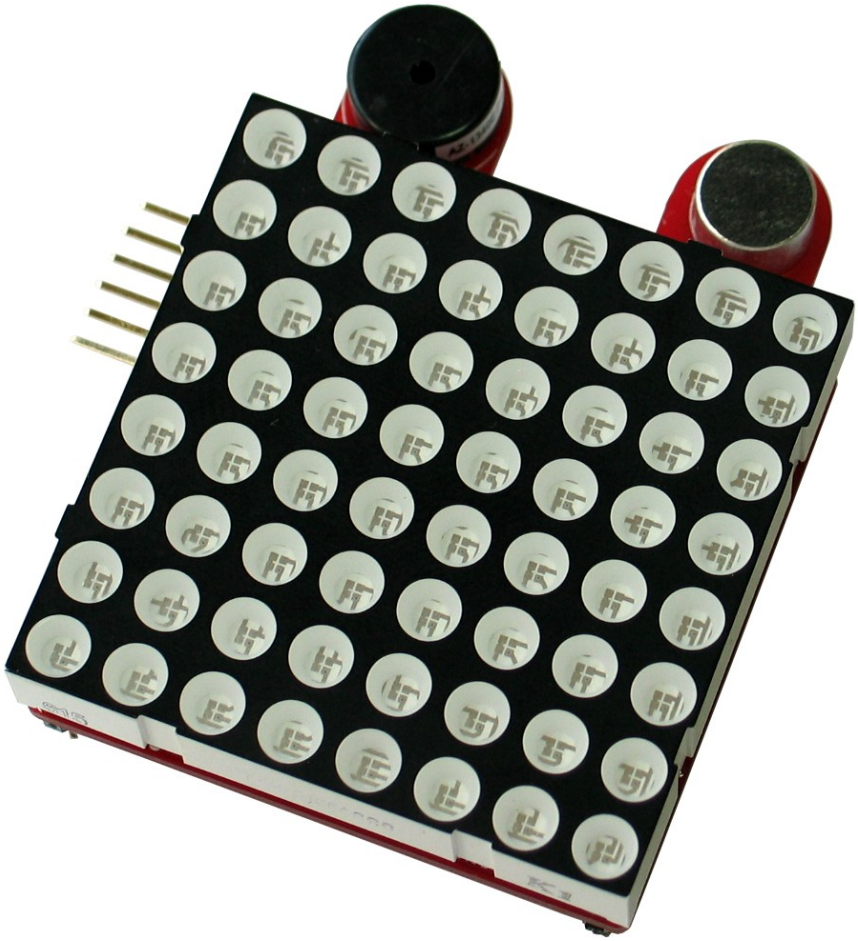

MSP430-LED8x8 BOOSTERPACK development board

Users Manual

All boards produced by Olimex are ROHS compliant

Rev. Initial, September 2011

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INTRODUCTION

MSP430-LED8x8 BOOSTERPACK is development board for MSP430-EXP430G2 LaunchPad from Texas Instruments. MSP430-LED8x8 BOOSTERPACK has 8x8 LED MATRIX, at which can be visualized captions or pictures. If you want to visualize longer captions, you can extend the board by connecting several MOD-LED8x8 boards to it. The board has also microphone for detecting sounds and buzzer for playing sounds.

BOARD FEATURES

- LED MATRIX 8x8 51x51mm
- BUZZER
- Microphone
- Extension connector
- MSP430_LAUNCHPAD connectors for connecting to MSP-EXP430G2 board
- PCB: FR-4, 1.5 mm (0,062"), solder mask, silkscreen component print
- Dimensions: 65.75x 51.00mm (2.59x 2.01")

