

Synchromerger™

Synchromerger™ is a centralised solution for automated performance and condition monitoring of distributed power networks. Benefitting from Synaptec’s passive photonic sensing technology, Synchromerger™ gathers, processes, and streams high-quality, continuous point on wave (CPOW) and synchrophasor data from up to 50 locations per 100 km / 60 miles of optical fiber. By centralising the interrogation of multiple distant measurements using passive photonic technology, the cost and latency issues associated with traditional phasor measurement unit (PMU) data networks is substantially eliminated. Measurement data is delivered as real-time CPOW streams, and processed in real time into live synchrophasor and power quality information to provide greater visibility and actionable insights anywhere on a power network.

By supporting a mix of passive electrical and mechanical sensing, Synchromerger™ can also be deployed to provide precise, live monitoring of overhead lines and cable systems to support Real-Time Thermal Rating and capacity monitoring over wide areas of network. Embedded monitoring also enables condition-based maintenance for stronger network resilience, post-event analysis, increased visibility of remote assets, and verification of accurate network models.

Synchromerger™ includes all the features and benefits of Refase™ and is fully compatible with the suite of Synaptec electrical and mechanical sensors.

Specifications

	Refase™	Synchromerger™	Synthesis™
Core functionality			
Up to 50 measurements per fibre, 100 km range	✓	✓	✓
Multi-zone protection instrumentation	✓	✓	✓
Wide-area synchronous data and analysis		✓	✓
Data logging, visualisation, and analytics			✓
Supported sensor types			
PCT (current)	✓	✓	✓
PVT (voltage)		✓	✓
PTT (temperature)		✓	✓
PST (strain and sag)		✓	✓
Vibration		✓	✓
Features			
IEC 61850 / IEC 61869-9 output	✓	✓	✓
Auto-reclose (AR) block	✓	✓	✓
IEEE C37.118 synchrophasors		✓	✓
Real-time power quality (PQ)		✓	✓
Correlated electro-mechanical data		✓	✓
Data visualisation			✓
High-quality data logging (private storage or cloud)			✓
Long-term trend analytics			✓