



DX8200A-3002

QUICK REFERENCE GUIDE



DX8200A-3002

General View:

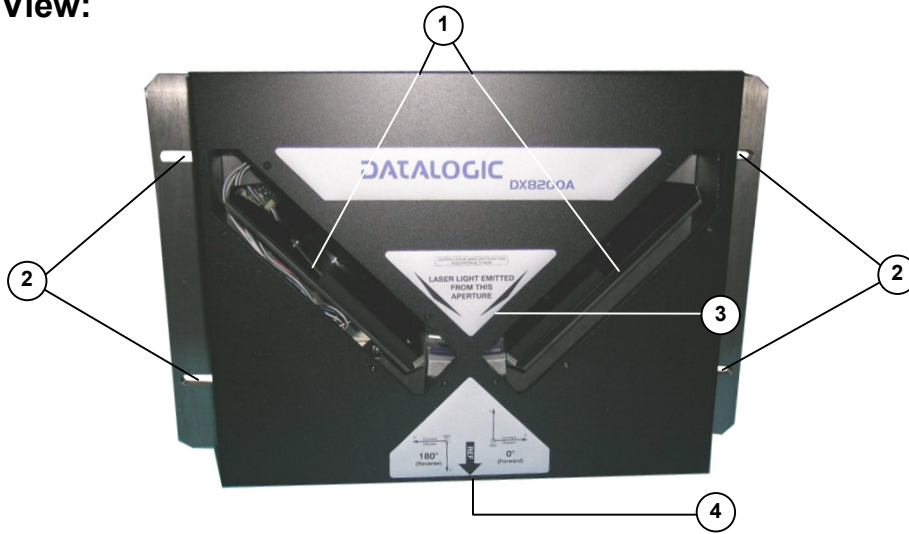


Figure A

- ① Laser Beam Output Windows
- ② Mounting Slots
- ③ Laser Safety Label
- ④ Mounting Reference Label

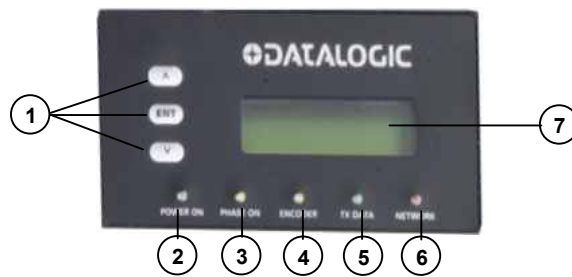


Figure B

- ① Programming Keypad
- ② Power On LED (Green)
- ③ Phase On LED (Yellow)
- ④ Encoder LED (Yellow)
- ⑤ TX Data LED (Green)
- ⑥ Network LED (Red)
- ⑦ LCD Display



Figure C

- ① Lonworks 17-pin Male Connector
- ② Lonworks 17-pin Female Connector



NOTE

For further details on product installation, see the complete Reference Manual available on the configuration CD-ROM included with this product.

Technical Features:

ELECTRICAL FEATURES		
Supply voltage	20 to 30 Vdc	
Power consumption	1.5 to 1.0 A; 30 W typical	
	1.75 to 1.17 A; 35 W Max. (including startup current)	
Communication Interfaces	Auxiliary	
	Baud Rate	
	RS232	1200 to 115200
	Other	
Lonworks	1.25 Mb/s	
OPTICAL FEATURES		
Light receiver	Avalanche photodiode	
Wavelength	630 to 680 nm	
Safety class	Class 2 - EN60825-1; Class II - CDRH	
Light source	Up to 4 semiconductor laser diodes	
Laser control	Security system to turn laser off in case of motor slow down	
READING FEATURES		
Scan rate	≤ 1000 scans/s (500 per leg)	
Maximum resolution	(see reading diagrams on page 10)	
Max. reading distance		
Max. reading width		
Max. depth of field		
USER INTERFACE		
LCD Display	2 lines by 20 characters LCD	
Keypad	3 keys	
LED indicators	Power On (green) Phase On (yellow) Encoder (yellow) TX Data (green) Network (red)	
SOFTWARE FEATURES		
Readable Codes	Interleaved 2/5 Code 39 Standard Codabar Code 128 EAN 128 Code 93 (standard and full ASCII) EAN/UPC (including Add-on 2 and Add-on 5)	
Code selection	Up to 10 codes during one reading phase	
Operating modes	PackTrack™	
Configuration modes	Genius™ utility program	
Parameter storage	Non-volatile internal FLASH	

ENVIRONMENTAL FEATURES	
Operating temperature	0° to +50 °C (+32° to +122 °F)
Storage temperature	-20° to +70 °C (-4° to +158 °F)
Humidity	90% non condensing
Ambient light immunity	20000 lux
Vibration resistance: EN 60068-2-6 2 hours on each axis	Frequency range from 5 to 150 Hz; Constant displacement 3 mm pk-pk from 5 to 9 Hz; Constant acceleration 0.5 g from 9 to 150 Hz;
Shock resistance: EN 60068-2-27 3 shocks on each axis	30 g; 11 ms
Protection Class EN 60529	IP65*
PHYSICAL FEATURES	
Mechanical dimensions	470 x 300 x 141 mm (18.50 x 11.81 x 5.55 in)
Weight	about 11 kg (24 lbs 3 oz)

* IP65 cables and connectors required (CAB-850x or BTK-8500).