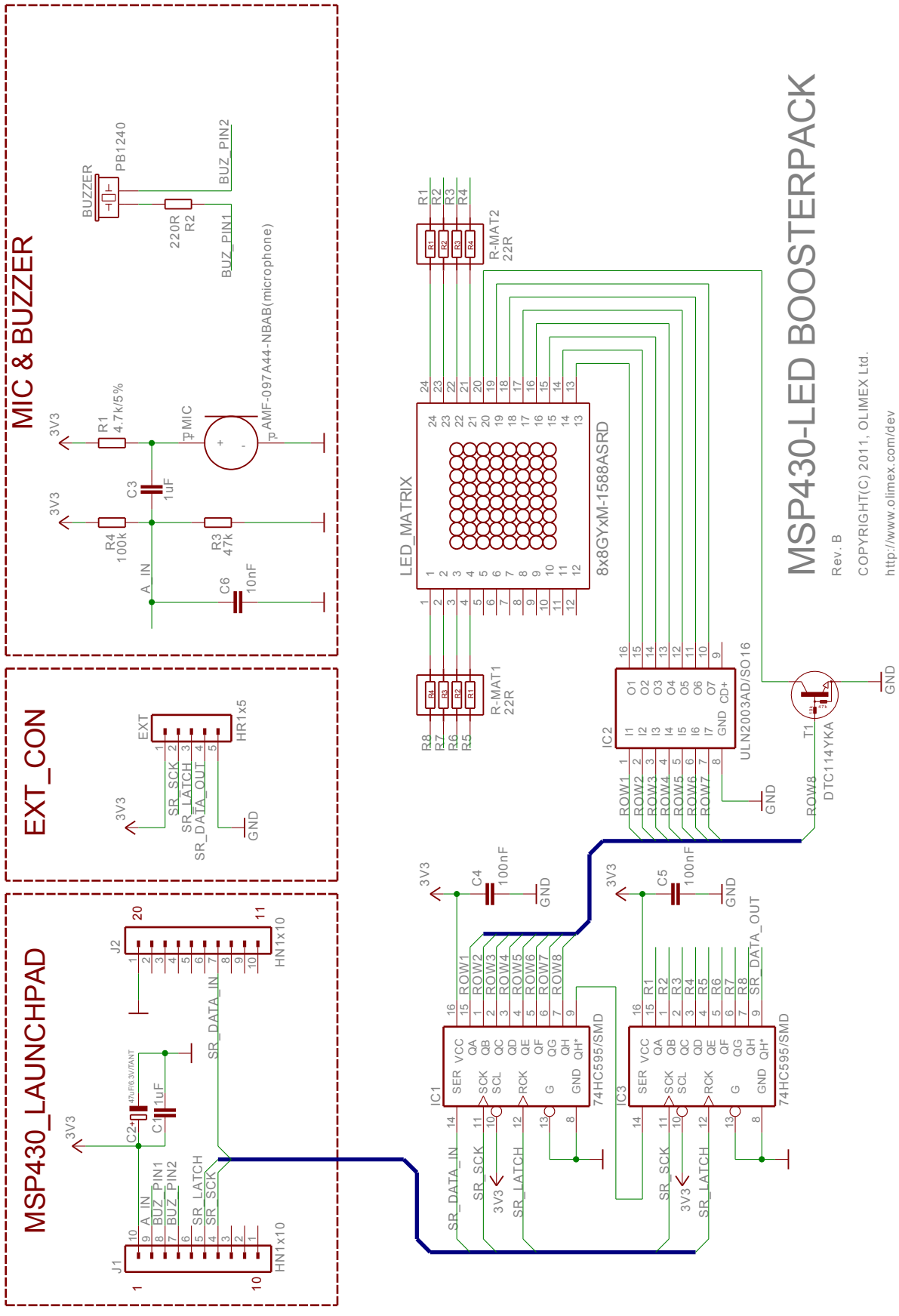
ELECTROSTATIC WARNING

The MSP430-LED8x8 BOOSTERPACK board is shipped in protective anti-static packaging. The board must not be subject to high electrostatic potentials. General practice for working with static sensitive devices should be applied when working with this board.

