

# Trimble Thunderbolt PTP Lacks Master-Less Consensus Substrate

by [Nick Clark](#) | Published April 25, 2026

## Thunderbolt Reality

Trimble Thunderbolt operates GPS-disciplined PTP time-server products deployed across telecom, financial, and government customers. Technical execution at deployment scale is mature.

## Master-Less Substrate

Thunderbolt operates within GPS-disciplined master-broadcast architecture; mesh-time consensus produces structural alternative without GPS dependency.

## Trimble Position

Trimble gains GPS-resilient time substrate above Thunderbolt.