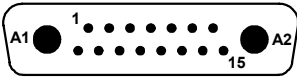
Accessories:

NAME	Description	Part Number
PWO-480	Power and Connect System 480W	93ACC1767
FS-1	Frame Shaper (8 pcs)	93ACC1750
S30	Photocell Kit	93ACC1782
PH-1	Photocell Kit - PNP	93ACC1791
MEP-543	Photocell Kit - NPN	93ACC1728
OEK-2	Optical Encoder Kit + 10 m cable + Spring	93ACC1770
OEK-1	Optical Encoder Kit + 10 m cable	93ACC1600
BTK-8100	Bus Terminator Kit (5 pcs)	93ACC1090
BTK-8500	IP65 Terminator Kit (2 pcs)	93A051286
PLL-8000	Optocoupled PLL device	93ACC1280
CAB-8100	10 wire shielded cable D 9.5 mm – 50 m	93ACC1120
CAB-8101	17-pin scanner/scanner connection cable 1.2 m	93A051020
CAB-8102	17-pin scanner/scanner connection cable 2.5 m	93A051030
CAB-8105	17-pin scanner/scanner connection cable 5 m	93A051040
CAB-8501	IP65 Cable Fam 8K 1,2 m	93A051283
CAB-8502	IP65 Cable Fam 8K 2,5 m	93A051284
CAB-8505	IP65 Cable Fam 8K 5 m	93A051285
Datalogic WebSentinel-005	Supervisor (up to 5 arrays)	93A101014
Datalogic WebSentinel-010	Supervisor (up to 10 arrays)	93A101015
Datalogic WebSentinel-020	Supervisor (up to 20 arrays)	93A101016
Datalogic WebSentinel-032	Supervisor (up to 32 arrays)	93A101017
Datalogic WebSentinel-064	Supervisor (up to 64 arrays)	93A101018
Datalogic WebSentinel-128	Supervisor (up to 128 arrays)	93A101019
Datalogic WebSentinel-256	Supervisor (up to 256 arrays)	93A101020

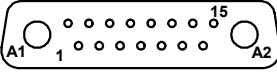
Electrical Connections:

Two 17-pin connectors provide access to the scanner's local Lonworks network used for both input and output connections to build a multi-sided or omni-station system.

17-pin Lonworks Connector Pinout		
Pin	Name	Function
A1	GND	Supply voltage (negative pin)
A2	VS	Supply voltage 20 to 30 Vdc (positive pin)
1	CHASSIS	Cable shield A - internally connected by capacitor to chassis
2	n.c.	Not connected
3	CHASSIS	Cable shield B - internally connected by capacitor to chassis
4	TXAUX	Transmit data of auxiliary RS232 (referred to SGND)
5	SGND	Signal ground (connected to GND)
6	RXAUX	Receive data of auxiliary RS232 (referred to SGND)
7	VS_I/O	Supply voltage of I/O circuit
8	Lon A+	Lonworks a line (positive pin)
9	Lon A-	Lonworks a line (negative pin)
10	Lon B+	Lonworks b line (positive pin)
11	Lon B-	Lonworks b line (negative pin)
12	SYS_I/O	System signal
13	SYS_ENC_I/O	System signal
14	Reserved	Internally connected
15	Ref_I/O	Reference voltage of I/O circuit