BOARD USE REQUIREMENTS

Hardware: MSP430 LaunchPad (MSP-EXP430G2) from Texas Instruments; MOD-LED8x8

SCHEMATIC


MIC & BUZZER
EXT_CON
MSP430_LAUNCHPAD
MSP430-LED BOOSTERPACK
Rev. B
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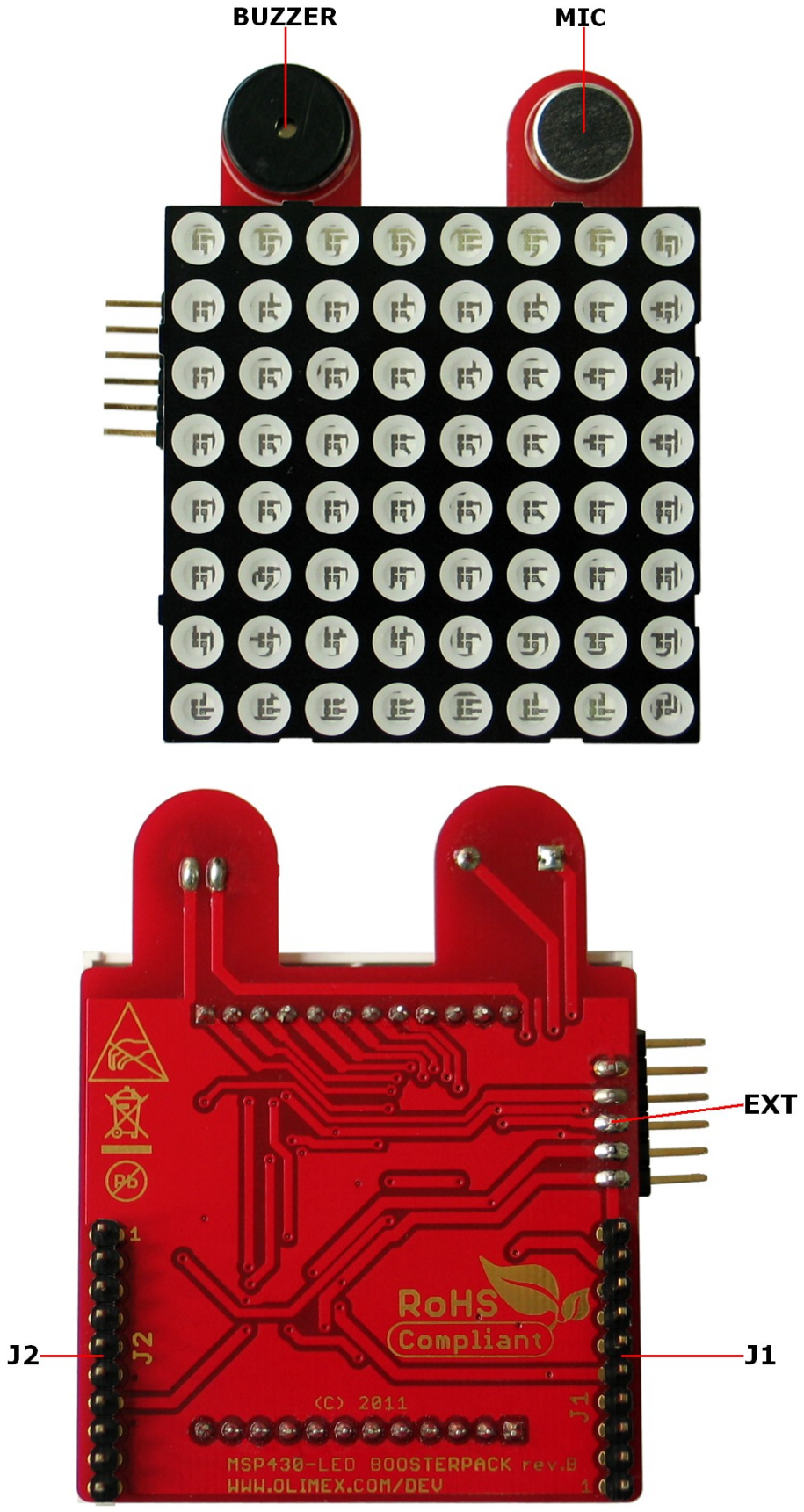
http://www.olimex.com/dev
BUZZER
PB1240
BUZ_PIN2
220R
R2
BUZ_PIN1
3V3
R1
4.7k/5%
MIC
AMF-097A44-NBAB(microphone)
C3
1uF
R4
100k
R3
47k
A_IN
C6
10nF
EXT
HR1x5
SR_SCK
SR_LATCH
SR_DATA_OUT
GND
J2
HN1x10
J1
SR_DATA_IN
C2
47uF/6.3V/TANT
C1
1uF
BUZ_PIN1
BUZ_PIN2
SR_LATCH
SR_SCK
LED_MATRIX
8x8GYxM-1588ASRD
R-MAT2
22R
R-MAT1
22R
IC2
ULN2003AD/SO16
ROW1
ROW2
ROW3
ROW4
ROW5
ROW6
ROW7
ROW8
T1
DTC114YKA
IC1
IC3
74HC595/SMD
C4
100nF
C5
100nF

