

# Design Services Partner Profile



## Topic Embedded Systems Company Overview

Date : 03/09/2020

[www.topic.nl/en](http://www.topic.nl/en)

### Partner Details

Partner Tier: Premier  
Headquarters Location: Materiaalweg 4,Best,,Netherlands  
Xilinx Alliance Partner Since: 10/22/2008

### Key Contact Info

Dirk van den Heuvel  
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### Regions Served

<b>Supported Product Types</b>	Yes	Design Services	Yes	Embedded Products
	No	IP	No	EDA Tools
	Yes	Boards		

<b>Engineering Service Types</b>	Yes	General Purpose Services	Preferred
	Yes	Services in Support of Products Sold	
	Yes	Services Leading to Contract Manufacturing	
		Maximum Service Scope: Turnkey / full product design	

<b>Engagement Models Supported</b>	Yes	SOW-Based Fixed Bid Projects	Preferred
	Yes	Time and Materials	
	Both	Captive Resources at Partner or Customer Premises	

<b>Xilinx Design Tool Experience</b>	Yes	Vivado	Yes	SDSoC
	Yes	HLx	No	SDAccel

**Industry Certifications Achieved** ISO 13485

**Industry Certification Services Offered** CE, FCC, SIL3/4

**Government Clearances** None, was not required sofar.

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## Topic Embedded Systems Segment and Application Focus

Primary Focus	<b>Defense/Aerospace</b>	<ul style="list-style-type: none"> <li>Primary Focus</li> <li>Secondary Focus</li> <li>Secondary Focus</li> <li>No Focus</li> <li>No Focus</li> <li>Primary Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>Primary Focus</li> </ul>	<ul style="list-style-type: none"> <li>Homeland Security</li> <li>Electronic Warfare</li> <li>ISR</li> <li>Space</li> <li>Missiles &amp; Munitions</li> <li>Military Avionics</li> <li>Commercial Avionics</li> <li>SatComm</li> <li>Wireless Milcom</li> <li>Other A&amp;D</li> </ul>
Primary Focus	<b>Audio, Video, Broadcast</b>	<ul style="list-style-type: none"> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>Secondary Focus</li> <li>Primary Focus</li> <li>Primary Focus</li> <li>No Focus</li> </ul>	<ul style="list-style-type: none"> <li>Encoders &amp; Decoders</li> <li>Monitors &amp; Projection</li> <li>Networking &amp; Converters</li> <li>Audio Systems</li> <li>Video Processing Cards</li> <li>Video Conferencing</li> <li>Routers and Switches</li> <li>Pro Cameras &amp; Camcorders</li> <li>Other Broadcast</li> </ul>
Secondary Focus	<b>Automotive &amp; Transport</b>	<ul style="list-style-type: none"> <li>Secondary Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>Primary Focus</li> </ul>	<ul style="list-style-type: none"> <li>Driver Assist - Camera</li> <li>Driver Assist Radar/LIDAR</li> <li>Driver Info/Infotainment</li> <li>Automated Driving</li> <li>Other Automotive</li> </ul>
Secondary Focus	<b>Consumer</b>	<ul style="list-style-type: none"> <li>No Focus</li> <li>No Focus</li> <li>Primary Focus</li> <li>No Focus</li> </ul>	<ul style="list-style-type: none"> <li>Digital Display</li> <li>Drones</li> <li>Multifunction Printers</li> <li>Other Consumer</li> </ul>
No Focus	<b>Datacenter</b>	<ul style="list-style-type: none"> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> </ul>	<ul style="list-style-type: none"> <li>Storage</li> <li>Compute</li> <li>Networking</li> </ul>
Primary Focus	<b>Industrial, Medical</b>	<ul style="list-style-type: none"> <li>Primary Focus</li> <li>Primary Focus</li> <li>Primary Focus</li> <li>Primary Focus</li> <li>No Focus</li> <li>Primary Focus</li> <li>Primary Focus</li> </ul>	<ul style="list-style-type: none"> <li>Motor Control</li> <li>Industrial Networking</li> <li>Surveillance</li> <li>Machine Vision</li> <li>Medical Imaging</li> <li>Medical / Clinical</li> <li>Other ISM</li> </ul>

# Design Services Partner Profile



## Topic Embedded Systems Segment and Application Focus (continued)

Secondary Focus	<b>Test &amp; Measurement</b>	<ul style="list-style-type: none"> <li>Primary Focus</li> <li>No Focus</li> <li>Secondary Focus</li> <li>No Focus</li> <li>No Focus</li> <li>Primary Focus</li> </ul>	<ul style="list-style-type: none"> <li>Simulation / Emulation</li> <li>T &amp; M Instrumentation</li> <li>Semiconductor Test</li> <li>Wired Communication Test</li> <li>Wireless Communications Test</li> <li>Other Test &amp; Measurement</li> </ul>
No Focus	<b>Wired Comms &amp; Networks</b>	<ul style="list-style-type: none"> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> </ul>	<ul style="list-style-type: none"> <li>Access Equipment</li> <li>Long Haul/Transport</li> <li>Wired Mobile Backhaul</li> <li>OTN</li> <li>Enterprise Equipment</li> <li>Ethernet Interlaken Connectivity</li> <li>Packet Processing</li> <li>Other Wired Communications</li> </ul>
Secondary Focus	<b>Wireless Comms &amp; Networks</b>	<ul style="list-style-type: none"> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> <li>No Focus</li> </ul>	<ul style="list-style-type: none"> <li>Baseband</li> <li>Wireless Backhaul</li> <li>Connectivity &amp; Switching</li> <li>Radio</li> <li>Other Wireless</li> </ul>