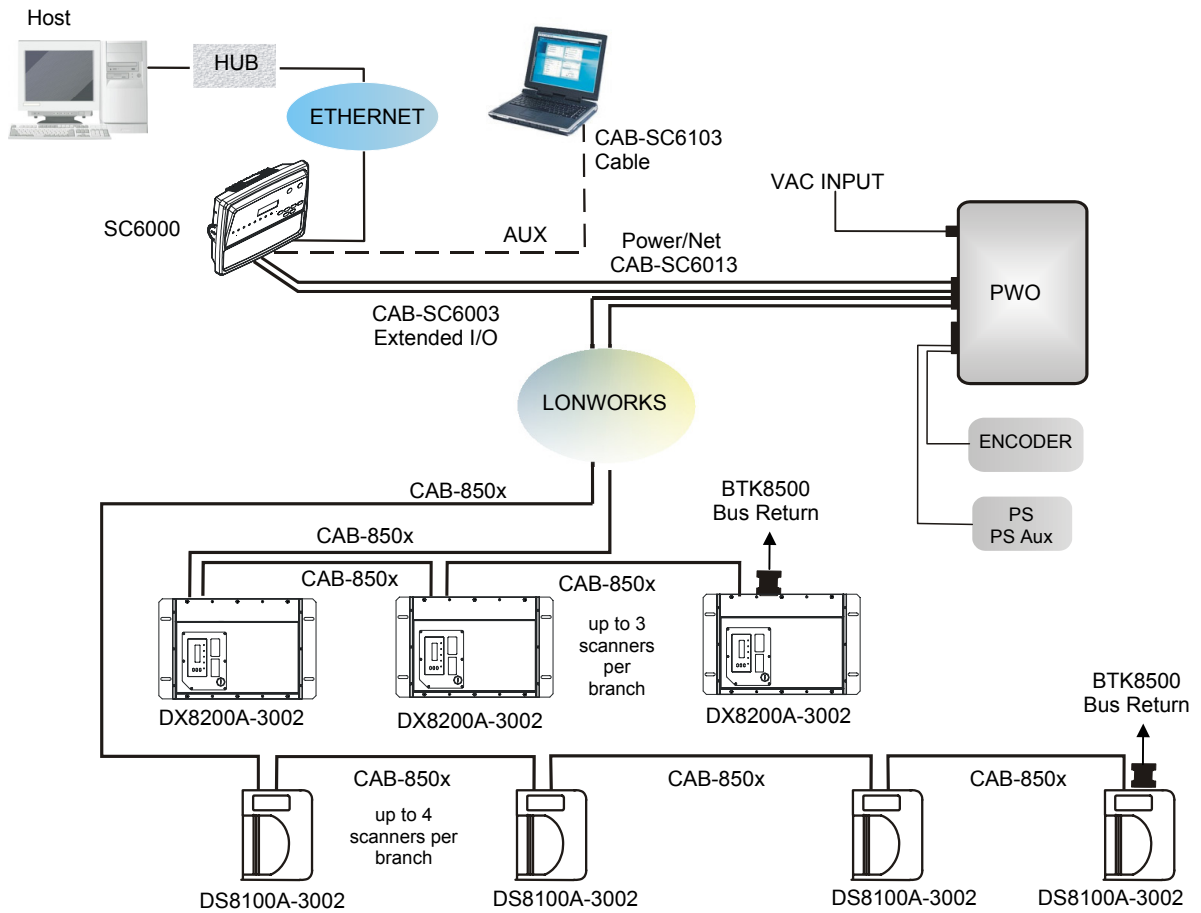
Male - Input



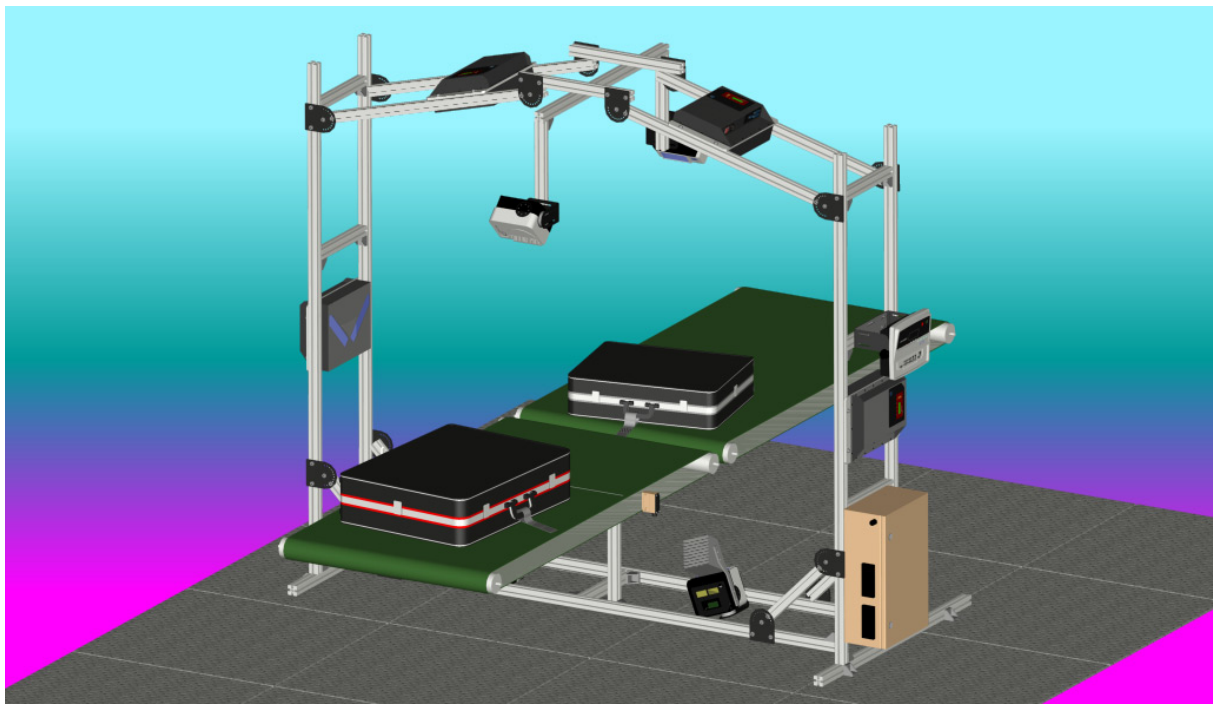
