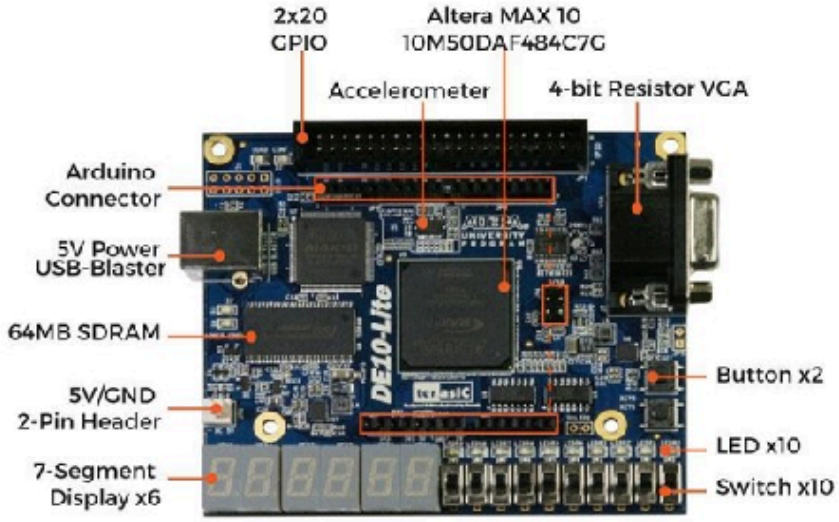
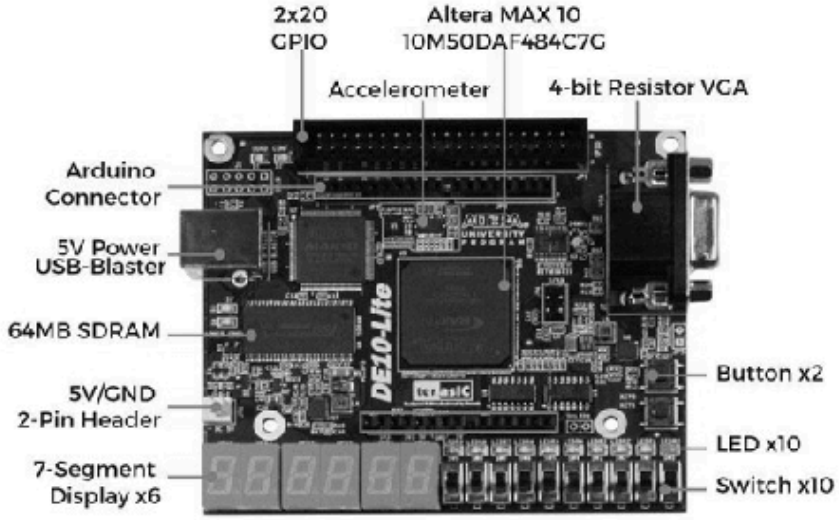
```
%Fundamental Oeporation for Image Processing in MATLAB
%Date: 14/01/2026
clc;
clear all;
close all;
%Basic Operations that clear the command window and closes the figure
%window
B= randi([0,255],8,8);
display(B);
%to create a 8*8 matrix with random numbers ranging between 0 and 255
I=imread("C:\Users\hp\OneDrive\Desktop\De10.jpg");
figure
imshow(I)
%Uploading the basic input image
figure %for opening seperate window for each image
Ig=rgb2gray(I); %keyword to convert image to grayscale
imshow(Ig)
%grayscale image shown
I_red=imread("C:\Users\hp\OneDrive\Desktop\De10.jpg");
I_red(:,:,2)=0; %making the pixels of green channel zero
I_red(:,:,3)=0; %making the pixels of blue channel zero
figure
imshow(I_red)
%the image is converted to red channel only
%to make it blue or green set the other two respective colour pixels
 to
%zero
Ib=Ig>100;
figure
imshow(Ib)
%the above logical expression sets the value of pixels above 100 to 1
 and
%below that to 0 to convert the image to black and white.
```

```
B =

   211   209   108    17   136    39   163    65
   251    66    24    81    83    71   245    57
   186   152   153   135    27   112    61   170
    88     5   120   167   156   134   173   216
   149   108   178   104   199   117    74    88
    27    80   179   209   108   224   171   199
   232    41   163   183    23   132   177   172
   225    45     8   247    68   241    17     1
```


