C2000™ real-time MCU Functional Safety Enablers

Leverage our functional safety diagnostic software library, compiler qualification kits, third party operating systems & development tools and additional functional safety documentation to help your system-level certification efforts.

Functional safety certifications & assessments	Products	Description	Action
TUV-SUD certificate for QRAS-AP00210	TMS320F2837xD TMS320F2837xS TMS320F2807x	Functional safety development process for IEC 61508-2 and ISO 26262-5 Compliant Hardware Components	Download
UL 1998 Certificate [DC Arc fault detection SW lib]	TMS320F2806x TMS320F2805x TMS320F2803x TMS320F2802x	ANSI/UL 1998 SW in programmable components; integrated protective control for type-2 action (DC Arc fault detection SW lib)	Download
UL 1998 Certificate [C2000 Self-Test Library]	TMS320F2806x TMS320F2805x TMS320F2803x TMS320F2802x	ANSI/UL 1998 SW in programmable components; integrated protective control for type-2 action (Self-Test Software Library - Safety Control), C2000 Self-Test Library	Download
IEC 60730, 60335 VDE Certificate	TMS320F2806x TMS320F2805x TMS320F2803x TMS320F2802x	IEC 60730-1 (Annex-H), IEC 60335-1 (Annex-R) normative requirements for electronic controls	Download

Functional safety manuals and analysis reports	Products	Description	Action
Safety Manual for C2000 functional safety automotive and industrial products	TMS320F2837xD TMS320F2837xS TMS320F2807x	Provides information to aid customers in designing systems in compliance with ISO 26262 or IEC 61508 functional safety standards	Download
Safety Manual for C2000 functional safety automotive and industrial products	TMS320F28004x	Provides information to aid customers in designing systems in compliance with ISO 26262 or IEC 61508 functional safety standards	Download
Safety Manual for C2000 functional safety quality managed products	TMS320F2806x TMS320F2805x TMS320F2803x TMS320F2802x	Provides information to aid customers in designing systems in compliance with IEC 60730 and IEC 60335 or UL 1998 functional safety standards	Download
Tunable FMEDA for C2000 functional safety automotive and industrial products	TMS320F2837xD TMS320F2837xS TMS320F2807x TMS320F28004x	Detailed, tunable, quantitative FMEDA for C2000 functional safety automotive and industrial products	Request
Tunable FMEDA Training	TMS320F2837xD TMS320F2837xS TMS320F2807x TMS320F28004x	5-part video training series on the detailed, tunable, quantitative FMEDA for C2000 functional safety automotive and industrial products including a demo on tuning the FMEDA	View
FMEDA for C2000 functional safety quality managed products	TMS320F2806x TMS320F2805x TMS320F2803x	Estimation based FMEDA for C2000 functional safety quality managed products	Request

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Functional safety software	Products	Description	Action
C2000 IEC 60730-1 Software Package	TMS320F2806x TMS320F2805x TMS320F2803x TMS320F2802x	UL/VDE Certified IEC 60730-1 Software Package	Download
Functional Safety Diagnostic Software Library (SDL)	TMS320F2837xD TMS320F2837xS TMS320F2807x	Safety Diagnostic Software Library with Compliance Support Package	Download
Functional Safety Self-Test Library	TMS320F2837xD TMS320F2837xS TMS320F2807x TMS320F28004x	CLA safety diagnostics library w/ compliance support package C28x CPU and CLA safety diagnostics library w/ compliance support package	Request
Software Diagnostic Library (SDL)	TMS320F28004x TMS320F28002x	Safety Diagnostic Software Package Library	Download
Compiler Qualification Kit	All C2000 Functional Safety Products	Release Validation based C28x and CLA Compiler Qualification Kit	Download

Third party tools	Description		Action
SafeRTOS	Safety certified Real Time Operating System (RTOS) for embedded processors		Visit
MathWorks	ISO 26262 and IEC 61508 certified simulation and code generation tools used by C2000 customers		IEC Certification Kit for ISO 26262 and IEC 61508 Using Simulink for ISO 26262 Projects

Additional Resources	Description		Action
Blog	C2000 Functional Safety Diagnostic Software Library blog		Visit
Application report	C2000 CLA Self-Test Library		Download
Application report	C2000 Memory Power-On Self-Test (M-POST)		Download
Migration Guide	C2000™ Gen 2 to Gen 3 MCUs Functional Safety Enablers		Download
Website	Functional Safety Information		Visit

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