DS6100

High Performance Laser Scanner

Features

- High performance code reconstruction through **ACR**™ 2nd generation technology
- High ambient light immunity by high frequency laser modulation
- Reading distance up to 1800 mm (71 in.)
- Scanning speed up to 1600 scan/s
- Dual SW programmable RS232/RS485 serial interfaces
- Parcelgap reduction through the **PackTrack**™ system
- **WINHOST**™ user friendly programming interface
- Keypad and backlit LCD display for fast programming

Applications

- Tray and parcel sorting systems
- Process control and parts tracking
- Shop floor automotive and electric applicances
- Warehousing and picking systems
- Loading and Unloading systems

General Description

The **DS6100** is a technologically advanced bar code reading system representing a complete solution for the widest range of applications in the manufacturing and distribution sectors. The introduction of innovative functions and new technologies make the **DS6100** the most versatile laser scanner in its market segment.

The **DS6100** has been developed to fulfill the most demanding identification requirements, combining a perfect mix of advanced research and solid experience for extremely innovative applications.

Datalogic patented **ACR**™ 2nd generation technology permits reading of very low aspect ratio codes placed anywhere on the objects. **ACR**™ 2nd generation also dramatically increases the reading capabilities of low quality printed or corrupted bar codes.

Thanks to **PackTrack**™ technology, the Datalogic patented parcel tracking system, the distance between parcels can be reduced to a few centimeters, allowing full throughput utilization of the transport system.

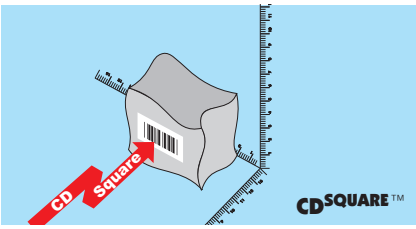
The **DS6100**'s bar code reading capabilities are not affected by ambient light conditions, thanks to Datalogic's high frequency laser light modulation system. The **DS6100**'s highest reading performance is assured under the most demanding conditions by optimization technology based on the innovative Self Adjusting Digitizer, supported by the patented **CD**$^{\text{SQUARE}}$™ code distance detector.

The patented technologies employed in the **DS6100** assure excellent reading performance in a large number of material handling applications and sorting systems. **DS6100** will astonish you not only by its performance, but also by its ease of use and control capabilities making it a real "plug & play" device.

Technologies

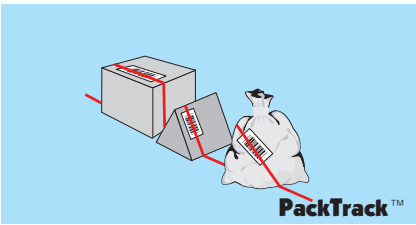
Advanced Code Reconstruction

ACR™ technology (Advanced Code Reconstruction) with multiprocessor architecture based on a powerful DSP combines, in real time, partial slices of the code to be read, with a max. decoding speed of 100,000 char/sec. The **ACR**™ software algorithm is not dependent on bar code aspect ratios and can be used to enhance the readability of poorly printed or damaged codes.
ACR™ 2nd generation provides additional performance and features including insensitivity to start/ stop movements and vibrations, as well as improved performance on 4 level codes.



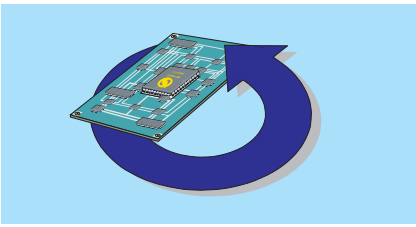
Code Distance Detector

CD SQUARE™ (Code Distance Detector) is a revolutionary technology allowing accurate detection of bar code label positioning wherever the bar code is located, independent of the object shape.
The **CD SQUARE**™ system analyses the received analog signal and measures the code distance from the scanner. All these operations are done in real time for multiple bar codes and for every scan up to a maximum of 1600 scans.
The information provided by **CD SQUARE**™ is used to optimize decoding processing and perform object tracking (see **PackTrack**™).



Integrated Parcel Tracking

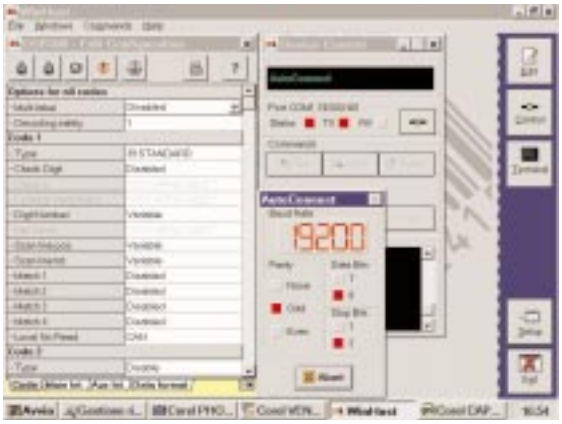
PackTrack™ is a DL patented system for parcel tracking. It can manage the most demanding applications where parcel tracking is necessary to improve system throughput. The needs of these applications are overcome by **CD SQUARE**™ and **PackTrack**™ permitting code assignment with 50 mm minimum gap between objects.
PackTrack™ eliminates the need for external accessories, such as photocells, encoders and height detector barriers, making installation and setting of the whole transport system less expensive, faster and easier.