BOARD LAYOUT



POWER SUPPLY CIRCUIT

MSP430-LED8x8 BOOSTERPACK can take power from MSP-EXP430G2 via J1 connector pin 10 (VCC) and J2 connector pin 1 (GND).

The board power consumption is: about 90 mA with all peripherals running at full speed.

JUMPER DESCRIPTION

There are no jumpers on this board.

Input/Output

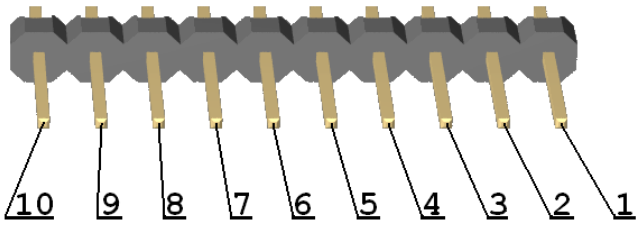
LED MATRIX 8x8 51x51mm

BUZZER – connected to J1 connector pins 7 (BUZ_PIN2) and 8 (BUZ_PIN1).

CONNECTOR DESCRIPTIONS

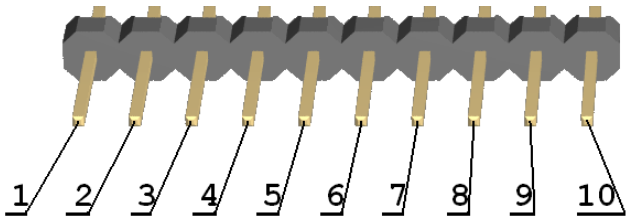
J1

Pin #	Signal Name
1	Not Connected
2	Not Connected
3	Not Connected
4	SR_SCK
5	SR_LATCH
6	Not Connected
7	BUZ_PIN2
8	BUZ_PIN1
9	A_IN
10	VCC



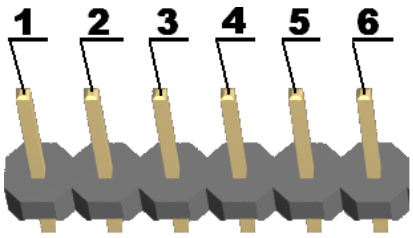
J2

Pin #	Signal Name
1	GND
2	Not Connected
3	Not Connected
4	Not Connected
5	Not Connected
6	Not Connected
7	SR_DATA_IN
8	Not Connected
9	Not Connected
10	Not Connected