Female - Output

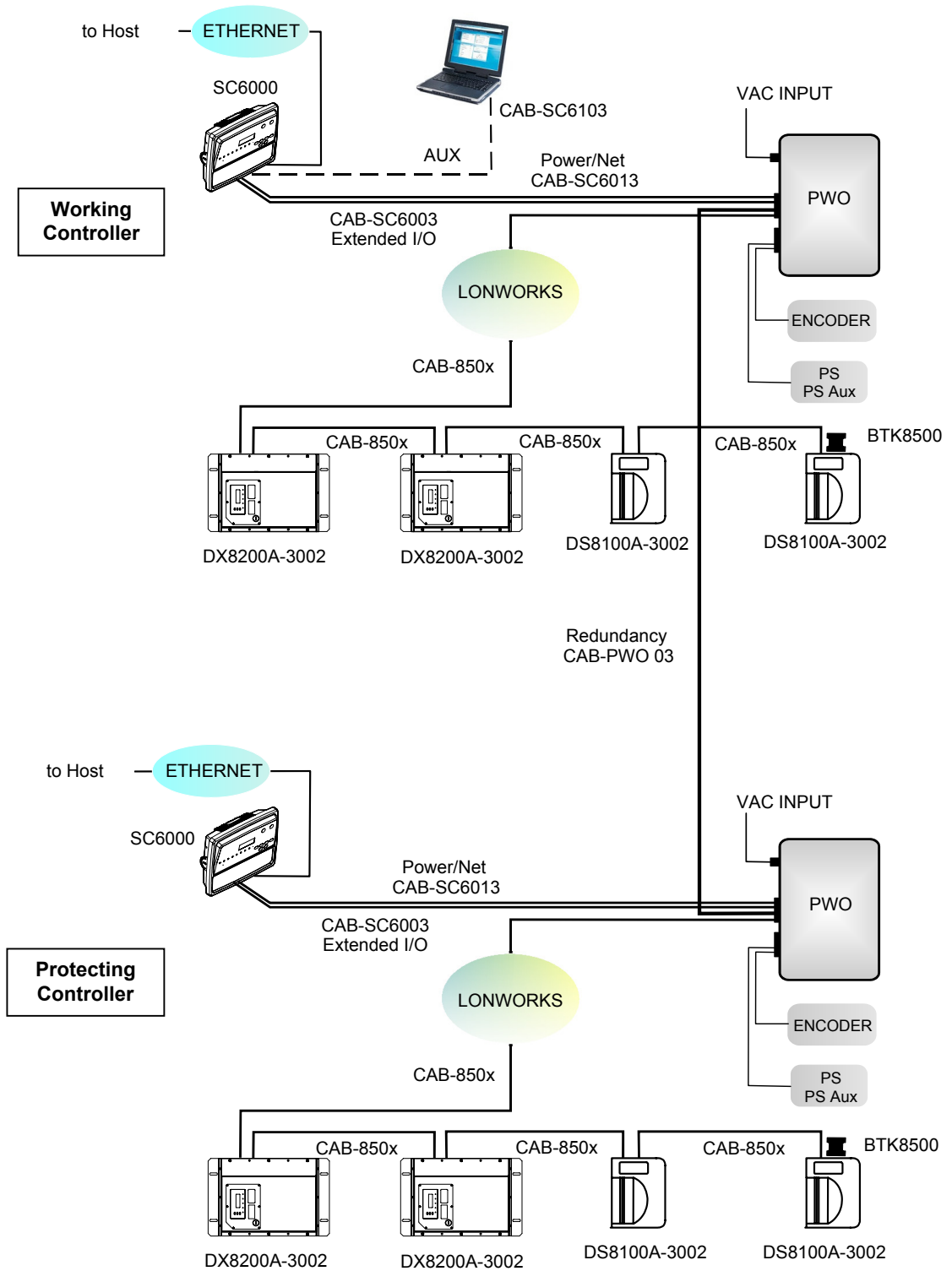
17-pin Local Lonworks Connectors

Connectivity:

