

Analysis of CPO Testing Challenges and Taiwan's Supply Chain

Topology Research Institute

On April 23, 2026, TSMC unveiled at the 2026 North America Technology Symposium its Compact Universal Photonic Engine (COUPE) platform built on Co-Packaged Optics (CPO) technology, with mass production targeted for the second half of 2026. However, CPO testing is the critical technology that must be mastered before COUPE can move into a mass production phase. As a result, not only international giants such as FormFactor, ficonTEC, and Keysight, but also Taiwanese players including MPI, Chroma ATE, Hon Prec, Enlitech, and MSS have all rolled out corresponding solutions, hoping to capture share in this new incremental market.

This report mainly provides an in-depth analysis of: (1) demand drivers for CPO test equipment; (2) technical bottlenecks and testing challenges of CPO; (3) CPO test insertion levels; and (4) Taiwan-based CPO test equipment suppliers. The goal is to map out the growth drivers and technology development of CPO testing, and to take stock of the current state of Taiwan's CPO test equipment supply chain.



11F, No.70. Sec. 3, Nanjing E.
Rd., Taipei City 104, Taiwan

Tel: +886-2-89786498

Fax: +886-2-25016399

Evolution of Broadcom and NVIDIA CPO Switches

	2022	2024	2025	2026
Broadcom	Tomahawk 4 (Humboldt) 25.6T (8×3.2T OE)	Tomahawk 5 (Bailey) 51.2T (8×6.4T OE)	Tomahawk 6 (Davisson) 102.4T (16×6.4T OE)	-
NVIDIA	-	-	Quantum-X Photonics 115.2T (36×3.2T OE)	Spectrum-X Photonics 102.4T (32×3.2T OE)

Source : TrendForce

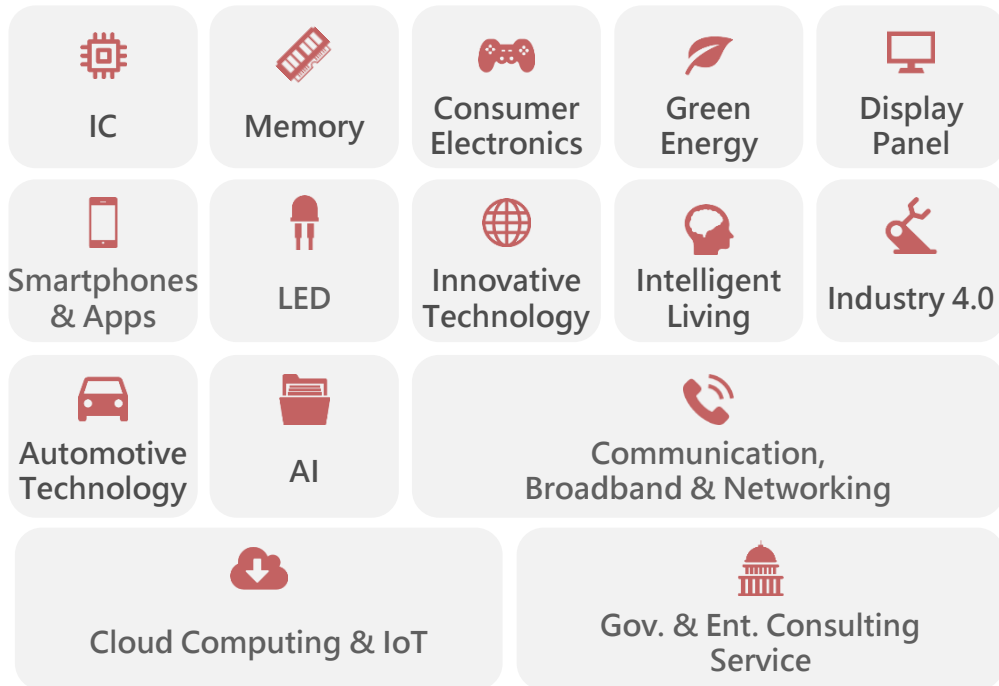
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TRI_MI@TrendForce.com