2x20
GPIO
Altera MAX 10
10M50DAF484C7G
Accelerometer
4-bit Resistor VGA
Arduino
Connector
5V Power
USB-Blaster
64MB SDRAM
5V/GND
2-Pin Header
7-Segment
Display x6
Button x2
LED x10
Switch x10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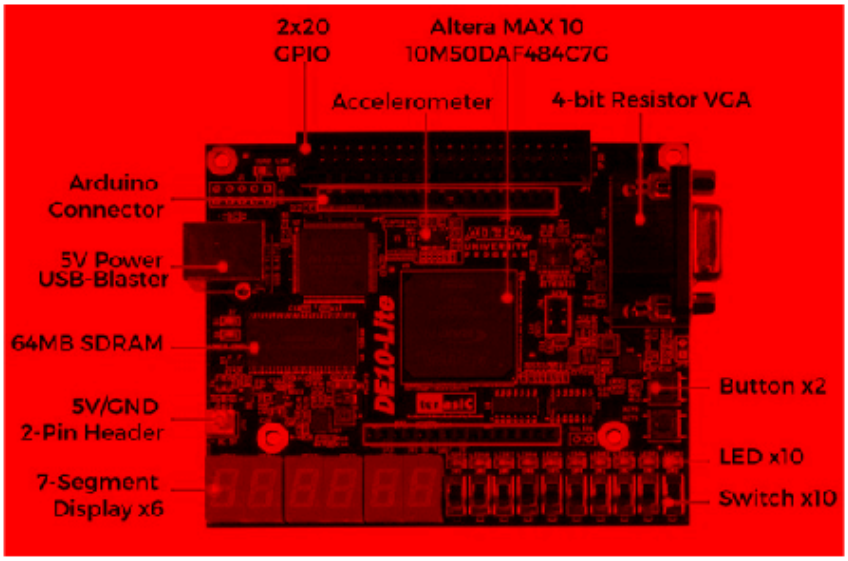

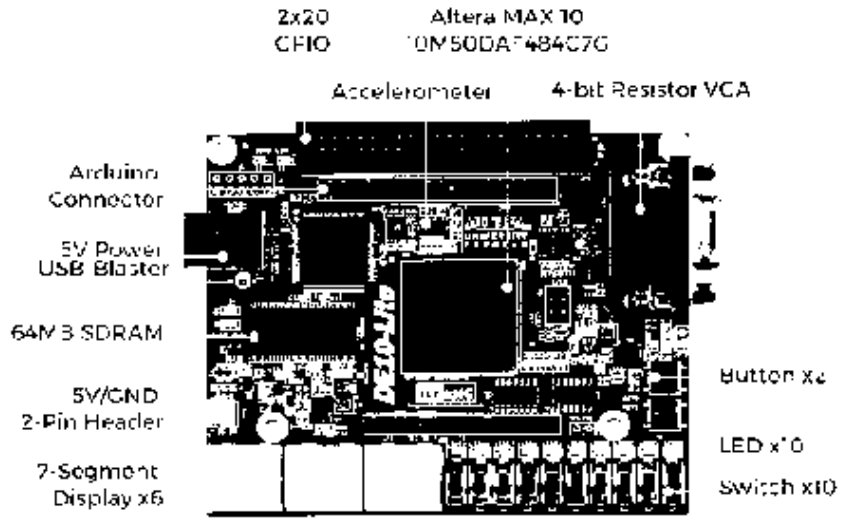

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