



STC3115

ACTIVE

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Gas gauge IC with alarm output for handheld applications



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The STC3115 includes the hardware functions required to implement a low-cost gas gauge for battery monitoring. The STC3115 uses current sensing, Coulomb counting and accurate measurements of the battery voltage to estimate the state-of-charge (SOC) of the battery. An internal temperature sensor simplifies implementation of temperature compensation.

An alarm output signals a low SOC condition and can also indicate low battery voltage. The alarm threshold levels are programmable.

The STC3115 offers advanced features to ensure high performance gas gauging in all application conditions.

Key Features

- OptimGauge™ algorithm
- 0.25% accuracy battery voltage monitoring
- Coulomb counter and voltage-mode gas gauge operations
- Robust initial open-circuit-voltage (OCV) measurement at power-up
- Programmable low battery alarm
- Internal temperature sensor
- Battery swap detection
- Low power: 45 µA in power-saving mode, 2 µA max. in standby mode
- Micro-sized packages:
 - 1.4 x 2.0 mm 10-bump CSP package
 - 2.0 x 3.0 mm DFN10 package

RESOURCES

Technical Documentation

Product Specifications			
	Description	Version	Size
	DS9300: Gas gauge IC with alarm output for handheld applications	9.0	713 KB


Application Notes			
	Description	Version	Size
	AN4324: STC3115 system integration	2.0	847 KB

User Manuals			
	Description	Version	Size
	UM1836: STSW-BAT001 open source driver for the STC3115	1.0	153 KB

Presentations & Training Material

Presentations			
	Description	Version	Size
	Health and Wellness Mobility Cloud computing		1 MB

Publications and Collaterals

	Description	Version	Size
	Brochure Power management guide	09.2017	3 MB

TOOLS AND SOFTWARE

Embedded Software

EVALUATION TOOL SOFTWARE

Part Number	Manufacturer	Description
<u>STSW-BAT001</u>	ST	STC3115 Open source driver

Evaluation Tools

SOLUTION EVALUATION TOOLS

Part Number	Manufacturer	Description
<u>STEVAL-ISB014V2</u>		Battery monitoring with alarm output for gas gauge applications based on the STC3115
<u>STEVAL-WESU1</u>	ST	Wearable sensor unit reference design for fast time to market

SAMPLE & BUY

Part Number	Package	Packing Type	Operating Temperature (°C) (min)	Operating Temperature (°C) (max)	Marketing Status	Unit Price (US\$) *	Quantity	ECCN (EU)	More info	Order from ST
STC3115AIJT	Chip Scale Package 0.4mm pitch	Tape And Reel	-40	85	Active	-	-	NEC	MORE INFO	
STC3115AIQT	UFDFPN 2X3 10L	Tape And Reel	-40	85	Active	-	-	NEC	MORE INFO	
STC3115IJT	Chip Scale Package 0.4mm pitch	Tape And Reel	-40	85	Active	-	-	NEC	MORE INFO	
STC3115IQT	UFDFPN 2X3 10L	Tape And Reel	-40	85	Active	-	-	NEC	MORE INFO	

(*) Suggested Resale Price per unit (USD) for BUDGETARY USE ONLY. For quotes, prices in local currency, please contact your local [ST Sales Office](#) or our [Distributors](#)

QUALITY & RELIABILITY

Part Number	Marketing Status	Package	Grade	RoHS Compliance Grade	Material Declaratic
STC3115AIQT	Active	UFDFPN 2X3 10L	Industrial	Ecopack3	 
STC3115AIJT	Active	Chip Scale Package 0.4mm pitch	Industrial	Ecopack3	
STC3115IJT	Active	Chip Scale Package 0.4mm pitch	Industrial	Ecopack3	 
STC3115IQT	Active	UFDFPN 2X3 10L	Industrial	Ecopack3	

(**) The Material Declaration forms available on st.com may be generic documents based on the most commonly used package within a package family. For this reason, they may not be 100% accurate for a specific device. Please contact our [sales support](#) for information on specific devices.

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