

End of Moore's Law – How long will EUV Lithography last?

Prof. Dr. Michael Kaschke
President and CEO, Carl Zeiss AG

Moore's Law was and still is the driver of innovations in many different areas, including the smartphone, artificial intelligence and autonomous driving. Achieving greater performance while lowering costs and energy consumption has required geometrical shrink powered by the resolution of optical lithography. Without this innovation, the power consumption of e.g. hyperscale data centers would increase linearly with the amount of data and hinder our data-driven world. The invisible engine that has made this possible for more than fifty years is the optics made by ZEISS. Today's leading-edge systems use light with a wavelength of 13.5 nm called Extreme Ultraviolet (EUV) Lithography. The talk will highlight the technological and managerial challenges that had to be overcome to achieve this at ZEISS in Oberkochen. And, looking ahead to the future, the talk will also address how much longer Moore's Law will last.