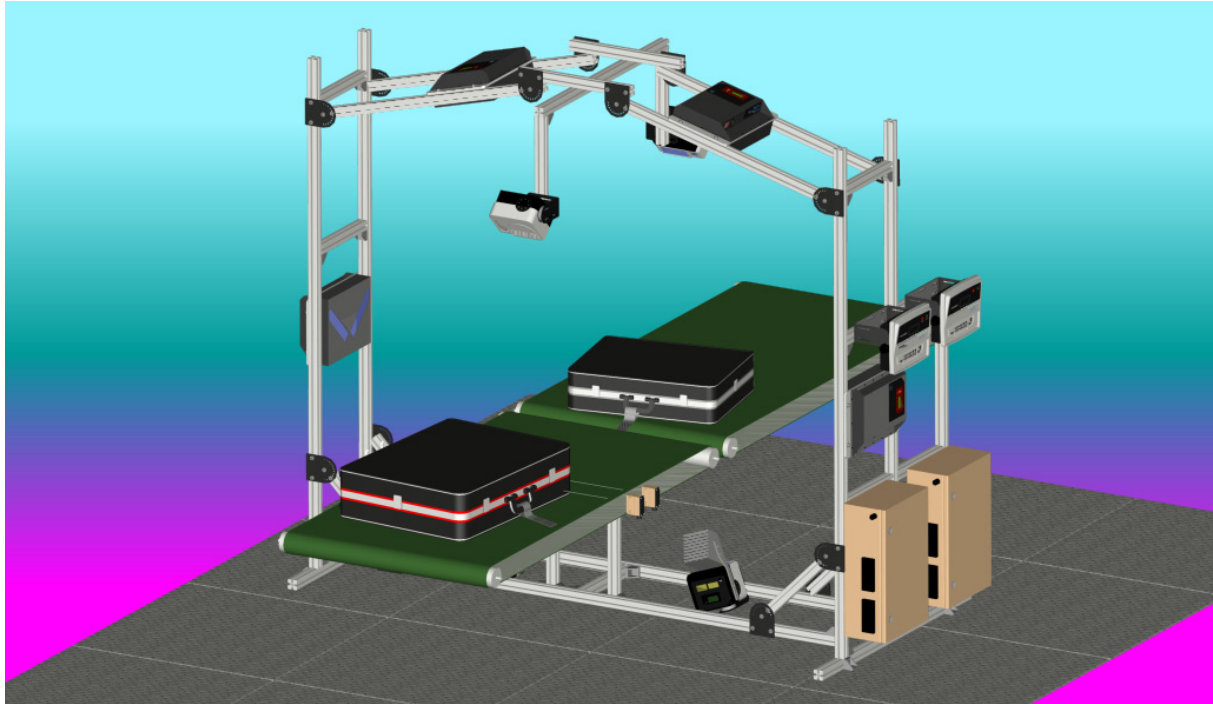


DX8200A-3002 Typical Layout





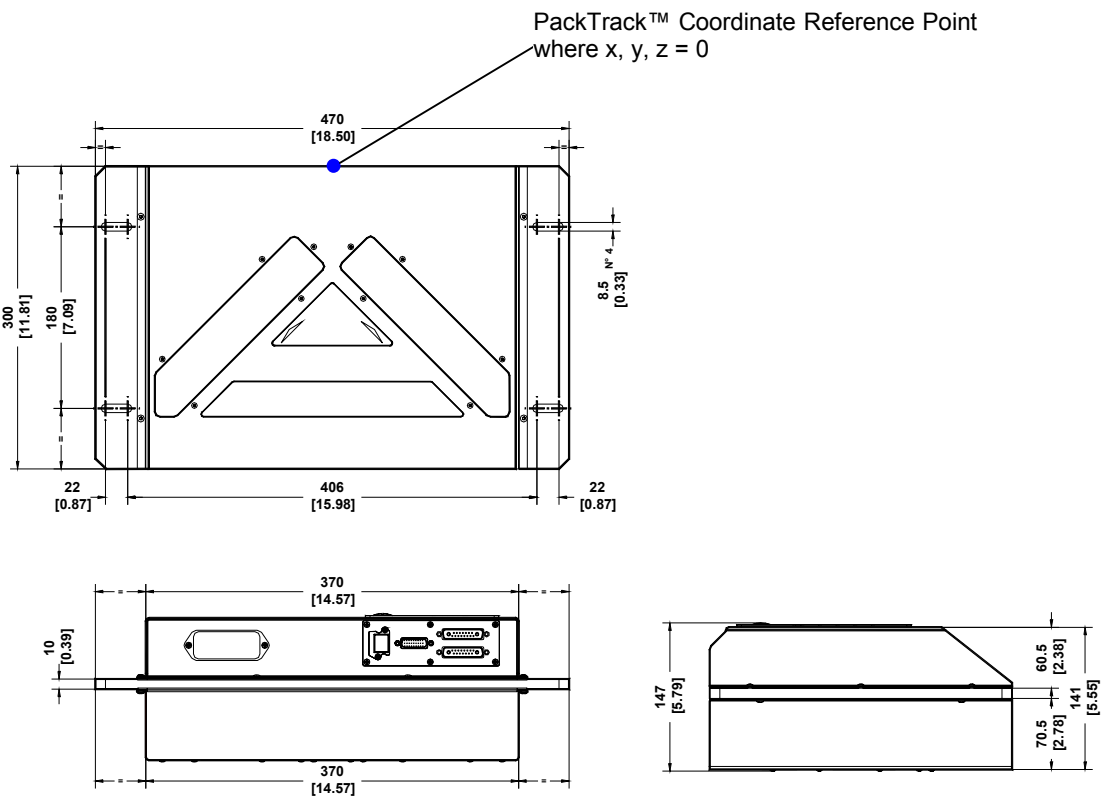
Example of Redundant System Layout




Example of Redundant System

Mechanical Installation:

DX8200A-3002 can be installed to operate in any position. There are 4 slots (dia. 8.5 mm) on the sides of the scanner for mounting. The diagram below can be used for installation; refer to the Reading Diagrams for correct positioning of the scanner with respect to the reading zone and scanner orientation.

