MSP430F5172 (U4)

Capture/Compare

Transmitter Circuit
CD4049 (U3)

Receiver Circuit
LMP7715 (U5)

40KHz Burst

Receive Echo

Distance, D

Object

$D = \frac{CT}{2}$

Where, $C =$ Speed of sound
$T =$ Round trip time of flight

Block Diagram

V_OUT = 9V or 12V

DC/DC Converter
TPS61046 (U1)

V_IN

FB

J5

STOP

40KHz Crystal
(Y1)

BNC

SBW Interface

SPI

GPIOs

START

J8, J9

To/From LaunchPad & BoosterPack

J1

+3.3V_LP

+5V_LP

TPS71733 LDO (U2)

J6

+3.3V

+3.3V_LDO

SPICE

Engineer

SY

FA&C

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