DATALOGIC™

For the attention of:

Datalogic Automation partners

Malmö, November 2007

Subject: **DS4800 Product Announcement**

We have the pleasure to announce the availability of the new compact laser scanner, named DS4800, extending the current offer for the manufacturing market.

DS4800 is an industrial laser scanner, combining flexibility and compactness to satisfy the main application needs of the manufacturing plants.

The main features are:

- <u>Better</u> performance, especially on low-contrast barcodes
- <u>Single</u> high-performance optics with adjustable focus
- <u>Innovative</u> X-PRESS™ Human Machine Interface
- <u>New</u> ID-NET™ High Speed Bus
- <u>Standardized</u> Genius™ Software Configuration tool

DS4800-1000 model

The DS4800 main goals are:

- reduce the number of models and rationalize the mid end of laser offer.
- increase the scanner performance in severe applications (temperature, ambient light, vibrations)
- keep the same footprint as the DS4600A

This product line will also represent a big opportunity for Datalogic's partners. In fact, its modularity will help their stock management and the easy configuration will automatically improve usability and flexibility among several application needs.

Solution Overview

• HUGE FLEXIBILITY

Through the **smart focus adjustment** DS4800 optimizes the performances based on the reading distance. This extends the reading area and improves the overall read rate.

• EXCELLENT PERFORMANCE

Thanks to **DIGITECH™** technology, DS4800 provides excellent reading performance on demanding barcodes.

By means of optimized **reading recipes**, DS4800 improves reading rate on low contrast barcodes while granting excellent performance at high skew angles. Additionally, **ACR4™ reconstruction technology** increases the max tilt angle and decoding rate of damaged barcodes.

• EASE OF USE

The intuitive **X-PRESS™** Human Machine Interface makes installation and maintenance easier than ever thanks to a five LED bar-graph and the multi-function key providing immediate access to relevant functions:

Test Mode (for bar code verification), *AutoLearn* (for automatic code setting) and *AutoSetup* (for self optimization of reading performance).

DS4800 is easily programmed through the multi-language **Genius™** software tool. Thanks to the wizard approach and graphic add-ons, the scanner configuration is rapidly accomplished.

• CONNECTIVITY

DS4800 is equipped with the embedded high-speed **ID-NET™** communication interface. ID-NET™ allows efficient data collection without the need of external multiplexer providing overall cost reduction and simplifying network wiring.
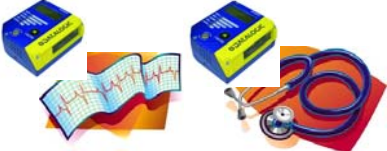
Extended fieldbus connectivity is available through a **complete range of modular connection boxes**.
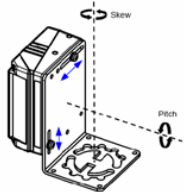
• INDUSTRIAL STRENGTH

With its rugged construction, IP65 protection class, **50°C** max operating temperature and **total ambient light immunity**, DS4800 is suitable for all main industrial applications.

Product Description (Features & Benefits)

Features	Benefits
Reading Performance	
+ Smart focus adjustment	Single DS4800 model to be standardized in the plant **Huge flexibility** in reading area selection **Optimized performances** at any reading distance
+ DIGITECH™ technology	Improved reading rate on low contrast barcodes Excellent reading performance at high skew angles Reading recipes for easy optimization based on specific application needs
+ High-performance optical system +	Complete **ambient light immunity** thanks to high-frequency laser light modulation **Extended reading area** by a single optics platform.

Decoding Performance	
+ ACR4™ Reconstruction Technology	Extension of Tilt Angle reading Increased Read Rate on Difficult codes Outstanding decoding capability on most common 1D symbologies, including add-on.
+ Scanning Speed up to 1000 scan/s	Excellent performance on high speed applications
+ Statistics and diagnostic	Preventive diagnostic on motor speed Real time notification of possible failures Statistic counters for easy monitoring of performances

◇DATALOGIC™

Installation, Configuration and Set-Up	
+ X-PRESS™ Human Machine Interface **Xpress interface**	Ease of Installation Ease of Maintenance Common look and feel as 2KN and Matrix400™ series Common Set-Up process with 2KN and Matrix400™ series
+ **Genius**™ Configuration SW **Genius™** Version 1.07 The new configuration program by **◇DATALOGIC**	Easy scanner setup through intuitive software tool Multi-language support for simplified use Rapid scanner configuration thanks to wizard approach and graphic add-ons
+ Smart Fixing Bracket	Higher Flexibility of Installation Reduce overall installation time Easy Replacement with Reduced downtime in case of failure

Xpress interface Human Machine Interface	
+ Multilanguage Display	Immediate feedback about scanner status, function selection and diagnostic information Multi-language support (both European and Oriental)
+ Multifunction Push Button	Immediate access to the relevant functions like *Test Mode* (for bar code verification), *AutoLearn* (for automatic code setting) and *AutoSetup* (for self optimization of reading performance).
+ AutoLearn (Automatic Code Setting) + AutoSetup (Optimization of Reading Performance)	Easy and quick scanner programming Reduce overall setup time No technical skills required No laptop necessary
+ Performance Bar graph	Diagnostics at a glance thanks to bar graph activation Immediate feedback on code reading performance
+ 5 Diagnostic leds	Immediate feedbacks on standard operating modes (Power ON, Good Read, Phase activation, COM activation, NO Read or Partial Read) Provides diagnostics indication for easy and effective troubleshooting
+ 1 Diagnostics led near scanner cable	Provides immediate feedbacks about power supply presence

