

No Single Point of Failure

The software uses several mechanisms to ensure continuous operations in presence of failures:

- Real-time Replication of Mission Critical Data
- Replication of Shared Memory Data
- Process Redundancy
- Reliable Messaging Protocol
- Health-Checks, Heartbeats, Watchdogs
- Redundant Database
- Online Software Upgrade

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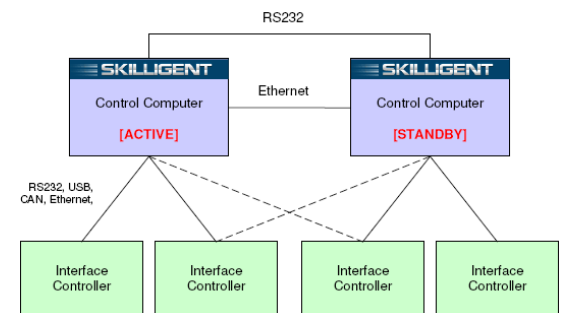
Vehicle Control System's Framework

An autonomous vehicle with a faulty control computer can cause serious damage or injuries. In order to eliminate a single point of failure, at least a pair of control computers needs to be used to control the vehicle.

In many cases, a single pair of computers does not provide enough computing power, so several computers are required to handle all the processing tasks.

The Skilligent Fault-Tolerant Control Framework keeps all the control computers in a synchronized state and automatically detects and isolates failures in the cluster.

Fault-Tolerant Control Framework



The software product provides the common infrastructure needed for building **mission-critical control systems**

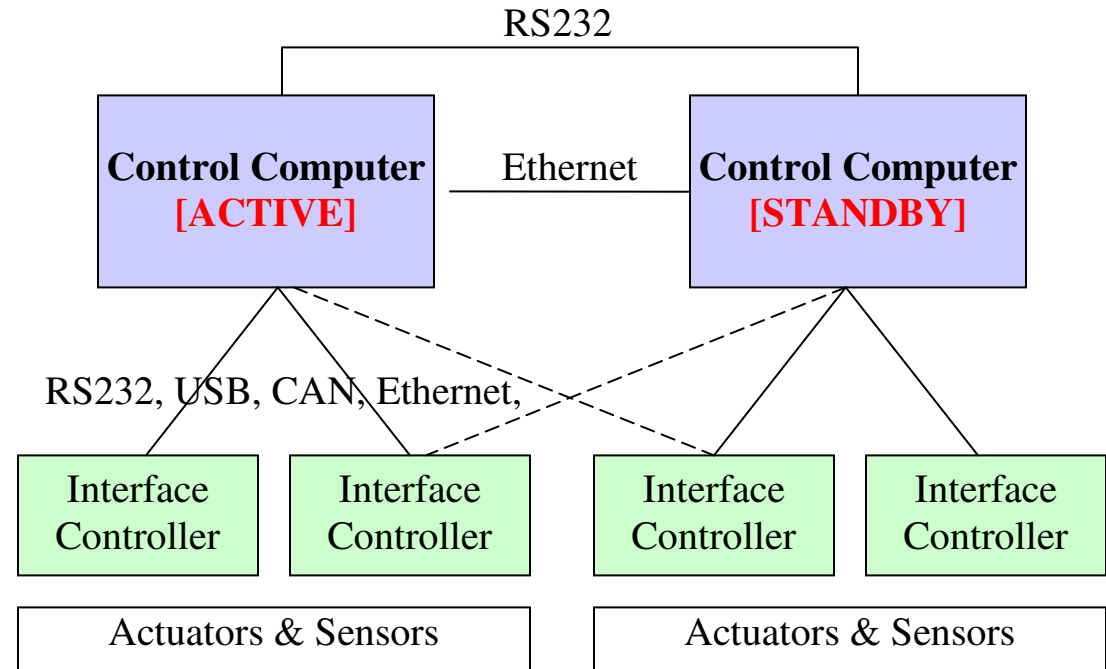
- Redundant vehicle control systems (**UGV, USV, UAV, AUV**)
- Mission Controller Systems
- Swarm Controllers

Fault-Tolerant Control Framework

Skilligent Fault Tolerant Control Framework provides a solid foundation for any project where fault-tolerance is a mandatory requirement and **no single point of failure** is allowed.

Technical Details

- Linux or Windows
- C++ API
- Clean Documentation
- Runs on most COTS computing hardware



Product Features (R4.0)

- No Single Point of Failure
- Active-Standby, Active-Active, N+M redundant configurations
- Automatic Fault Detection and Switch-over
- High-Performance Onboard Computing (up to 32 servers working together)
- Distributed Shared Memory (Lock-Free Buffers paradigm)
- High-Speed, Low-Latency Messaging System
- Mission Critical Data Replication
- Common software facilities such as logging, statistics, configuration, remote control.
- Proven reliability and performance.