

## LIST OF SYMBOLS AND ABBREVIATIONS

<b>CCTV</b>	-	Closed Circuit Television
<b>CCD</b>	-	Charge Coupled Device
<b>NIR</b>	-	Near Infra Red
<b>CFL</b>	-	Compact Fluorescent Lamps
<b>AOI</b>	-	Area Of Interest
<b>IR</b>	-	Infra Red
<b>CFA</b>	-	Colour Filter Array
<b>EEPROM</b>	-	Electrically Erasable Programmable Read Only Memory
<b>PCI</b>	-	Peripheral Component Interconnect
<b>ROI</b>	-	Region Of Interest
<b>RAM</b>	-	Random Access Memory
<b>TTL</b>	-	Transistor Transistor Logic
<b>FOV</b>	-	Required field-of-view in one direction
<b>RGB</b>	-	Red Green Blue
<b>HSI</b>	-	Hue Saturation Intensity
<b>CD</b>	-	Coefficient of Dispersion
<b>CV</b>	-	Coefficient of Variation
<b>LR</b>	-	Latus Rectum
<b>LED</b>	-	Light Emitting Diode
<b>CIE</b>	-	Commission International de l'Eclairage – the International Commission on Illumination
<b>FFT</b>	-	Fast Fourier Transform
<b>H</b>	-	H factor
<b>L</b>	-	Length of field of view (fruit's pass line) in mm
<b>RS-232C</b>	-	Serial Communication Port Standard
<b>N</b>	-	Rpm of the padded roller
<b>N<sub>1</sub></b>	-	Rpm of the main conveyor chain

$N_2$	- Rpm of the friction belt drive motor
<b>HeNe</b>	- Helium Neon
$C_s$	- Conveyor speed in mm/sec
$T_s$	- Time taken by the fruit to travel through 'L' in sec
$S_c$	- Rubberised cylinder speed in rev / sec
$D_c$	- Rubberised cylinder diameter in mm
$D_a$	- Apple diameter in mm
$D_1$	- Pitch Circle Diameter of main conveyor drive chain sprocket
$D_2$	- Diameter of friction belt drive drum
$D_p$	- Maximum object size in the field-of-view direction
$L_v$	- Maximum variation in the object location and orientation
$P_A$	- Allowance for camera pointing as a percentage or fraction
<b>Dia</b>	- Diameter
<b>Ecc</b>	- Eccentricity
<b>CDR(r)</b>	- Coefficient of dispersion for range (radius)
<b>CDS D(r)</b>	- Coefficient of dispersion for standard deviation (radius)
<b>CV(r)</b>	- Coefficient of variation (radius)
<b>CDR(a)</b>	- Coefficient of dispersion for range (area)
<b>CDS D(a)</b>	- Coefficient of dispersion for standard deviation (area)
<b>CV(a)</b>	- Coefficient of variation (area)
$x_{av}$	- Average values of the boundary coordinates
$y_{av}$	- Average values of the boundary coordinates
$I_x$	- Moment of inertia about x-axis
$I_y$	- Moment of inertia about y-axis
$I_{xy}$	- Combined Moment of inertia
<b>mm</b>	- Millimeter