Power, Usage and System Health Manager (PUSHM)

PUSHM SYSTEM MANAGEMENT

The PUSHM combines system health monitoring with electrical power control and fault response mechanisms to improve the life-cycle cost, safety and availability of mission-critical equipment.

On Target's PUSHM is a COTS-based, intelligent control system that assesses system health and automatically responds to faults through fault reporting, power management, subsystem actuation and interlock control. It performs real-time diagnostics and prognostics and notifies the operator of system faults, maintenance requirements (preventative and scheduled), and operational status.

The PUSHM adapts to diverse applications. Users define hardware configuration, software algorithms and control calibrations.

On Target provides systems engineering services to create power and embedded control systems applications, such as PUSHM applications, in mission-critical domains using lean development processes.

BENEFITS

- **Operators alerted to critical system failures (active, intermittent and developing)**
- **Auto-response mechanisms, such as interlocks, load-shedding and fail-safe operation.**
- **Hardware and software configurable to meet a wide range of applications.**
- **As-needed system maintenance is performed at the right time on the right device.**

FEATURES

- **Comprehensive diagnostic, prognostic and fault response algorithms.**
- **Extensive input, output and data interfaces**
- **Powerful processing and logic control**
- **Configurable data trending and reporting**

PUSHM MISSION / VALUE

- **Respond to faults with power interrupts to protect other components**
- **Perform proactive, fault-based maintenance management instead of reactive and scheduled maintenance**
- **Schedule interlock and control logic for system startup and shutdown**
- **Apply user-defined logic to control subsystems and shed loads**
- **Trend conditions, usage and degradation and report status to platform systems databus**
- **Implement system-level diagnostics and fault response algorithms**

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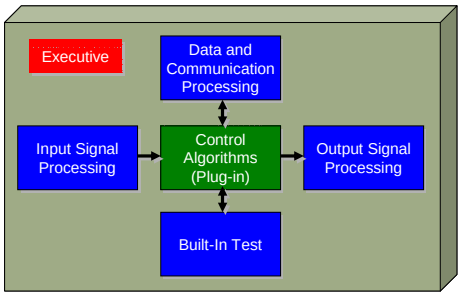
Detailed Functionality

OPEN ARCHITECTURE

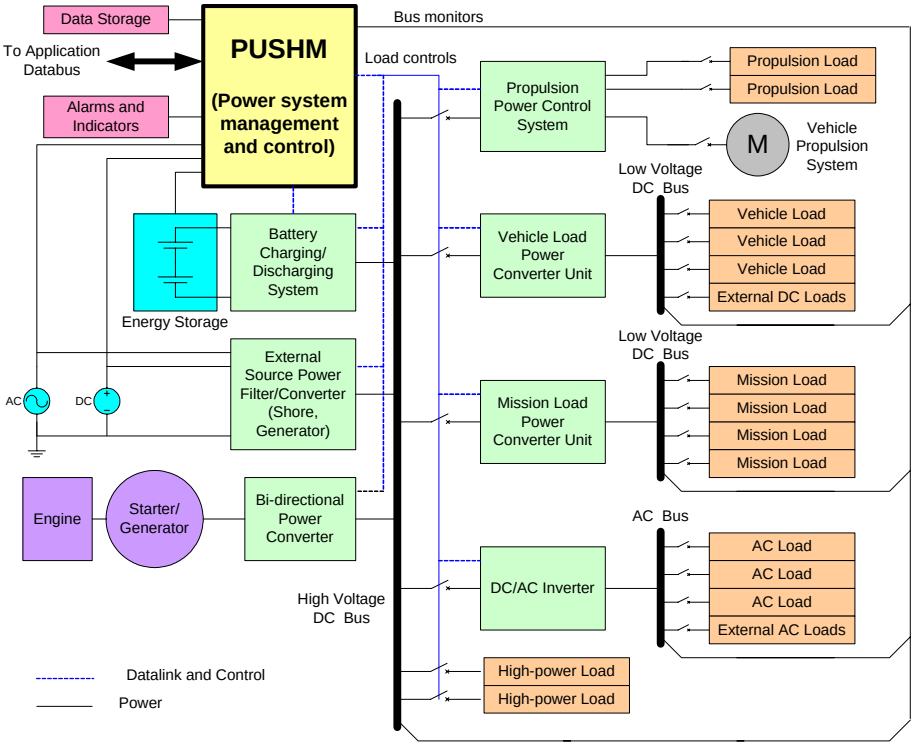


DIVERSE APPLICATIONS

PROCESSING SYSTEM FEATURES

CORE FUNCTION	PUSHM CHARACTERISTICS
Powerful Processing Platform	Quad 1.5 GHz PowerPC Xilinx Virtex II Pro FPGA
Extensive Memory	up to 512 MB SDRAM per processor 256 MB Flash, 128 KB NVRAM Off-board data storage to peripheral data drives
Configurable Interfaces	Open-architecture hardware configured to application Discrete, analog,, PWM, timer interfaces RS232, RS422/RS485, Ethernet Optional ARINC-429 and CANbus
Small, Robust Packaging	Conduction Cooled 6U VME Rugged COTS Chassis 7.82" H x 4.88" W x 12.61" D, Less than 20 lbs MIL-STD-704, 28VDC or 115VAC power input, 150W Internal monitors, watchdog
Comprehensive, Flexible Software	I/O drivers, data communication managers, POBIT, CBIT, MIBIT, static and dynamic testing Configurable diagnostics, prognostics Partitioned interface for plug-in control algorithms Data trending and usage monitoring

EXAMPLE APPLICATION (MILITARY HE HMMWV)



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