

# Protec GmbH

High-Rel Electronic Components

since 1976

## UK and Ireland Linecard

**RENESAS**  
intersil

 **Q-TECH**  
CORPORATION

 **SMC**

**NX**  
NanoXplore

**SEMICOA**  
A DIVISION OF OSI OPTOELECTRONICS

smiths  
interconnect

**REFLEXPHOTONICS**<sup>®</sup>  
A Smiths Interconnect Company

 **TELEDYNE e2v**  
HIREL ELECTRONICS  
Everywhereyoulook<sup>™</sup>

 **AirBorn**

 **APOGEE**  
SEMICONDUCTOR

 **XREL**  
SEMICONDUCTOR

 **TTS**  
Semiconductor

 **FLUX**

**Honeywell**

**VPT**  
COMPONENTS



# About us

Protec GmbH is specialized in the distribution of high quality products for the electronics industry, particularly for the Space, Avionic, High Voltage, High Temperature and Niche Industrial Markets.

We are supporting customers and manufacturers with our expertise in:

- EUS requirements and licensing processes
- CoC requirements
- Design in support
- Export classifications and rules
- Product trainings

Support and understanding of terms like SLDC, LOT acceptance, PIND, TID, ELDRS, SEE, SEU, SEL, Proton testing and many more industry specific terms.

## Protec GmbH - UK Contacts

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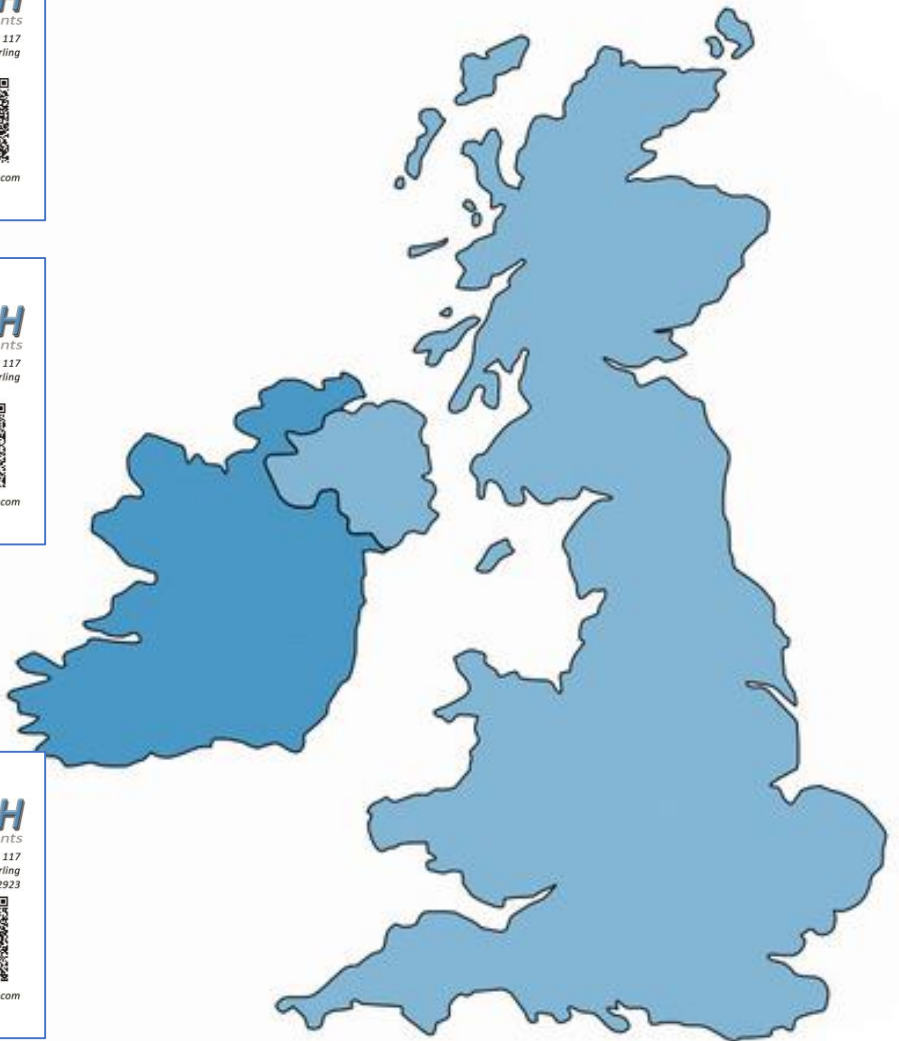
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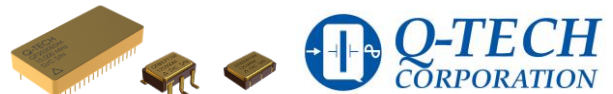
**Analog** OpAmps, Temp. Sensor, ADC & DAC, Voltage References, Multiplexer, RS422, CAN Bus

