MEMS Accelerometers

ST offers a portfolio of MEMS-based sensors able to sense acceleration in two or three axis. The mechanical part of linear accelerometer sensor is based on a silicon inter-digitated structure done by fixed and movable fingers. To sense the acceleration in each axis, these structures are packaged in orthogonally groups and the acceleration in each direction is sensed by measuring the change of capacitance between fixed and movable elements correlated to that axis. The changing of capacitance per axis is then translated into an analog or digital output signal in the interface chip. The whole process of design and production of sensors is managed by STMicroelectronics. This guarantees to the customer high volume production, long term security, high precision and reliability since all the devices are tested by Standards and Proprietary Test Systems.

Output	Axis	Acceleration Range (g)	Package	Calibration (V)	Digi-Key Part No.	Price Each 1	Price Each 10	Price Each 100	Tape and Reel‡ Qty.	Tape and Reel‡ Pricing	STMicroelectronics Part No.
Digital	2	±2/±8	14-LGA	2.16 ~ 3.6	497-6071-1-ND	6.03	5.34	4.31	5,000	2494.90/M	LIS202DLTR
Analog	2	±2	16-LGA	3.0	497-6343-ND	3.43	3.13	2.48	—	—	LIS244AL
Analog	2	±2/±6	16-LGA	3.3	497-6344-1-ND	7.78	6.89	5.56	3,000	3221.27/M	LIS244ALHTR
Analog	3	±2	14-LGA	3.3	497-5910-1-ND	7.11	6.31	5.09	5,000	2947.56/M	LIS302ALBTR
Digital	3	±2/±8	14-LGA	3.3	497-5911-1-ND	9.10	8.26	6.55	5,000	3471.74/M	LIS302DLTR
Analog	3	±2	14-LGA	3.3	497-6340-ND	6.61	5.86	4.72	—	—	LIS302SG
Analog	3	±3.5	16-LGA	3.0	497-6341-ND	8.09	6.65	5.61	—	—	LIS344AL
Analog	3	±2/±6	16-LGA	3.3	497-6345-1-ND	8.54	7.57	6.10	3,000	3537.08/M	LIS344ALHTR
Analog	3	±2	8-LGA	3.3	497-4917-ND	7.99	7.39	5.60	—	—	LIS3L02AL
Analog	3	±2/±6	44-QFN	2.4 ~ 3.6	497-6072-1-ND	12.78	11.58	9.19	—	—	LIS3L02AQ3TR
Digital	3	±2/±6	28-QFPN	2.5	497-6346-1-ND	12.31	11.16	8.85	2,300	5386.93/M	LIS3LV02DQ-TR
Analog	1	±2/±6	28-LGA	2.5	497-8230-ND	8.70	8.05	6.09	—	—	LISY300AL

‡ For Tape and Reel part number, change 1-ND to 2-ND.

Tools and Evaluation Boards

The Micro Electro Mechanical System is a new technology that exploits the mechanical properties of silicon to integrate mechanical structures sensitive to vibration, displacement, acceleration and rotation. This new technology opened the door to a new generation of compact, cost effective and sensitive sensors. While conventional microelectronics development focuses on incremental improvements of a well-established technology, MEMS challenge the way designers work, compelling them to think three dimensionally and to acquire a unique blend of multi-disciplinary skills combining electrical, semiconductor and mechanical design.

Features:

• Strategic Cost • Low Power Consumption • Low size and weight • High volumes • High reproducibility • High thermal stability by design • High integration with standard IC devices to build Multi Chip Modules (MCM) or smart sensors.

LIS302DL Evaluation Board

MEMS 3-Axis ±2g/±8g. Digital Output Low Power Linear Accelerometer Evaluation Board based on LIS302DL (EK302DL).

497-6229-ND (STEVAL-MKI006V1)..... **40.55**
497-6342-ND (STEVAL-MKI013V1)..... **25.11**

LIS3LV02DQ Evaluation Board

MEMS 3-Axis ±2g/±6g. Digital Output Low Voltage Linear Accelerometer Evaluation Board based on LIS3LV02DQ.

497-6249-ND (STEVAL-MKI004V1)..... **40.55**

LIS3LV02DL Evaluation Board

MEMS 3-Axix ±2g/±6g. Digital Output Low Voltage Linear Accelerometer.
Evaluation Board based on LIS3LV02DL (EK3LV02DL).