# Design Services Partner Profile



## Design Competencies

<b>System Architecture</b>	Primary Focus	Total systems development from Research to complete product development for end customers (Proof of Concept, Definition, Execution to Deployment and Support) in multiple domains ranging from Medical to Industrial, Space, Avi
<b>RF and Analog Design</b>	Secondary Focus	Software defined radio for active and passive RF ID applications. 24 bit analog frontend for EEG/ECG/EMG applications. Wireless connected dependable equipment (434M/868M/2.4G public band).
<b>FPGA Design and Integration</b>	Primary Focus	System integration platform: reduction of board form factor, power and complexity. Communication interfaces and protocols. Algorithm translation from mathematical descriptions via Matlab/Simulink/C/C++ into FPGA code using co
<b>FPGA Timing Closure</b>	Primary Focus	Part of our design methodology: no designs are released unless proven timing closer with documented exceptions (clock domain crossings, etc.)
<b>FPGA Design Optimization</b>	Primary Focus	Offered as a service
<b>Signal Integrity Design and Analysis</b>	Primary Focus	DDR3/4, PCIe, HMC, PLL lock 10ppb(!) @ ~6GHz, HD-SDI video, iBert, IBIS, board simulation, layout simulation, Mentor Graphics based.
	Inhouse or Subcontracted: Inhouse Typical Serial Speed: 16	
<b>PCB Design &amp; Layout</b>	Primary Focus	Board size from 30x30mm upto 400x300mm. From 2 layers upto 16 layers, geometries < 100um, burried via's, micro vias, IPC610 compliance
	Inhouse or Subcontracted: Both	
<b>Industrial and Mechanical Design</b>	Primary Focus	Complete systems development (requirements, design and implementation) of systems for radiation treatment simulation and non-destructive testing in steel plate inspection. Collaborated with partners from architecture to impl
	Inhouse or Subcontracted: Both	
<b>Industry Certification and Compliance Testing</b>	Secondary Focus	Complete compliance to all relevant medical and electrical and electronical standards, like IEC60601, ISO13485, ISO14971, like FDA QSR, ISO62304, EMC/EMI regulations, ISO62366.
	Inhouse or Subcontracted: Subcontracted	
<b>Quality and Reliability Testing</b>	Primary Focus	Main and core competence on automated verification using several test-driven practises including HIL testing and continuous integration and delivery. When applicable: bump and vibration tests, tests for electromagnetical int
	Inhouse or Subcontracted: Both	
<b>Contract Manufacturing</b>	Primary Focus	PCB assembly. Enclosure design. Mechanical integration/Industrial design
	Inhouse or Subcontracted: Subcontracted Max Quantities Supported: 10,000+	
<b>Digital Signal Processing</b>	Primary Focus	OMAP Davinci, PicDSP
	<b>Experience:</b> OMAP Davinci,	

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PicDSP

<p><b>Embedded Processors</b></p> <p><b>Experience:</b></p>	<p>Primary Focus</p> <p>EFM32, NIOS, A TMega, MSP430 , Cortex M0/M3/M4/A53/ A9</p>	<p>RTOS and Linux based applications. UI and control. Data processing, acceleration and optimization, debugging, TDD, BDD, automatic build&amp;test, configuration management</p>
<p><b>Embedded Porting / BSP Extension</b></p> <p>OS and RTOS Design Experience:</p>	<p>Primary Focus</p> <p>FreeRTOS, Linux, Other / Contact Partner, VxWorks, Windows Embedded</p>	<p>Various and multiple OS-es often including maintenance.</p>
<p><b>Embedded Application Development</b></p>	<p>Primary Focus</p>	<p>Almost all-in-house work includes a significant part in application development having an interface to customers or users including iOS / Android development, Windows development, Linux development</p>
<p><b>Image Sensor Fusion</b></p> <p>Homo or Heterogeneous:</p> <p>Sensor Types Design Experience:</p>	<p>Primary Focus</p> <p>Heterogeneous</p> <p>Accelerometer, Compass, GPS / Position, Gyro, IR, Inclinator, LIDAR, Radar, Thermal, Tilt, Video (4K, 8K), Video (SD, HD)</p>	<p>Radar image reconstruction for water depth measurements at sea using wave reflection; Navigation for visual impaired people based on cane integration</p>
<p><b>Computer Vision</b></p>	<p>Secondary Focus</p>	<p>We have a lot of experience with vision implementations, but the focus is more related to vision related algorithmic design then providing generic vision solutions.</p>
<p><b>Machine Learning</b></p> <p>Framework Experience:</p> <p>Network Model Experience:</p>	<p>Primary Focus</p> <p>Caffe, Other / Contact Partner, TensorFlow</p> <p>AlexNet, GoogLeNet</p>	<p>WISH is a Topic developed AI based application for workflow optimization in an operating theater context in hospitals.</p>