



INTERTANGLE

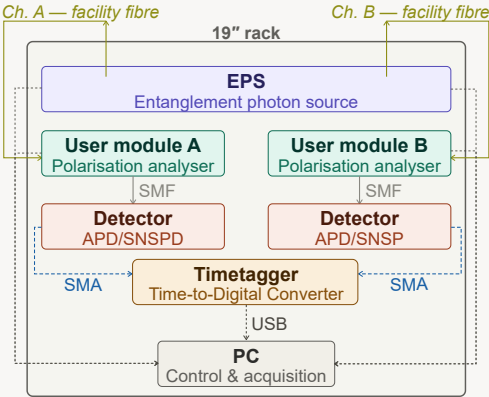
Developed at Heriot-Watt University



CURRENT PROTOTYPE

Deployable Photonic Entanglement System

Entanglement source, receiver modules, and integrated control software, engineered for long-distance operation over existing fibre networks.



Ready for external trials — October 2026

Our prototype delivers leading performance in entanglement **fidelity**, **purity**, and **generation rate** — an architecture built toward multi-node and multi-modal quantum networks.

KEY CAPABILITIES

- 19-inch rack compatible, FC/PC fibre connectors, single mains power operation, USB control interface
- Generates polarisation-entangled photon pairs for fibre applications
- Comes with fibre-coupled measurement modules; suitable for APDs and SNSPDs
- Software for automating measurements, certifying entanglement and stability logging

PERFORMANCE SPECS

PARAMETER	VALUE
Wavelength (nm)	1540–1560
Spectral bandwidth (nm)	<3
Entangled pairs (kc/s)	>300
Heralding (%)	>40
Fidelity (%)	>97

Peer-reviewed physics, engineered into a product.

SOURCE DESIGN

- Pickston et al., Opt. Express 29, 6991 (2021)
- Graffitti et al., Optica 5, 514–517 (2018)

APPLICATIONS & MULTI-SOURCE DEMOS

- Ho et al., J. Phys. Photonics 8, 025006 (2026)
- Pickston et al., npj Quantum Inf. 9, 82 (2023)
- Ho et al., npj Quantum Inf. 8, 13 (2022)

DEVELOPED WITH SUPPORT FROM

