

# Powertrain Monitoring & Optimization

The RAPPT software suite uses Machine Learning to model the behavior of Power, Propulsion, and Thermal (PPT) subsystems and their interactions. These models optimize powertrain tradeoffs and form performance baselines that enable rapid anomaly detection and prediction.

### ≻ FAST

Patented ML approach learns complex system behaviors using one million times less data compared to Deep Learning

## > FLEXIBLE

Functions on low-power hardware—no companion computers required

## SAFER AND SMARTER

Adapts to changing conditions while offering unprecedented health & status insights

#### <u>Contact</u>

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RAPPT exploits cutting-edge machine learning techniques to enable: Digital Twin Creation at the Edge

- Ingests performance data in real time and creates an adaptive dynamical model
- Digital Twin can train--and retrain-literally on the fly

### Anomaly Detection

- Continually compares Digital Twin predictions to actual performance
- Displays insights on intuitive Graphical User Interface (GUI)

### PPT Optimization

Acts as a state estimator to affect feedback control of complete PPT system and/or subcomponents

# RAPPT

Peak performance and deep insights for advanced powertrains





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