

# High-Performance Semiconductors

- » Magnetic Sensor Integrated Circuits
- » Power Integrated Circuits



**A4915**

**Cost Effective BLDC System Controller  
Simplifies Consumer and Industrial Designs**

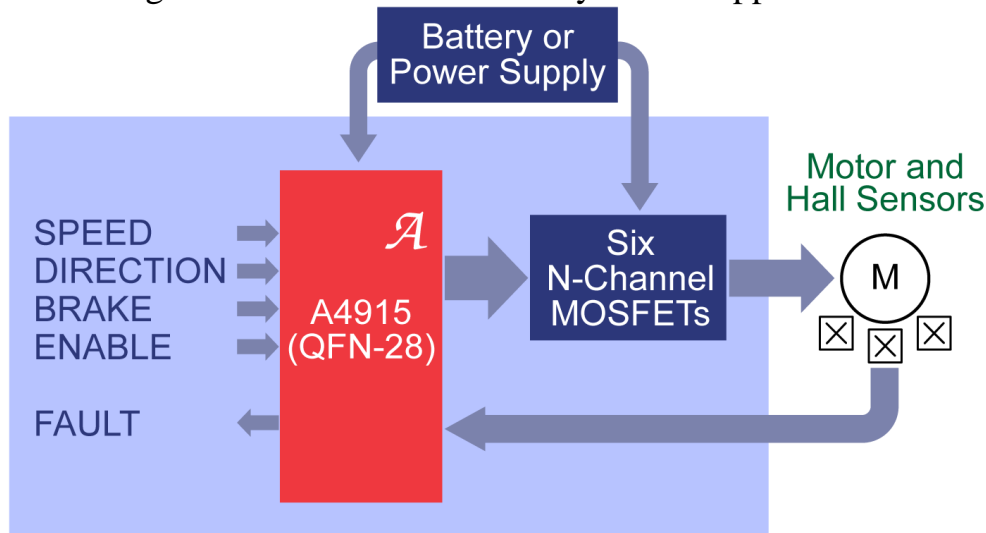


**April 2013**



## What Is It?

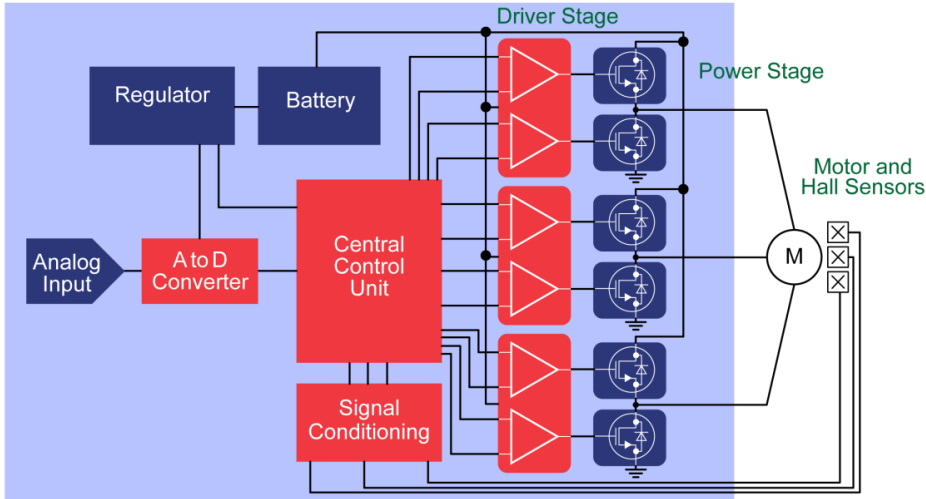
- The A4915 drives a BLDC motor without a microprocessor or DSP
  - Improves time to market by eliminating complicated software development
- Its powerful gate drive can support up to 150 A load current over a wide operating voltage range
  - Capable of driving wide range of motors
  - 50 V maximum rating for operation with wide range of input voltages.
- 5 V minimum supply rating is ideal for battery operated applications
  - SLEEP function provides 10uA standby current
- Center Aligned PWM improved thermal management and noise reduction
- Integrated brake feature for safety critical applications