**Power** LDOs, PoL, PWM, MosFet Driver, Supervisory, Linear Regulator, Source Driver

**Discrete** MosFETs

**Digital** PROM,  $\mu$ Controller

**RF** SP2T & more under development



	Freq. Range	Vdd	min	Package
<b>B+ Products</b>	15kHz - 250MHz	1.8V - 5V	$\pm 25$ ppm	TO, DIP, FP, SMD
<b>XO</b>	15kHz - 250MHz	1.8V - 5V	$\pm 25$ ppm	TO, DIP, FP, SMD
<b>TCXO</b>	3MHz - 100MHz	3,3V - 15V	$\pm 0,5$ ppm	24 pin DIL or FP
<b>MCXO</b>	5MHz - 100MHz	3,3V	$\pm 5$ ppb	38 pin DIL

VCXOs, SAW, OCXOs and New Space Variants also available.  
or Multiple Output XO's, TCXO locked to PLL and many more



**Connectors** (Micro D, Nano D, .... & many others)

**Cable Assemblies** (including other manufacturers)

**Harness** (Internal or External Harness)

**Flex Assemblies** (Box Internal including Connectors)



**RF Filters**  
**RF Cable Assemblies**

**Optical Transceivers** (up to 28Gbps per channel up to 12 per Module) Industrial, Avionic, Mil, and Space versions available



**Transistors** RadHard & qualified to MIL-PRF-19500

**Diodes** Qualified to MIL-PRF-19500 UMC Package

## Low Power Rad Hard FPGAs

(for GEO, LEO, MEO and Constellations)



	kLUTs	RAM Mb	DSPs	HSSL	
<b>NG-medium</b>	34	3	122		
<b>NG-large</b>	137	10	384	24x 6Gbps	ARM Cortex R5
<b>NG-ultra</b>	537	32	1344	32x 12Gbps	4x ARM Cortex R52

Coming soon Military and Avionic versions



**ESCC Qualified Magnetics**  
Transformer, Coils,  
Chokes.....



High-reliability diodes qualified to MIL-PRF-19500 slash sheets and offered in JAN, JANTX, JANTXV, and JANS quality levels.



**ADCs and DACs** up to 12 GSps

**Digital** Processors, Memory, SIP

**RF components** DAS, Multiplier, Gain Blocks, Limiters, Mixers, PLL

**Dosimeters**



Diodes for medical, avionic, Mil applications in all state of the art packages. TVS diodes, Schottky's, Rectifiers, Chips and more. SMC has its own Wafer Fab and offers additional screening or tests.



**ASICs & FPGA to ASIC**

Analog, Digital and Mixed Signal

Space, Military, Avionic & Industrial / Commercial



<b>MRAMs</b>	1M / 4M / 16M
<b>SRAMs</b>	265k - 64M
<b>ADC</b>	12-bit 25 MSps
<b>Comperato</b>	Rail to Rail



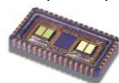
Parts for High-temperature applications like Oil & Gas, Avionic & Military hot Areas like Engine control.

Operating Temp. Range beyond -60°C to 230°C

Products for High Temperature and other Harsh Environments



Flash, EEPROM, SRAM, PWM, RTC, OpAmps, Line Drivers, Transistor Array



**RadHard Logic**



AND, NAND, OR, NOR, XOR, Inverter, Voter, Flip-Flop, Level Translator, Transceiver

Available in RH plastic

# Bare Die for Hybrids

**Protec GmbH**  
High-Rel Electronic Components



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## Historical Brand Names of Suppliers

following Brands are still known, either sold or renamed, we might be able to help you

