

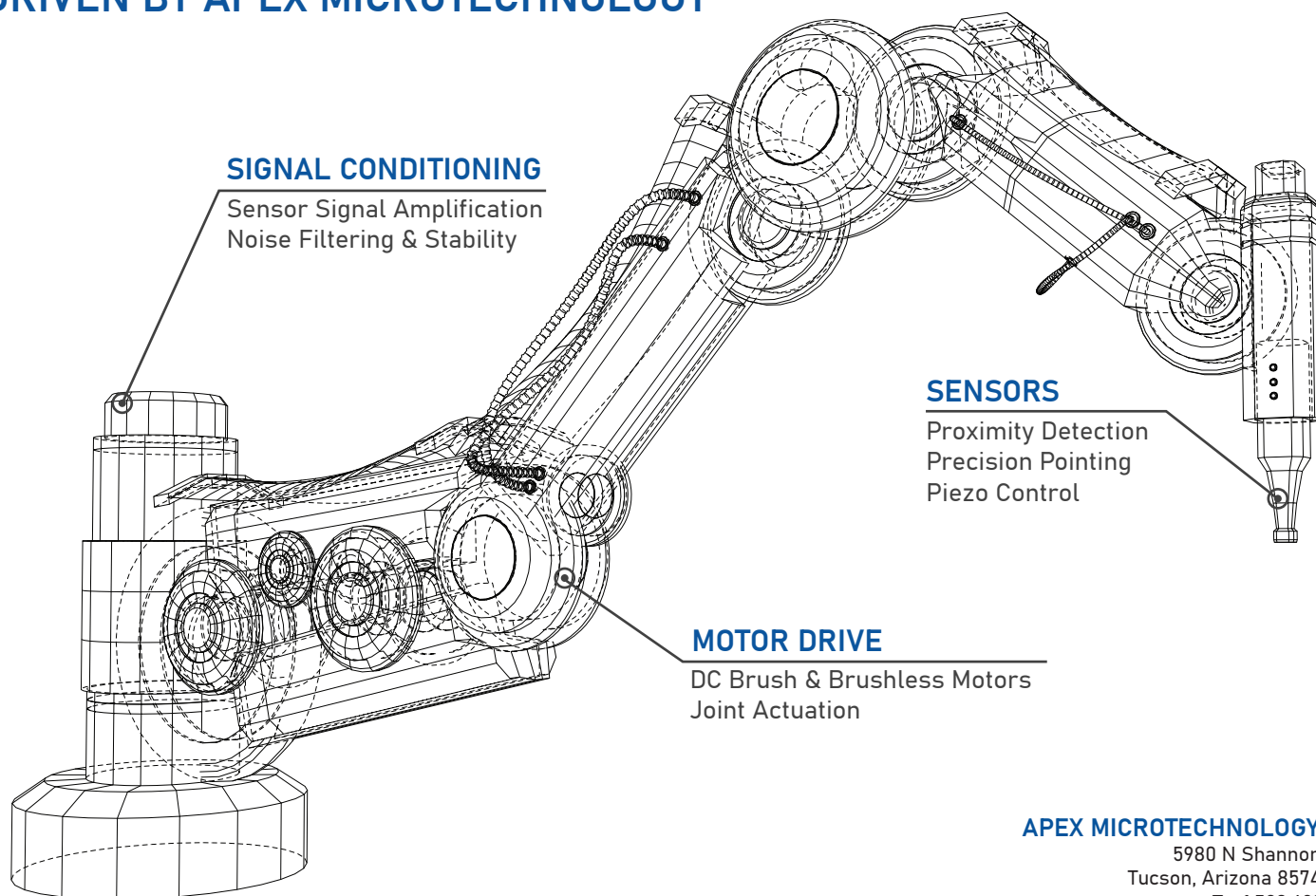
PRECISION POWER ANALOG PRODUCT REFERENCE GUIDE FOR ROBOTICS APPLICATIONS



Modern robotics systems demand precision, efficiency, and reliability across every axis of motion and control. From industrial automation and collaborative robots to autonomous platforms, designers are challenged to deliver higher power density, faster response times, and accurate sensing in increasingly compact footprints.

Apex Microtechnology provides high-performance analog solutions that support every stage of a robotics system, from sensor input to motor output. Our portfolio of precision amplifiers and power devices enables accurate signal conditioning, reliable sensor interfacing, and high-current motor drive, allowing designers to achieve responsive control and efficient power delivery in demanding robotics applications.

CRITICAL SYSTEMS DRIVEN BY APEX MICROTECHNOLOGY



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For more information about Apex Microtechnology's full product portfolio, and robotics applications, scan the QR code or visit our website.

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SILICON CARBIDE INTEGRATED POWER MODULES

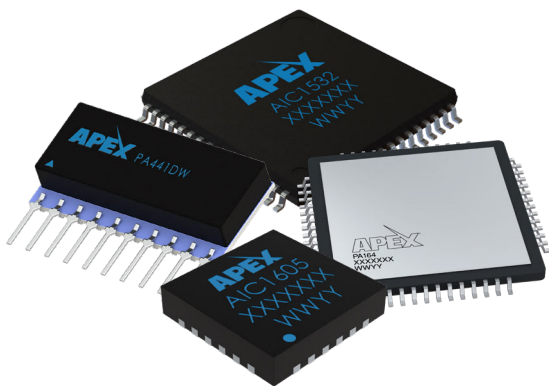
Apex Microtechnology offers a dedicated range of integrated silicon carbide (SiC) power modules featuring rugged hi-rel packaging, compact footprints, and exceptional power density. Designed to meet stringent size, weight, and power (SWAP) requirements, these solutions integrate seamlessly into motor drive systems using proven commercial off-the-shelf analog technology.

These modules enable efficient, high-speed switching and improved thermal performance, supporting reliable operation and optimized efficiency in demanding robotics and motion control applications.



Specification Parameter	MSA303	SA111	SA310	SA110
Output Current Continuous	40A	32A	30A	28A
Supply Voltage Operation	600V	650V	600V	400V
Internal Power Dissipation	75W	56W	111W	89W
Output Architecture	3-Phase	Single-Phase	3-Phase	Single-Phase
Switching Frequency	1MHz	1MHz	400kHz	400kHz
Package Size (mm)	30.5 x 41.9	23.3 x 23.3	40 x 58.7	31 x 29.5
Package Style	22-pin KU, Power DIP	52-pin QFP, Surface Mount	16-pin KR, Power DIP	12-pin DP, Power SIP

DRIVERS AND SENSORS



Apex Microtechnology's Precision IC portfolio includes a wide range of commercial off-the-shelf devices, along with full custom IC design services, including application-specific integrated circuits (ASICs) and application-specific standard products (ASSPs). Apex supports every stage of development—from initial feasibility and design to prototyping, testing, and full-scale production.

Whether addressing simple or complex analog and mixed-signal challenges, Apex serves as a trusted partner in delivering high-performance, application-specific solutions.

Model	Description	Supply Voltage Range (V)	Package
AIC1508	8-Bit HV Parallel Driver IC	20 to 300	20-pin SOP (ZF)
AIC1513	8-Channel Parallel HV Driver	3 to 5 and 30 to 300	32-pin VQFN (ZK)
AIC1532	32-Channel High Voltage Driver	5 and 30 to 230	64-pin LQFP (ZD)
AIC1601	Inductive Proximity Sensor IC	5.5 to 38	24-pin QFN (ZC)
AIC1605	High Voltage Interface IC	5 to 36	24-pin QFN (ZC)
AIC1638	Photo Receiver Amplifier IC	5	16-pin QFN (ZL) / 6-pin CSP