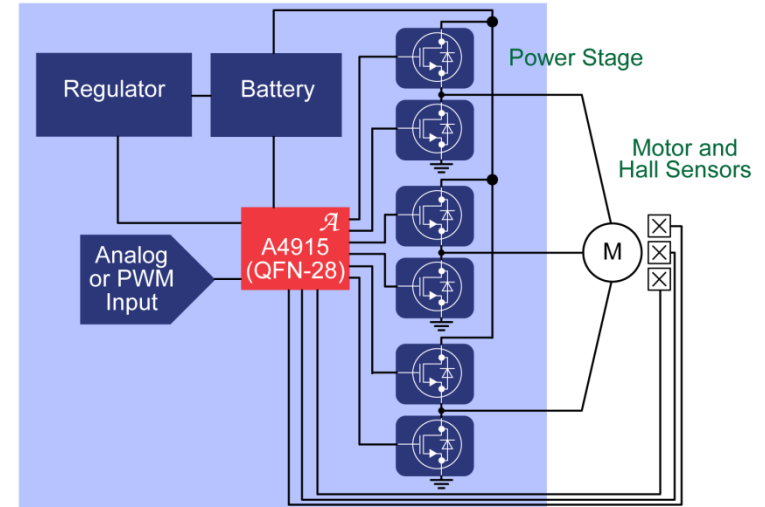


# The A4915 Simplifies Designs

## Existing Solution

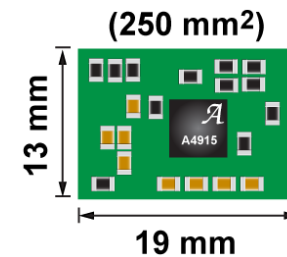
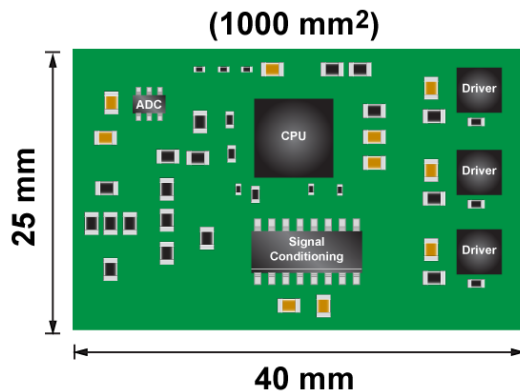


## Allegro Solution



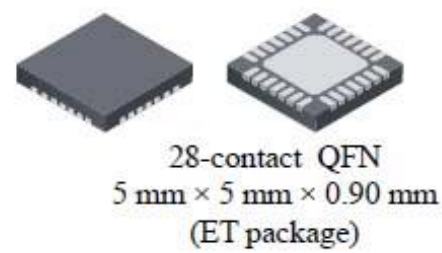
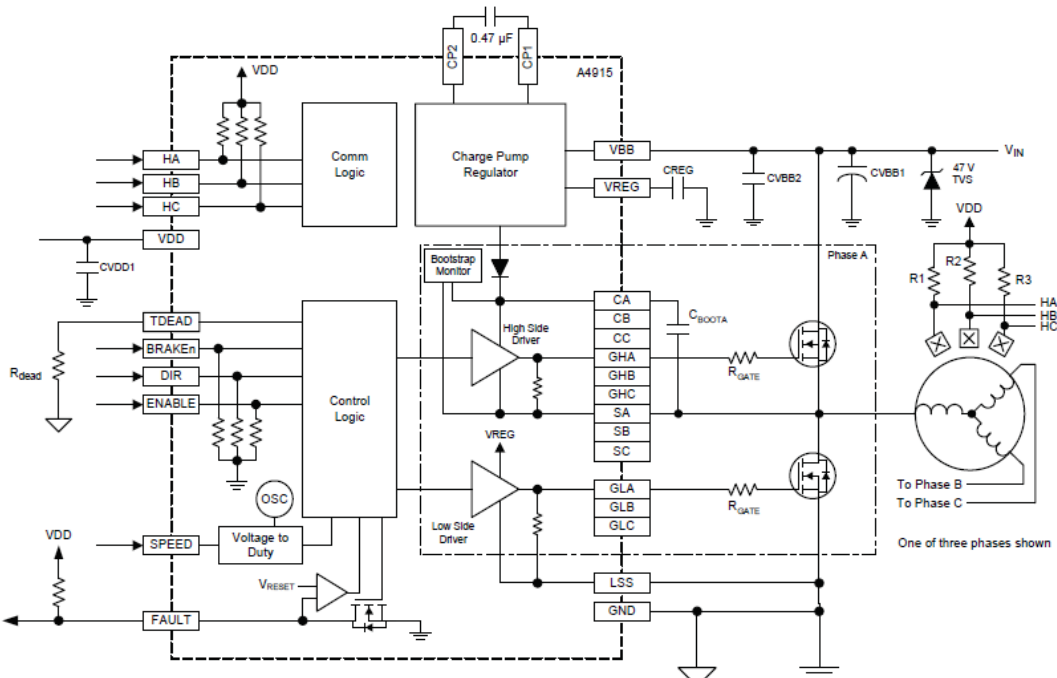
## And Saves Space

