

↑ 82% Cost Reduction

↑ 30% Faster Convergence

↑ 150ms Delay Tolerance

Hours



CLOUD: Federated Learning

Physics-Informed Neural ODEs
Multi-Agent RL Training
Federated Aggregation



ms



EDGE: Real-Time (<10ms)

BITW Hardware + ONNX
Control Barrier Functions
Safety Enforcement



ms-min



MAS: Distributed Control

Primary (ms) • Secondary (s)
Tertiary (min) • GNN-ADMM
Consensus Optimization