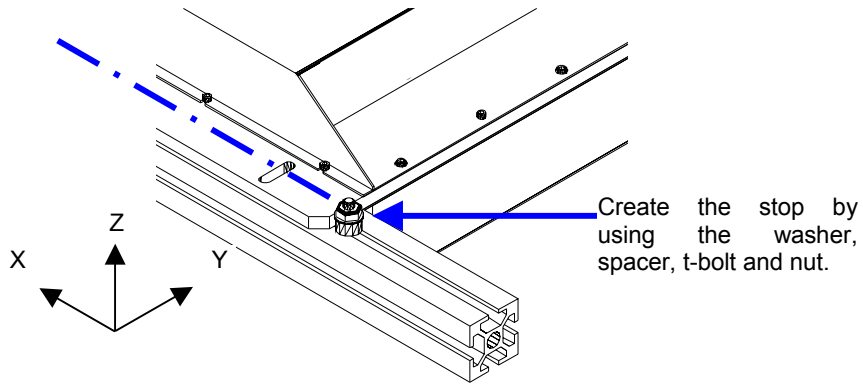


DX8200A-3002 Overall Dimensions



WARNING

When installing several scanners, take care to position them correctly so that no laser beam enters the reading window perpendicularly and at the same level of the output beam of the other scanners. This condition could occur more frequently for side mounted applications. If these precautions are not followed, it may occur that the laser of the blinded scanner starts blinking due to an internal circuit which temporarily turns the laser off when detecting a power anomaly. To resolve this problem, it is sufficient to slightly change the inclination and position of one of the two scanners involved.



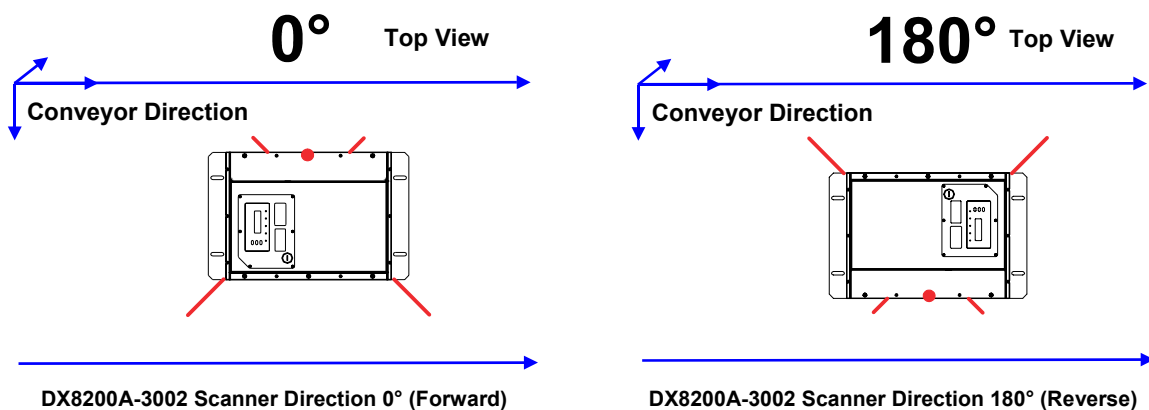
X-axis Reference Point Stops

The 2 washers and 2 spacers can be mounted to the Reading Station Frame using Bosch T-bolts and nuts to create 2 stops which can be used to facilitate DX8200A mounting and positioning.

- During initial mounting, affix the stops in approximation to the mounting position. The weight of the DX8200A can rest against this reference while the mounting bolts are being set. This avoids having to hold and maneuver the scanner (especially for vertical side mounted positions) while simultaneously affixing it to the frame.
- Once the scanner is correctly positioned for PackTrack, fix the stops against the scanner. The stops remain fixed to the station frame so that the scanner can be replaced without having to recalibrate the PackTrack coordinates. Referring to the figure above, the stop provides a reference point for the X-axis while the scanner should be centered on the frame to have a fixed reference for the Y-axis.

Scanner Direction

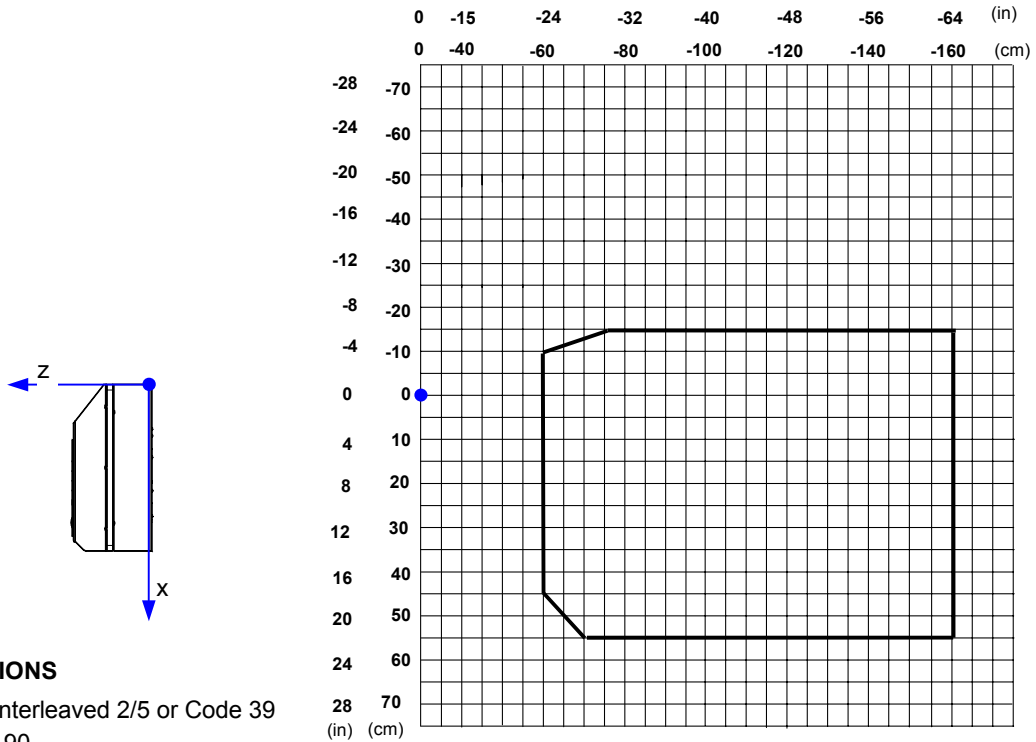
The different scanner orientations are illustrated in the following figures:



