

The Future of Sensing and Power in Industrial Automation and Robotics



Allegro MicroSystems is a global leader in sensing and power IC solutions, serving the industrial automation and robotics market with advanced sensing technologies. With 18 engineering and technology centers worldwide, Allegro delivers precision ICs trusted across every stage of automation.

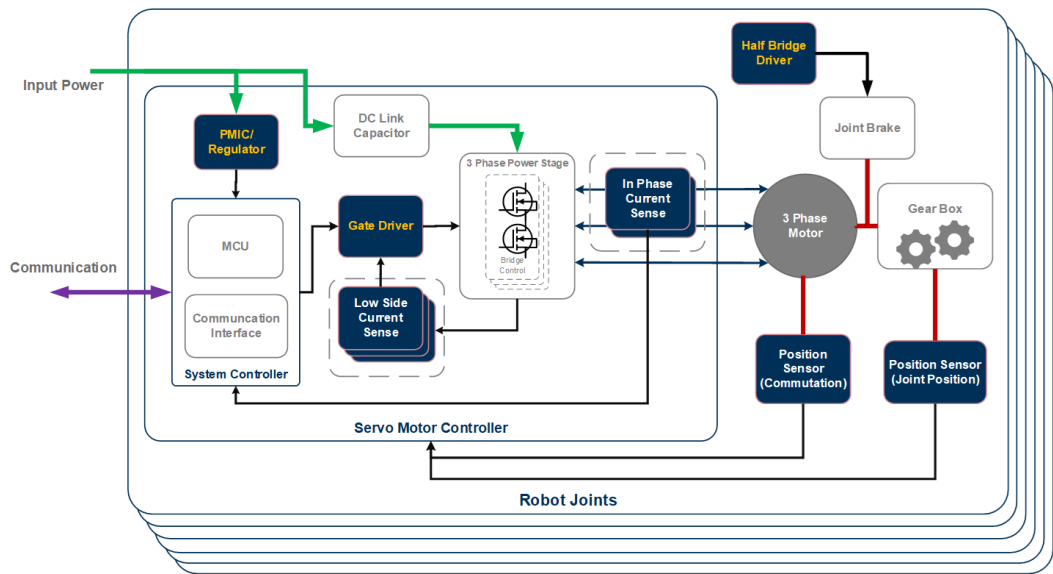
What you can achieve with Allegro solutions

- **Precise motion control:** Enable high-resolution, stray-field immune position sensing for accurate robot joint and actuator feedback
- **Efficient power management:** Deploy compact, highly integrated power ICs designed for safety across any voltage platform
- **Reliable current monitoring:** Achieve high-accuracy, high-bandwidth current sensing for any current range in demanding industrial environments



The industrial automation and robotics market is accelerating rapidly, driven by rising demand for smarter, more precise, and energy-efficient systems across manufacturing, logistics, and consumer robotics applications.

Block Diagram



Key Products and Solutions

Subsystem	Component	Allegro Parts
Servo Motor Controller	PMIC/Regulator	APM81815 (48V Pre-Regulator)
		A81411 (12V PMIC)
	Gate Driver	AMT49100 (48V 3-Phase)
		A89500 (48V Half-Bridge)
		AHV8311 (1.5kV SiC FET)
	In Phase Current Sensor	ACS39402 (TMR, <30A)
		ACS71240 (Hall, <50A)
		ACS37220 (Hall, 50-200A)
Encoder	Half Bridge Driver	A89500 (48V)
		A4950 (12V)
		A3942/4 (HS/LS)
	Motor Commutation	A33023 (Hall, SFI, 12-bits)
		A17803 (Inductive, SFI, up to 18-bits)
	Joint Position Sensor	CT310 (End-of-Shaft, TMR, 17.5-bits)



To learn more about the Allegro family of products and to explore available design resources, visit allegromicro.com