BROCADE
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Carbon Footprint Report

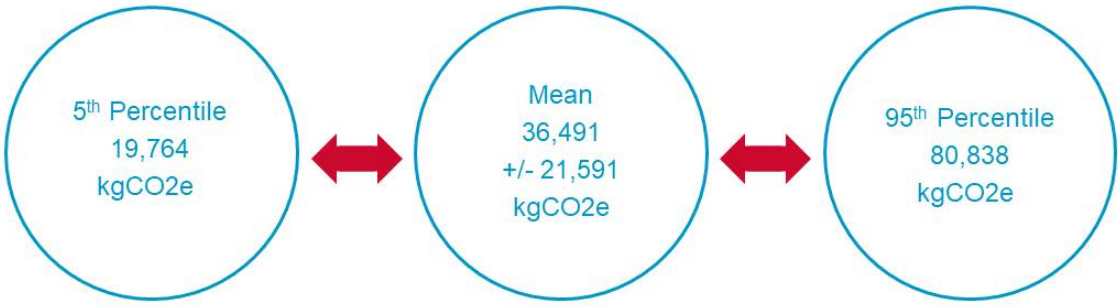
Brocade® X7-8 Fibre Channel Director

Report Produced March 2024

Power consumption and environmental impact are important considerations for customers, and Brocade has led the way in power efficiency for many years. The Brocade hardware engineering teams have achieved much higher levels of integration in Brocade® hardware, leading to dramatically lower power consumption for Brocade storage networking hardware. We strive to be efficient throughout the product lifecycle, from design, manufacturing, packaging, and shipping, to the use of our products, to end-of-life.

This report was produced to provide an estimate of the potential carbon impacts of a product for the customer using the Product Attributes to Impact Algorithm (PAIA) model, developed by the Massachusetts Institute of Technology's Materials Systems Laboratory and partners, Version 1.4, copyright by the ICT Benchmarking collaboration including the Massachusetts Institute of Technology's Materials Systems Laboratory and partners. The information in this report is subject to change as the model, tool, or data inputs are updated.

Figure 1: Brocade X7-8 Fibre Channel Director Carbon Footprint (192-Port Configuration)



Please remember that the product carbon footprint values are only estimates; therefore, the values are subject to uncertainties and should not be used for emissions inventories or formal carbon footprinting exercises. Actual product carbon footprint values may vary depending on a number of factors, including how the device is configured and used, where it is deployed, and what type of power source is used. The carbon intensity of the energy sector varies considerably from country to country. Broadcom provides the 5th percentile and the 95th percentile numbers to reflect the possible range. For the Brocade X7-8 Fibre Channel Director, the estimated mean product carbon footprint for an average-sized, 192-port configuration is 36,491 kg of CO2e, with a standard deviation of 21,591 kg of CO2e.

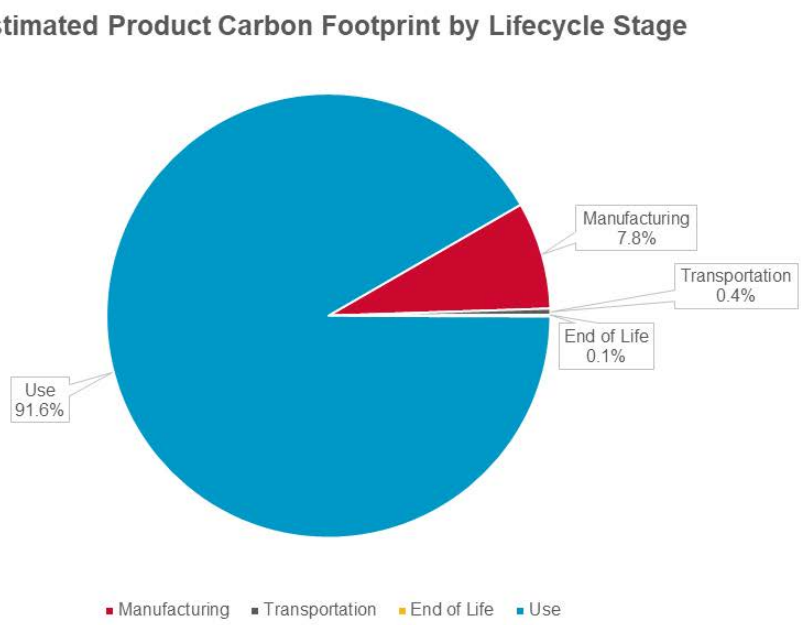
The assumptions used for these calculations are as follows:

Product Type	Fibre Channel Director	**Port Count Minimum**	48
Product Weight	133 kg (192-port configuration)	**Port Count Maximum**	640 (including optional ICLs)
Product Lifetime	4 years	**PSU Count**	4
Use Location	Europe	**Final Assembly Location**	Czech Republic

Because the X7-8 is a modular platform, the configuration will make a significant difference. Three different configuration scenarios are provided in this document for comparison purposes. For an estimated figure specific to a particular user configuration, please contact your Broadcom representative for assistance.

Carbon Footprint Values	**96-Port (32G)**	**192-Port (32G)**	**384-Port (64G)**
Total Mean Carbon Footprint (CO2e)	48,147	54,677	77,539
Standard Deviation	20,390	24,260	37,147
5th Percentile	16,868	18,989	35,228
95th Percentile	112,197	126,827	179,603

Figure 2: Brocade X7-8 Fibre Channel Director Carbon Footprint Lifecycle (192-Port Configuration)



To learn more about what Broadcom is doing regarding Environmental, Social and Governance impacts, go to: www.broadcom.com/company/citizenship