Reading Diagrams:

Note: $x = 0$ and $z = 0$ correspond to the edge of the DX8200A-3002 scanner as shown in the figure below.

DX8200A-3002 (0.50 mm/20 mils)



Compliance:

Laser Safety

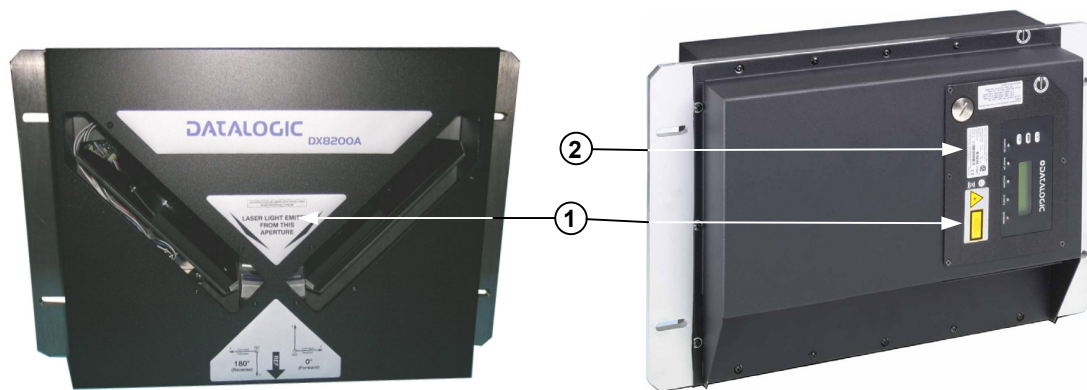


Figure D

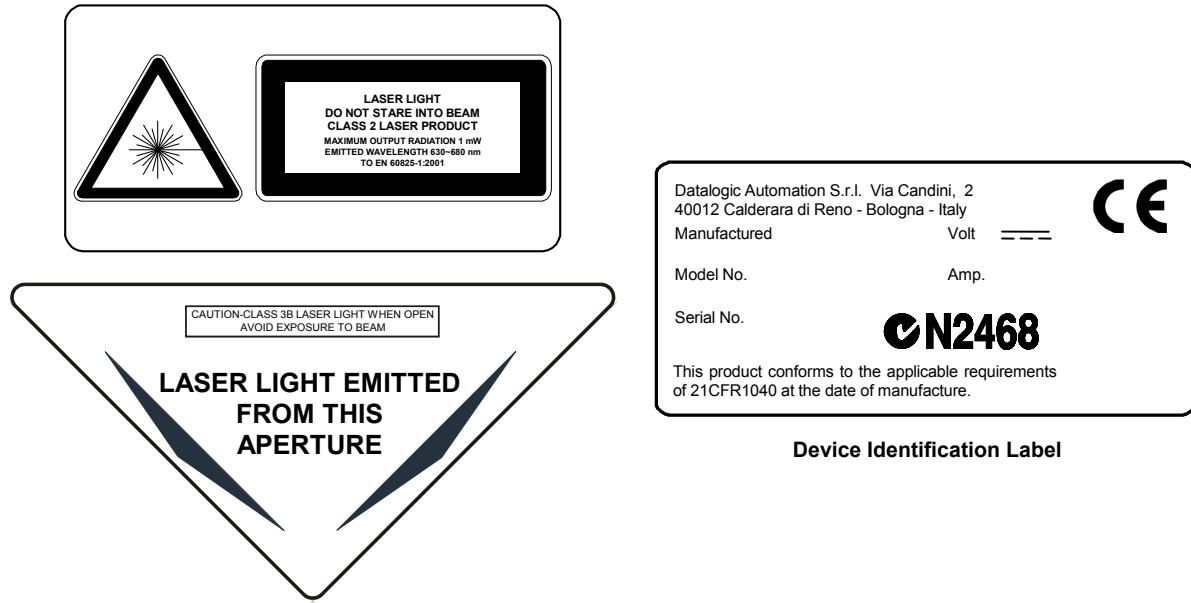
- ① Warning and Device Class Label
- ② Device Identification Label

The scanner is classified as a Class 2 laser product according to EN60825-1 regulations and as a Class II laser product according to CDRH regulations.