497-6226-ND (STEVAL-MKI005V1)..... **40.55**

LIS3LV02DL Adapter Board

LIS3LV02DL Adapter Board designed to be plugged into a standard DIL 20 socket.

497-6227-ND (STEVAL-MKI009V1)..... **18.35**

LIS344ALH Adapter Board

The STEVAL-MKI015V1 is an adapter board designed to facilitate the evaluation of the LIS344ALH three-axis analog output linear accelerometer.
The board offers an effective solution for fast system prototyping and device evaluation directly within the user's own application.

497-8199-ND (STEVAL-MKI015V1)..... **25.11**

LIS344AL Demonstration Kit

The STEVAL-MKI016V1 is a demonstration kit designed to provide the user with a complete, ready-to-use platform for the evaluation of the LIS344AL.
The LIS344AL is a low-power 3-axis linear capacitive accelerometer that includes a sensing element and an IC interface capable of taking information from the sensing element and providing an analog signal to an external application.

497-8200-ND (STEVAL-MKI016V1)..... **37.66**

LIS344AL Adapter Board

The STEVAL-MKI017V1 is an adapter board designed to facilitate the evaluation of the LIS344AL three-axis analog output linear accelerometer. The board offers an effective solution for fast prototyping and device evaluation directly within the user's own application

497-8201-ND (STEVAL-MKI017V1)..... **25.11**

LIS244AL Adapter Board

The STEVAL-MKI018V1 is an adapter board designed to facilitate the evaluation of the LIS244AL two-axis analog output linear accelerometer.
The board offers an effective solution for fast system prototyping and device evaluation directly within the user's own application.

497-8202-ND (STEVAL-MKI018V1)..... **25.11**

LIS302SG Demonstration Kit

The STEVAL-MKI019V1 is a demonstration kit designed to provide the user with a complete, ready-to-use platform for the evaluation of the LIS302SG.

The LIS302SG is a low-power 3-axis linear capacitive accelerometer that includes a sensing element and an IC interface capable of taking information from the sensing element and providing and analog signal to an external application.

497-8203-ND (STEVAL-MKI019V1)..... **37.66**

LIS302SG Adapter Board

The STEVAL-MKI020V1 is an adapter board designed to facilitate the evaluation of the LIS302SG three-axis analog output linear accelerometer.

The board offers an effective solution for fast system prototyping and device evaluation directly within the user's own application.

497-8204-ND (STEVAL-MKI020V1)..... **25.11**

LIS331AL Evaluation Board

The STEVEL-MKI021V1 MEMS 3-Axis 2g Analog Output Evaluation Board based on NANO Accelerometer LIS331AL.

497-8205-ND (STEVAL-MKI021V1)..... **35.73**

STMPE2403 Demonstration Board

The STEVAL-TCS003V1 is a 24 bit port expander demonstration board with LCD, Keypad and PWM interfaces based on STMPE2403.

497-8206-ND (STEVAL-TCS003V1)..... **88.83**

STCF03/ST7 Demonstration Board

The STEVAL-TLL005V1, Power Flash Demonstration Board, is based on STCF03.
The STCF03 is a high efficiency power supply solution to drive a single flash LED in a camera phone, PDAs and other hand-held devices.

It is a buck-boost converter to guarantee a proper LED current control over all possible conditions of battery voltage and output voltage.
All the functions of the devices are controlled through I2C interface with microcontroller.

497-8207-ND (STEVAL-TLL005V1)..... **58.90**

STUSB03/ST72F63B Evaluation Board

The STEVAL-PCC003V1 is designed for a low speed USB evaluation board based on the STUSB03 transceiver and ST72F63B USB microcontroller.

497-8208-ND (STEVAL-PCC003V1)..... **44.42**

STUSB02E/ST72F63B Evaluation Board

The STEVAL-PCC004V1 is designed for a low speed USB evaluation board based on the STUSB02E transceiver and ST72F63B USB microcontroller.

497-8209-ND (STEVAL-PCC004V1)..... **44.42**

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Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

Free shipping on orders over £50! All prices are in British pound sterling and include duties.