.... >Laser measurement solution

Friday, 11 May 2007

News release
Laser Measurement Solution from APEX

Apex Automation and Robotics
always aim to select the most appropriate
technologies for each application to provide
their customers with automation solutions
that give them a competitive edge.

 In a recent project, it was required to measure
the dimensions, position and orientation of a product on the move, then send this information
to a robot. After investigating variousoptions,
Apex decided to use a laser scanning device that they interfaced with a PC to calculate
the results.

Laser scanning devices are commercially available and they use the time of flight
to calculate the distance to any point in their field of view with a scanning frequency
of up to 500 Hz. In other words they perform measurements at a rate of 500 times
a second and this large amount of data makes it impossible to use them with
a Programmable Logic Controller (PLC). As a result, practically laser scanners can
only be interfaced with a computer using Ethernet TCP/IP.
The software engineers at Apex Automation and Robotics have developed the TCP/IP
interface with the computer to acquire the large amount of data from the laser scanner,
then used C++ programming language to analyse the data and calculate the relevant
dimensions of the product. Real dimensions in mm were then sent from the PC through
the Ethernet network to the robot.

The integration of PCs in an Ethernet network to acquire real-time data and perform
complex calculations, will give Apex Automation and Robotics new opportunities
in applications where PLCs and robots have been limited.