Disconnect the power supply when opening the device during maintenance or installation to avoid exposure to hazardous laser light.

There is a safety device, which allows the laser to be switched on only if the motor is rotating above the threshold for its correct scanning speed.

The laser beam can be switched off through a software command (see also the Genius™ Help On-Line).



The laser diodes used in this device are classified as Class 3B laser products according to EN 60825-1 regulations and as Class IIIb laser products according to CDRH regulations. Any violation of the optic parts in particular can cause radiation up to the maximum level of the laser diode (30 mW at 630~680 nm).

Power Supply

This product is intended to be installed by Qualified Personnel only.

- This scanner is intended to be supplied by either a UL Listed power supply marked 'Class 2' or 'LPS', output rated 20 - 30 V dc, minimum 1.75 A or by a UL Listed computer with LPS outputs.
- This scanner must be supplied by a Class II Power Supply Unit conforming to the EN 60950 safety regulation.

Patents:

This product is covered by one or more of the following patents.

U.S. patents: Re. 36,251; 5,483,051; 5,992,740; 6,177,979 B1; 6,347,740 B1; 6,394,352 B1; 6,443,360 B1; 6,527,184 B1; 6,629,639 B2; 6,688,524 B1; 6,742,710 B2; 7,161,685 B1; 5,028,772; 5,124,538; 5,466,921; 5,548,107; 6,206,289 B1; 6,669,091 B2; 7,000,838 B2.

European patents: 652,530 B1; 789,315 B1; 851,376 B1; 926,615 B1; 959,426 B9; 1,363,228 B1.

Japanese patents: 3,793,585; 4,033,958.

Additional patents pending.

Datalogic Automation S.r.l.
Via S. Vitalino 13
40012 - Lippo di Calderara
Bologna - Italy

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DX8200A-XXXX Laser Scanner e tutti i suoi modelli
 and all its models
 et tous ses modèles
 und seine Modelle
 y todos sus modelos

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
 are in conformity with the requirements of the European Council Directives listed below:
 sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
 der nachstehend angeführten Direktiven des Europäischen Rats:
 cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

89/336/EEC EMC Directive	e	92/31/EEC, 93/68/EEC	emendamenti successivi
	and		further amendments
	et		ses successifs amendements
	und		späteren Abänderungen
	y		sucesivas enmiendas

2006/95/EC Low Voltage Directive

Basate sulle legislazioni degli Stati membri in relazione alla compatibilità elettromagnetica ed alla sicurezza dei prodotti.
 On the approximation of the laws of Member States relating to electromagnetic compatibility and product safety.
 Basée sur la législation des Etats membres relative à la compatibilité électromagnétique et à la sécurité des produits.
 Über die Annäherung der Gesetze der Mitgliedsstaaten in bezug auf elektromagnetische Verträglichkeit und Produktsicherheit entsprechen.
 Basado en la aproximación de las leyes de los Países Miembros respecto a la compatibilidad electromagnética y las Medidas de seguridad relativas al producto.

Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
 This declaration is based upon compliance of the products to the following standards:
 Cette déclaration repose sur la conformité des produits aux normes suivantes:
 Diese Erklärung basiert darauf, daß das Produkt den folgenden Normen entspricht:
 Esta declaración se basa en el cumplimiento de los productos con las siguientes normas:

EN 55022 (Class A ITE), September 1998:	INFORMATION TECHNOLOGY EQUIPMENT RADIO DISTURBANCE CHARACTERISTICS LIMITS AND METHODS OF MEASUREMENTS
EN 61000-6-2, September 2005:	ELECTROMAGNETIC COMPATIBILITY (EMC) PART 6-2: GENERIC STANDARDS - IMMUNITY FOR INDUSTRIAL ENVIRONMENTS
EN 60950-1, December 2001: EN 60950-1/A11, April 2004:	INFORMATION TECHNOLOGY EQUIPMENT - SAFETY - PART 1 : GENERAL REQUIREMENTS
EN 60825-1, March 1994: EN 60825-1/A1, July 1996: EN 60825-1/A2, March 2001: EN 61000-3-2, April 2006:	SAFETY OF LASER PRODUCTS - PART 1 : EQUIPMENT CLASSIFICATION, REQUIREMENTS AND USER'S GUIDE
EN 61000-3-3, July 1995: EN 61000-3-3/A1, June 2001:	ELECTROMAGNETIC COMPATIBILITY (EMC) PART 3-2 : LIMITS - LIMITS FOR HARMONIC CURRENT EMISSIONS (EQUIPMENT INPUT CURRENT UP TO AND INCLUDING 16A PER PHASE) ELECTROMAGNETIC COMPATIBILITY (EMC) PART 3 : LIMITS SECTION 3: LIMITATION OF VOLTAGE FLUCTUATIONS AND FLICKER IN LOW- VOLTAGE SUPPLY SYSTEMS FOR EQUIPMENT WITH RATED CURRENT <= 16A

Lippo di Calderara, January 29th, 2008

Lorenzo Girotti
 Product & Process Quality Manager

