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Catalyst 9300 48-port PoE+ Switch

Life Cycle Assessment Summary: C9300-48P

Goal and Scope

This summary presents the GHG emissions associated with the production, transport, use phase and end-of-life (EOL) of Cisco's C9300-48P switch. It is based on the *Life Cycle Assessment Report: Catalyst 9300-48P Switch*, which is in alignment with the International Organization for Standardization (ISO) Standards 14040 and 14044 on LCA (ISO, 2006) and can be found in the [Environmental Sustainability section of cisco.com](#). The underlying report and this summary have not been critically reviewed and are therefore not ISO-conformant.

Table 1: C9300-48P Technical Specifications

Technical Data	
Product weight	7.11 kg
Typical Power Consumption	112 W
Dimensions	1.73 x 17.5 x 17.5 in

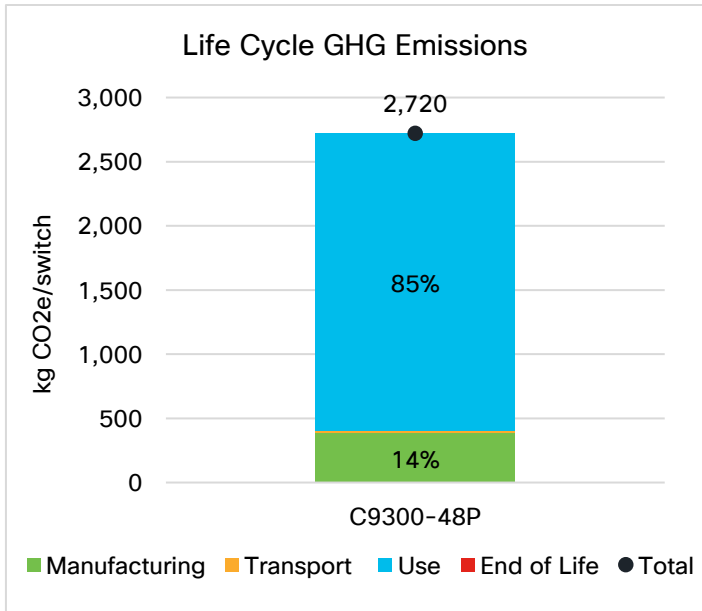
System Boundary

The model's system boundary was from cradle-to-grave for the life cycle inventory (LCI) and impact assessment and included raw material extraction and refinement, material transport, component manufacturing, assembly, testing, delivery, use phase and EOL. The product is disposed of at its EOL assuming a 5 year lifespan.

The study assumes most electronics production occurs in Asia and all material inputs were matched to datasets that are either global averages or Chinese datasets. Manufacturing was modeled specifically for China as the manufacturing country in terms of energy consumption. The use phase was assumed to take place in the United States and EOL was assumed as a global average.

Results

The GHG emissions (according to IPCC AR6 GWP 100, excluding biogenic carbon) per C9300-48P switch were 2,720 kg CO₂e. The GHG emissions were categorized into different life cycle stages covering manufacturing, transport, use phase and EOL. The use phase significantly influences the overall impact, contributing 85 percent of the total for the C9300-48P switch. The manufacturing phase was the second-largest contributor to GHG emissions, accounting for 14 percent of total GHG emissions per C9300-48P switch.



Life Cycle Phase	GHG Emissions (kg CO2e)
Manufacturing	390
Transport	12
Use	2,318
End of Life	0
Total	2,720

Note: Figures may not total 100 percent due to rounding of underlying data.

Limitations

There are a few key data limitations associated with electrical components and the use of secondary data for assembly and testing. Within the BOM, electrical components were matched to the components available in the LCA for Experts (formerly GaBi) and ecoinvent databases, which were not always an exact match. Proxied components were scaled by length and width or mass to reflect the number and type of components in the product under study.

Manufacturing burdens of the assembly and testing of the product were proxied using secondary datasets from ecoinvent. A limitation of the proxies is that they do not track operation improvements or changes over time.

Disclaimer: Data and other information in this report are estimates and indicative only, based on assumptions and approximations, for particular products and points in time. They are neither predictions, commitments or guarantees of actual outcomes nor intended for purposes other than identifying opportunities to improve the environmental performance of products at various points in their life cycle. Cisco and WSP continues to refine the methodology, modelling, and assumptions. Data and other information are therefore subject to change and uncertainties that are difficult to predict.

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Further information on Cisco's approach to Life Cycle Assessments (LCAs) is available at Cisco's Environmental, Social, and Governance (ESG) Reporting Hub, at https://www.cisco.com/c/m/en_us/about/csr/esg-hub.html