Self-Adjusting Digitizer

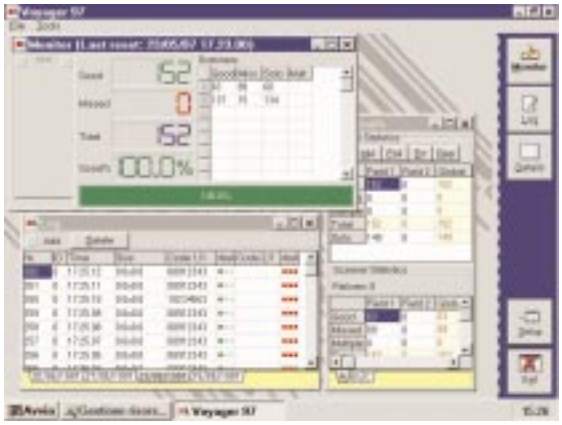
The innovative features of the Self-Adjusting Digitizer allow the highest reading result in the most varied conditions.
Based on sophisticated electronic circuitry, the Digitizer adapts its elaboration parameters to the different reading conditions supplying real time electronic optimization for each code to be read. Bar code distance measurement provided by **CD SQUARE**™ and bar code quality information are combined by the Self-Adjusting Digitizer enhancing the decoding capabilities in every reading condition and the readability of low quality bar code labels.

User Friendly Stations



WINHOST™

- Windows based
- Easy Setting
- Config. Database
- Help on Line
- Compare Config.
- Interactive Mode



VOYAGER™

- Real Time Statistics
- Details — Scanner Report
- Monitor — Virtual Parcel Movie
- Log — Log File
- Remote Diagnostic

Applications

High tilt angle tolerance label positioning

The benefit of avoiding label position control and the possibility to read labels with a tilt angle exceeding the linear decoding capabilities reduces costs and makes automated processes more flexible. In many oriented applications, especially in the ***manufacturing*** and ***distribution*** industries, a percentage of the bar codes reach the reading area with an excessive tilt angle.
ACR™ 2nd generation code reconstruction technology provides the ideal solution to tomorrow's needs without any extra costs through its capability of decoding independently from the code aspect ratio and enhancing reading results on poorly printed codes.

Unattended scanning system

The DS6100 provides cost effective solutions for ***Manufacturing*** applications by matching state-of-the-art technology and industrial reliability with an extremely competitive price
Practical examples of application needs, such as automotive and electrical appliance ***Shop Floor*** and ***Warehousing***, can be easily resolved thanks to the DS6100's compact dimensions, high scan rate, multiple label reading and ACR™ technology.
The reader's flexibility also provides an important advantage in these applications as the same model of the bar code reader can be used in different assembly or warehousing stations according to the WIP of the product.
In certain applications, a large amount of clearance is necessary due to scanned objects of various sizes (ex. body assembly in automotive industries or appliances assembling). A large reading width is the most important feature in other applications when, for example, large boxes must be transported from the assembly line to the warehouse.
Thanks to its adjustable focus system and self adjusting digitizer capability, the DS6100 offers the ideal solution for all these particular requests.
In some typical box sorting applications, the bar code reader must read the shipping label, usually made up of several bar codes, in picket fence mode. It's important to read the label in the minimum possible time, since the box usually is stopped in the reading area (stop and go), waiting for bar code reading to complete. The maximum scan rate of 1600 scan/sec, ACR™ technology, Real Time Decoding and the GFC-05 compact oscillating mirror are other unbeatable benefits offered by the DS6100.

The PackTrack™ function, allowing minimum distance between the sorted objects, improves throughput and efficiency of the plant dramatically.
Ambient light immunity, obtained through high frequency laser modulation, eliminates unwanted negative effects on the read rate of the reading station due to the sun light and other forms of illumination that penetrate the plant at certain times during a typical working day.

Thanks to high frequency laser modulation, it is also possible to satisfy very challenging requests in vertical AutoID projects, such as bar code identification of incoming and outgoing vehicles in parking lots.
The user friendly Window's based WINHOST™ software program takes performs scanner parameters setup. If the application requires a multi-reader configuration, installation can be easily done by means of the XMF-05 mounting frame, while station performance can be monitored and analyzed by means of the VOYAGER™ software.

