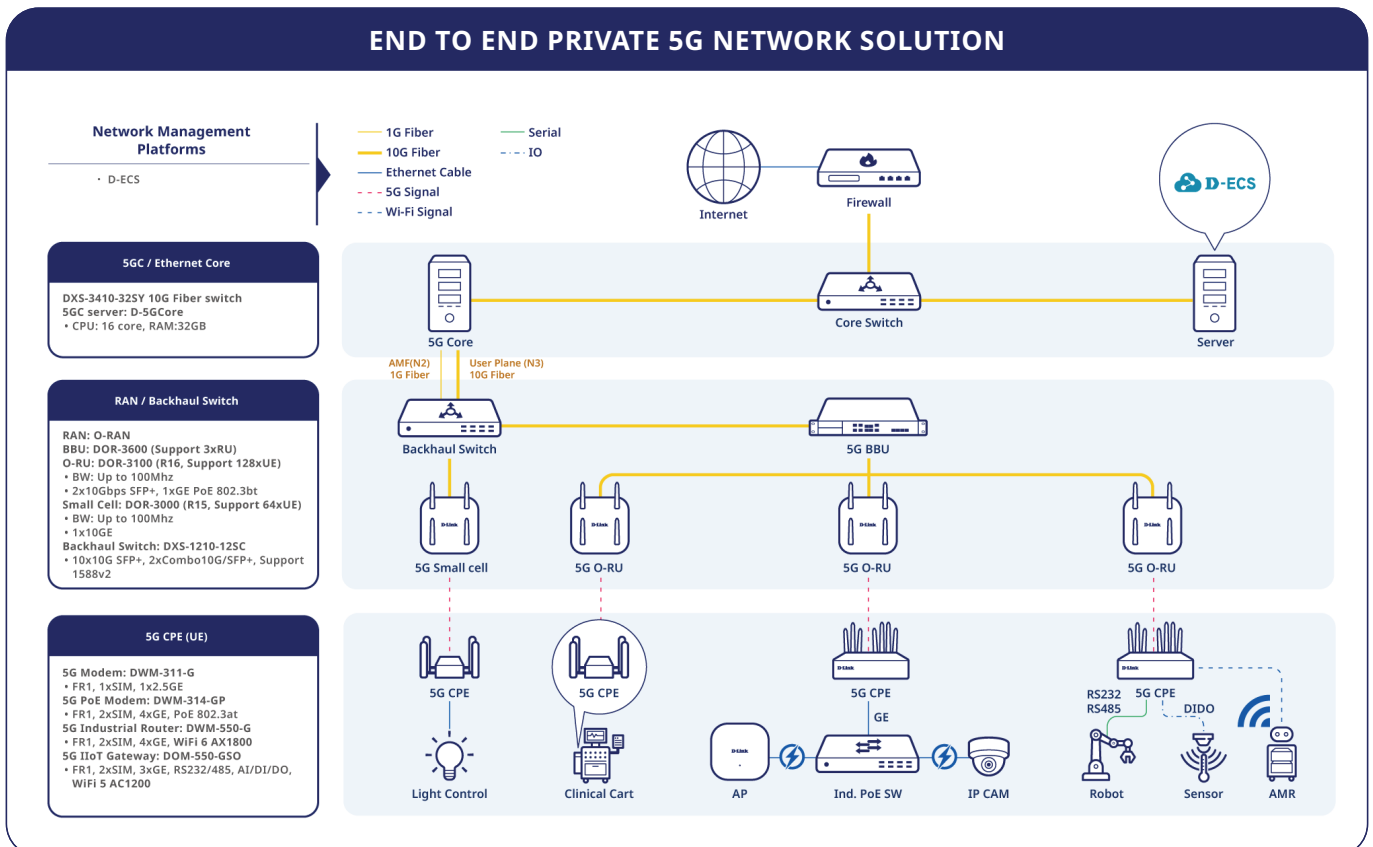
Diverse Industrial 5G Connectivity Solutions, encompassing Modems, Routers, and Gateways for IIoT.