EXT

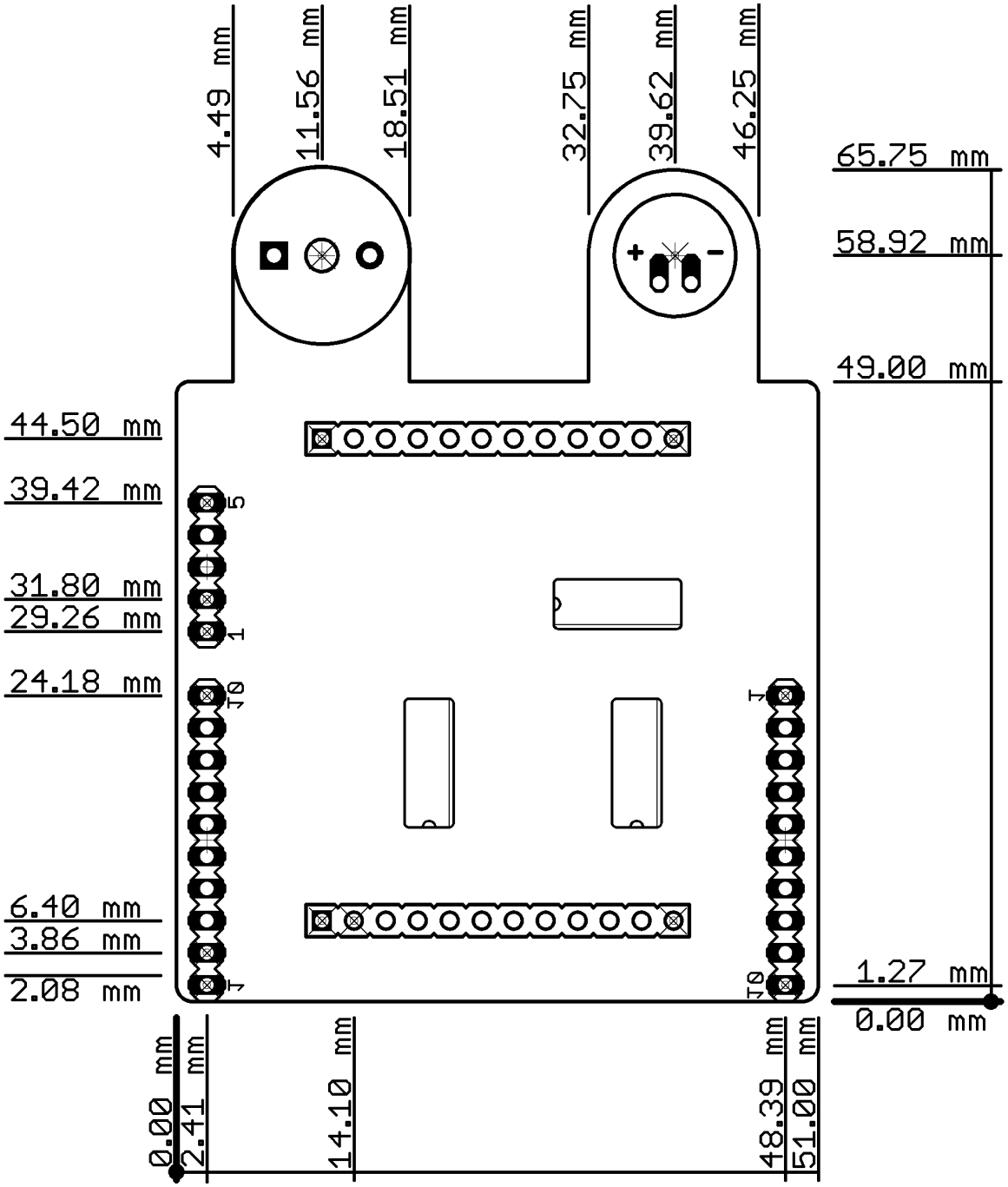
Pin #	Signal Name
1	VCC
2	SR_SCK
3	SR_LATCH
4	SR_DATA_OUT
5	GND
6	Not Connected



MIC

Pin #	Signal Name
1	A_IN
2	GND

MECHANICAL DIMENSIONS



AVAILABLE DEMO SOFTWARE

- MSP430-LED-BOOSTERPACK – demonstrates reactions of the board to clapping with different violence by displaying several emoticons and playing sound.

ORDER CODE

MSP430-LED8x8 BOOSTERPACK – assembled and tested (no kit, no soldering required)

How to order?
You can order to us directly or by any of our distributors.
Check our web www.olimex.com/dev for more info.

Revision history:

Board's Revision	- Rev. B created June 2011
Manual's Revision	- Rev. Initial created September 2011

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