



Xilinx Quality ISO/TS 16949 Announcement Backgrounder

Xilinx Quality History

Since Xilinx was founded in 1984, the company has consistently raised the bar on quality through continuous improvements and relentless pursuit in meeting rigorous requirements associated with registration to industry quality standards. Xilinx continues to enhance its quality efforts to build on this track record, and is the only PLD Supplier to achieve full compliance and certification to ISO 9001, TL 9000, QML, ISO 14001, and now ISO/TS 16949.

Year	Certification
1995	ISO 9001:1994, QML
1999	ISO 14001:1996
2002	ISO 9001:2001
2003	Sony Green Partner
2004	TL 9000:2000, AEC-Q100
2005	ISO/TS 16949:2002

Xilinx believes that compliance to leading industry quality system standards enables stakeholders throughout the entire supply chain to improve product and process quality, raise confidence in global sourcing, improve customer and supplier communication, and ultimately save time and money.

Xilinx ISO/TS16949:2002 Certification

In the past there were several quality standards used by automotive companies around the world. These quality standards included:

- QS 9000 (Ford, General Motors, Chrysler)
- EAQF 94 (PSA Peugeot, Citroën, Renault, FIEV)
- VDA 6 (Audi, BMW, VW, DaimlerBenz)
- AVSQ '94 (Fiat Auto, IVECO)
- ISO 9000 series 1994, ISO 9000 series 2000

Support for numerous varying standards is difficult for the supply chain to manage as well as expensive for stakeholders as they are forced to conduct audits to multiple standards regularly. In addition, communication between stakeholders supporting these different standards becomes confusing and inefficient as companies struggle to understand each other.

In an effort to resolve these issues and to reduce costs and improve efficiency and communication between stakeholders, an international group of vehicle manufacturers known as the International Automotive Task Force (IATF) came together to standardize

on a “single” quality standard based on the framework ISO 9000. Membership in IATF includes BMW Group, DaimlerChrysler, Fiat Auto, Ford Motor Company, General Motors Corporation, PSA Peugeot-Citroen, Renault SA and Volkswagen, plus national trade associations. The Japanese vehicle manufacturers association (JAMA), has also been involved in the development of ISO/TS 16949.

Xilinx Achieves ISO/TS 16949 Certification

Xilinx achieved this quality milestone on schedule, finishing a typical multi-year process in just nine months. Xilinx adoption of the ISO/TS 16949 standard reduces costs through improved product and process quality along with efficiencies achieved through improved customer and supplier communications. A consistent quality system approach used in the supply chain eliminates the need for vendors to perform time-consuming audits. TS 16949 certification also provides higher quality confidence to Xilinx customers in non-automotive applications. Achieving this certification ensures that Xilinx is supplying components with the highest levels of quality and reliability.

ISO/TS 16949 and Automotive Products from Xilinx

Xilinx is already the leading PLD provider to the automotive market, with many programmable devices "on the road" in areas such as GPS, infotainment, communication, driver assistance and comfort applications.

Xilinx programmable solutions provide the time-to-market and design flexibility benefits required by the automotive market's multiple emerging standards and shorter life cycles. By combining these traditional benefits with full compliance to industry standards, Xilinx is positioned to attain an even larger portion of the available market. According to IMS Research, the PLD TAM in the automotive market for in-car audio, infotainment and driver information/telematics is expected to reach \$449M by 2010.

The Xilinx XA product line is the only programmable logic line to meet the Automotive Electronics Council AEC-Q100 qualification flow, full support of the Automotive Industry's Production Part Approval Process (PPAP) provision, and now full compliance to the ISO/TS 16949 quality standard. See product tables below.

Spartan-3	Speed	Temp Grade	VQG100	TQG144	PQG208	FTG256	FGG456	FGG676
			16x16mm	22x22mm	30.6x30.6mm	17x17mm	23x23mm	27x27mm
			0.5mm	0.5mm	0.5mm	1.0mm	1.0mm	1.0mm
XA3S50	-4	I,Q	X		X			
XA3S200	-4	I,Q	X	X	X	X		
XA3S400	-4	I,Q			X	X	X	
XA3S1000	-4	I,Q				X	X	
XA3S1500	-4	I					X	X

Spartan-II	Speed	Temp Grade	TQ144	FT256
			22x22mm	17x17mm
			0.5mm	1.0mm
XA2S50E	-6	I,Q	X	

XA2S100E	-6	I,Q	X	
XA2S150E	-6	I,Q		X
XA2S200E	-6	I,Q		X
XA2S300E	-6	I,Q		X

CoolRunner-II	Speed	Temp Grade	VQG44	VQG100	TQG144	CPG132
			12x12mm	16x16mm	22x22mm	8x8mm
			0.8mm	0.5mm	0.5mm	0.5mm
XA2C32A	-6	I,Q	X			
XA2C64A	-7	I,Q	X	X		
XA2C128	-7	I,Q		X		X
XA2C256	-7	I,Q		X	X	
XA2C384	-10	I,Q			X	

9500XL	Speed	Temp Grade	VQ44	VQ64	TQ100	CS144
			12x12mm	12x12mm	16x16mm	12x12mm
			0.8mm	0.5mm	0.5mm	0.8mm
XA9536XL	-10	I,Q	X			
XA9572XL	-10	I,Q	X	X	X	
XA95144XL	-10	I				X

Flash PROM	Temp Grade	VOG20
XAF01S	Q	X
XAF02S	Q	X
XAF04S	Q	X

Xilinx is the only PLD Company in the industry to support the full suite of quality standards including ISO 9001, ISO 14001, TL 9000, QML, and ISO/TS 16949 as reflected in the following chart.

Quality Standard	Xilinx	Actel	Altera	Atmel	Cypress	Lattice	QuickLogic
ISO9000:2001 Industry Quality Standard	X	X	X	X	X	X	X
TL 9000 Telecommunications Industry Standard	X						
TS 16949 Automotive Industry Standard	X	X		X			
AEC-Q100 Automotive / Stress Qualification for ICs	X				X		
QML (MIL-STD-38535) Military Standard	X	X			X		X
ISO14001:1996 Environmental Management Standard	X			X	X		

Source: Company web sites