Backhaul switch

Broad Core-to-Edge Switch Range, designed for seamless integration and optimal network performance.

D-ECS Management

D-ECS Platform for streamlined on-premise network management and operational excellence.



Device Catalogue



D-Link Baseband Unit

DOR-3600

- 3GPP Release 16, TDD SA Option 2
- Open RAN split: Opt.7-2a
- M-Plane: Netconf protocol and YANG model
- S-Plane: IEEE 1588v2
- RIC interfaces comply to O-RAN spec
- Security complies to O-RAN specChannel
- Bandwidth: 100 MHz (max)
- UE per TTI: 12 UE / TTI
- Capacity: 128 active UEs
- Throughput
- DL: 1.2 Gbps (7DS2U)
- UL: 400 Mbps (DSUU)



D-Link Radio Unit

DOR-3100

- 3GPP Release 16, TDD SA
- Band: n79
- MIMO: 4T4R
- Tx power: 24 dBm per RF antenna
- BW: up to 100MHz
- Fronthaul interface: 10Gbps SFP+x2
- Power supply: IEEE 802.3bt PoE
- IP rating: IP30
- Open RAN standard: Split option 7-2a
- Synchronization: PTP v2 w/ G.8275.1
- M-Plane: O-RAN compliant Netconf protocol and Yang model
- Holdover: 3 μ s over 0.5 hours (Time sync from BBU, 3 μ s over 4 hours)



D-Link Small Cell

DOR-3000

- 3GPP R15
- 5G SA, Option 2
- SU-MIMO: DL: 4 layers, UL: 2 layers
- Interface: 10Gbps RJ45 x1, Optical SFP+x1
- Capacity: 64 active UEs
- Band: n79, n78, n77, n48
- Antenna: 4T4R
- Max. BW: 100MHz
- Max. transmit power 24dBm per RF connector



D-Link Backhaul Switch

DXS-1210-12SC

- 10xSFP+ ports
- 2x10GBASE-T (100M/1G/2.5G/5G/10G)/SFP+ combo ports
- RJ-45 console port
- 240 Gbps Switching Capacity
- 178.56 Mpps Maximum Packet Forwarding Rate
- Up to 32,000 entries per device MAC Address Table
- Operating Temperature -5 to 50 °C
- Storage Temperature -40 to 70 °C
- GNSS receiver as accessory for 4G/5G small cell deployments
- Miniature, pluggable device fits in any MSA-Compliant 1G SFP port



D-Link 5G Core

D-5GCore

- 3GPP Release 16
- 5G Standalone (SA) mode
- IPv4 and IPv6 support
- Xn/N2 Handovers
- 5G AKA Authentication
- Control & User Plane Separation (CUPS)
- OAM Management
- Web GUI
- RESTful API
- Network Function
- Control Plane: AMF, SMF, PCF, UDM, UPF, AUSF, NRF, BSF, NSSF
- User Plane: UPF
- NR Interface: N1, N2, N3, N4, N6, N7, N8, N10, N11, N12, N13, N22, N35, N36

▸ Device Catalogue



5G Modem

DWM-311-G

- 1x4G/5G SIM
- 1xRJ-45 2.5GE
- DC 5V/2A Power Adapter to USB Type C



5G PoE Modem

DWM-314-GP

- 1x5G NR/LTE (Dual SIM)
- 4xRJ-45 GE
- DC 50-57V in
- PoE-PSE 802.3at



5G Industrial Router

DWM-550-G

- 1x5G NR/LTE (Dual SIM)
- 4xRJ-45 GbE
- Wi-Fi 6 AX1800
- TB 9-36V



5G IIoT Gateway

DOM-550-GSO

- 1x5G NR/LTE (Dual SIM)
- 3xRJ-45 GbE
- Wi-Fi 5 AC1200
- 2xAI+2 x DI+2 x DO
- 1xRS232/485
- TB 9-36V

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For more information about D-Link's latest products, please visit www.dlink.com or contact your local D-Link sales representative.