



## S-92 Helicopter Maintenance Data Computer (MDC) Software Development



[www.milsoft.com.tr](http://www.milsoft.com.tr)



Sikorsky Aircraft Corporation (USA) is producing a new helicopter, called the S-92. Within the scope of the S-92 program, MilSOFT, as subcontractor to Sikorsky, develops the software on the “onboard” Maintenance Data Computer (MDC) to monitor avionics & electro-mechanical systems via ARINC 429 data bus in order to analyze, display and record the associated maintenance data for the S-92 helicopter.

The S-92 program is a commercial program and thus is subject to certification by the US FAA (Federal Aviation Administration). The MDC software is developed and verified according to RTCA/DO-178B Level C and is certified as part of the S-92 Helicopter Type Certification (TC).



The MDC is a component of the Maintenance Data Reporting System (MDRS) that performs aircraft system health, status determination, and reporting functions utilizing data acquired from aircraft sensors or the Avionics Management System (AMS92) and displaying that information to the flight or maintenance crew. The MDC receives data from several avionics systems via ARINC 429 buses. The MDC interfaces analog and discrete aircraft system data directly through its input signal interface hardware. The MDC returns information via additional ARINC 429 buses. The MDC also provides limited analog outputs for initiation of Built-In-Test (BIT) by other aircraft systems and subsystems.

### System Functions

- Integration of the avionic systems and software
- Automatic inquisition of avionic systems, testing avionic systems
- Developing software that provides data exchange through ARINC 429 bus
- The MDC software is embedded software on TMS320C31 microprocessor
- The MDC software is real-time software developed by using Ada 83 programming language
- Safety critical avionic systems software development and verification complying with RTCA/DO-178B “Software Considerations in Airborne Systems and Equipment Certification”.