Save 75% 750 mm<sup>2</sup>





# A4915 Features



- Wide Supply Voltage Range
  - 5.0 V to 50 V
- Extended Battery life
  - 1uA Standby Current
  - Center aligned PWM reduces power losses
- Designed For Safety
  - Fault Output
  - Latched Thermal Shutdown
  - Active Low Brake (normally active)
- Easy to Control and Flexible
  - Single Wire SPEED Input Converts Voltage to PWM Duty
  - Direct PWM via ENABLE Pin
  - Hall Commutation Table On-Chip
  - Optional DIRECTION and BRAKE Inputs
  - Dead-time adjustment allows operation with various MOSFETs

[Product Webpage](#)     [Datasheet Download](#)



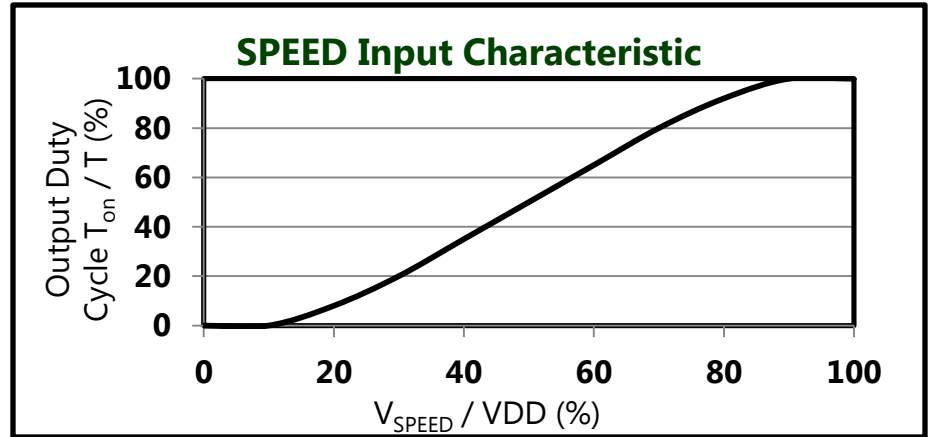
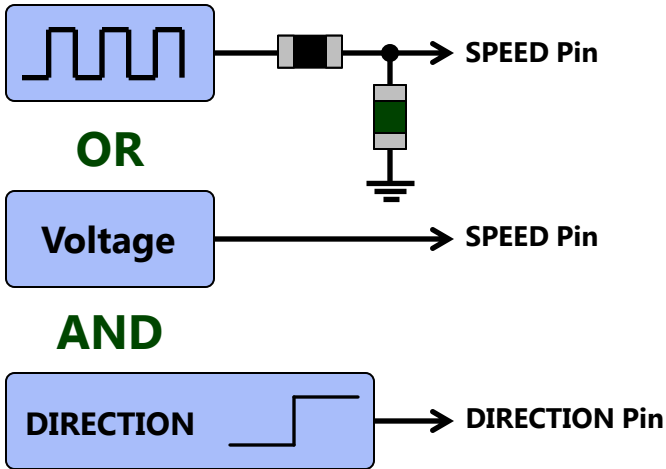
- Small Thermally Efficient Packaging
  - Offered in Leadless and Leaded Options with Exposed Pad