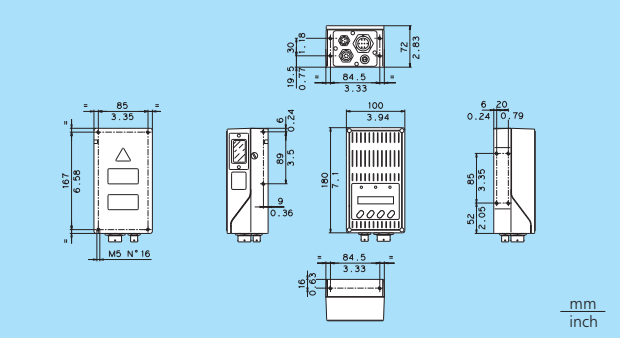
Models and Accessories

MODEL	CONNECTIONS		ORDER NO.
	Connectors	Junction Box	
DS6100-3000	•		931251050
DS6100-3100		•	931251060
ACCESSORIES			
PG110/50	Power block (110 Vac)		B9751094
PG220/50	Power block (220 Vac)		B9751095
GFC-50	90° reading device		B9751067
GFC-05	Oscillating mirror attachment		B9751098
US-1	Installation support		91H031000
XMF-05	Single cross mounting frame		91H031120
XBOX-05	Connection box single/double cross		93ACC1010
VOY-05	Voyager Kit XBOX-05		93ACC1030
US-05	Mounting Brackets (10 pcs)		93ACC1000
INT-26	20 mA C.L. interface board		93A151010

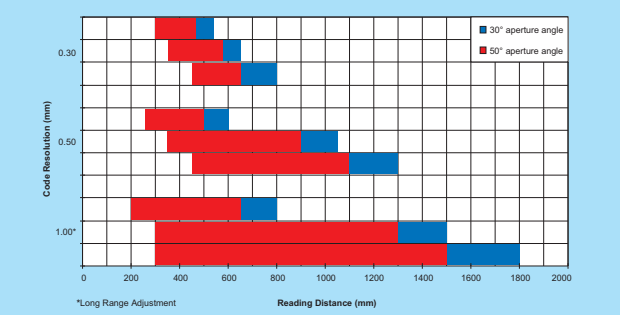
Specifications

POWER SUPPLY	10 to 30 Vdc
POWER CONSUMPTION	6 W
LIGHT SOURCE	Visible Laser Diode (670 nm)
LIGHT RECEIVER	Avalanche photodiode
MAX. RESOLUTION	0.20 mm (8 mils)
SCANING SPEED	800 (1600) scans per second
SINGLE SCANNER STATION	
READING DISTANCE	Up to 1800 mm (71 in)
DEPTH OF FIELD	Up to 1600 mm (63 in)
SINGLE CROSS OMNI-STATION	
READING WIDTH	Up to 600 mm (24 in)
DEPTH OF FIELD	Up to 600 mm (24 in)
READABLE CODES	The most popular symbologies incl. 2/5 family, Code 39, Code 93, Code 128, EAN/UPC, Codabar
CODE AUTODISCRIMINATION	Up to 5 different codes
MAIN INTERFACE	RS232 / RS485 SW programmable (20 mA C.L. optional)
AUX. INTERFACE	RS232 / RS485 SW programmable (20 mA C.L. optional)
BAUD RATE	1200 to 57,600 bauds
INPUT SIGNALS	'Presence sensor' and 1 auxiliary (NPN/PNP transistor)
OUTPUT SIGNALS	'No read,' 'Right code' and 1 auxiliary (NPN transistor open collector and emitter)
SET UP	Built-in keypad and menu driven display / Via serial port Winhost™
OPERATING MODES	'On line,' 'Serial on line,' 'Automatic,' 'Pack Track™,' 'Test
DISPLAY	2 line by 16 character LCD
KEYPAD	4 keys
LED INDICATORS	'Laser on,' 'Reading phase active,' 'Label present,' 'Data transmit'
LASER CLASSIFICATION	IEC 825 Class 2
LASER CONTROL	Security system to turn laser Off in case of motor slow down or failure
DIMENSIONS	180 x 100 x 72 mm (7.09 x 3.94 x 2.83 in)
WEIGHT	1.3 Kg (2.87 lbs) approx.
CASE MATERIAL	Aluminium
OPERATING TEMPERATURE	0 to 40 °C (32 to 104 °F)
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90% non condensing
VIBRATION RESISTANCE	IEC 68-2-6 test FC 1.5 mm, 10 to 55 Hz; 2 hours on each axis
SHOCK RESISTANCE	IEC 68-2-27 test EA 30 G 11 ms; 3 shocks on each axis
PROTECTION CLASS	IP65

Dimensions



Reading Diagram



DATALOGIC
Bar Code & More

We reserve the right to make modifications and improvements

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