# Easy to Control with SPEED or ENABLE Pins

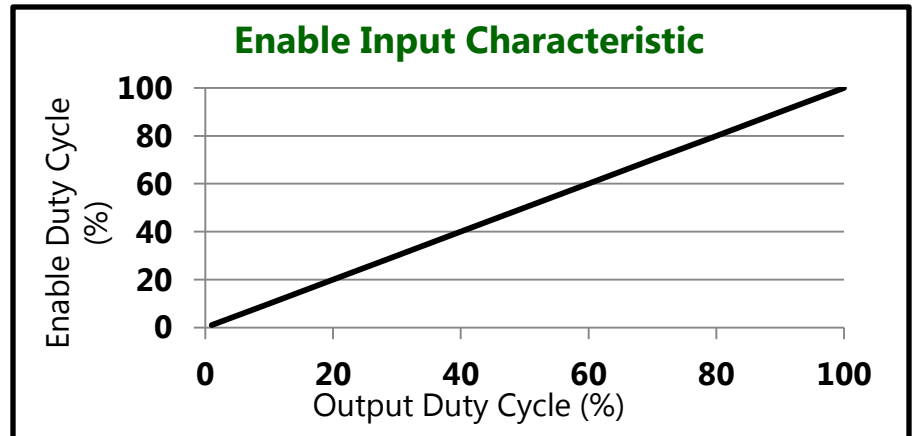
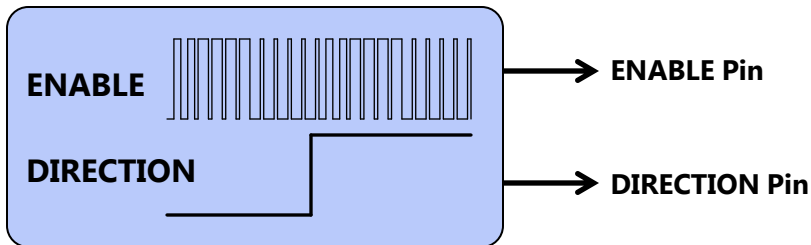
## Option 1

■ Speed Input - Analog voltage on speed input is converted to output duty cycle



## Option 2

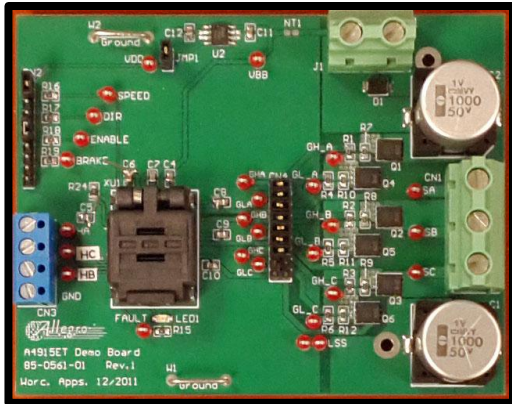
■ Enable Input – Traditional PWM input







# Design Tools and Application Support



## Evaluation Kit PNs:

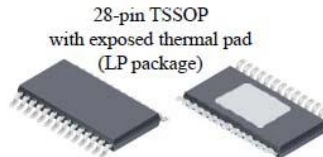
- 28L QFN [APEK4915EET-01-T](#)
- 28L TSSOP [APEK4915ELP-01-T](#)

## A4915METTR-T



28-contact QFN  
5 mm × 5 mm × 0.90 mm  
(ET package)

## A4915MLPTR-T



28-pin TSSOP  
with exposed thermal pad  
(LP package)

**Spin a motor in minutes with evaluation kits available for purchase on [Allegro's Storefront](#)**

Samples available from [Allegro sales](#)

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samples and evaluation kits.**

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