Connectivity	
+ ID-NET™: High Speed Network 	Built-in interface dedicated to high-speed scanner interconnection Fastest and most efficient data collection on the market No need of an external multiplexer device Simple system wiring when scanner network is required Overall system cost reduction
+ New generation of Connection Boxes (CBX Series) 	Modular connection boxes for maximum flexibility Several fieldbus options to satisfy any connectivity needs Easy replacement thanks to dedicated backup module Very low cost of ownership

Mechanical	
+ **IP65 (NEMA 4)** protection class	Full dust and water protection for every harsh industrial environment
+ Operating temperature **0-50°C (32-122°F)**	Ready to use in high temperature environment
+ Rugged full metal construction	Ideal product for industrial applications Suitable for robotic applications

Target Applications

The DS4800 *industrial* scanner provides huge *flexibility and compactness satisfying all main identification needs of the manufacturing plants.*

Automated warehousing

- Medium/small conveyor sorting
- Reading on pallets
- Picking systems
- Receiving / Incoming materials

Automated shop floor

- Items and parts tracking
- Process control
- Overall production traceability
- Packaging and compliance

Reading Performance

DS4800-100X - Resolution : 0,50 mm / 20 mils

Preliminary

F = 60 cm / 23,62 in
F = 40 cm / 15,75 in
F = 30 cm / 11,81 in
200 – 1000 mm @ X=0.5mm
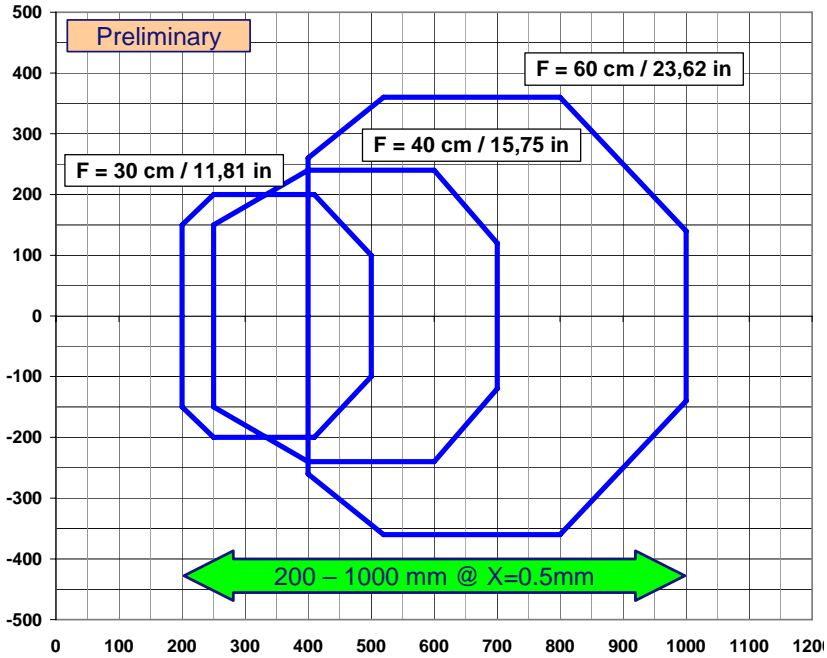
DS4800-100X - Resolution : 0,38 mm / 15 mils

Preliminary

F = 60 cm / 23,62 in
F = 40 cm / 15,75 in
F = 30 cm / 11,81 in
200 – 750 mm @ X=0.38mm
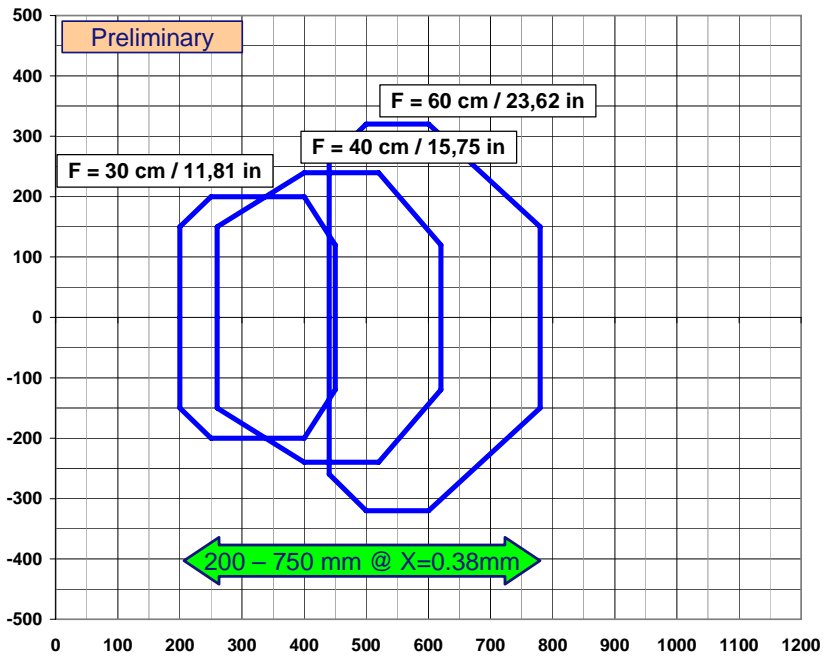
Compatibility with DS4600A

Reading diagrams

DS4800 grants an equal/wider reading area respect to the DS4600A, in most of the applications. Based on the model rationalization achieved, the following cross-over table is recommended:

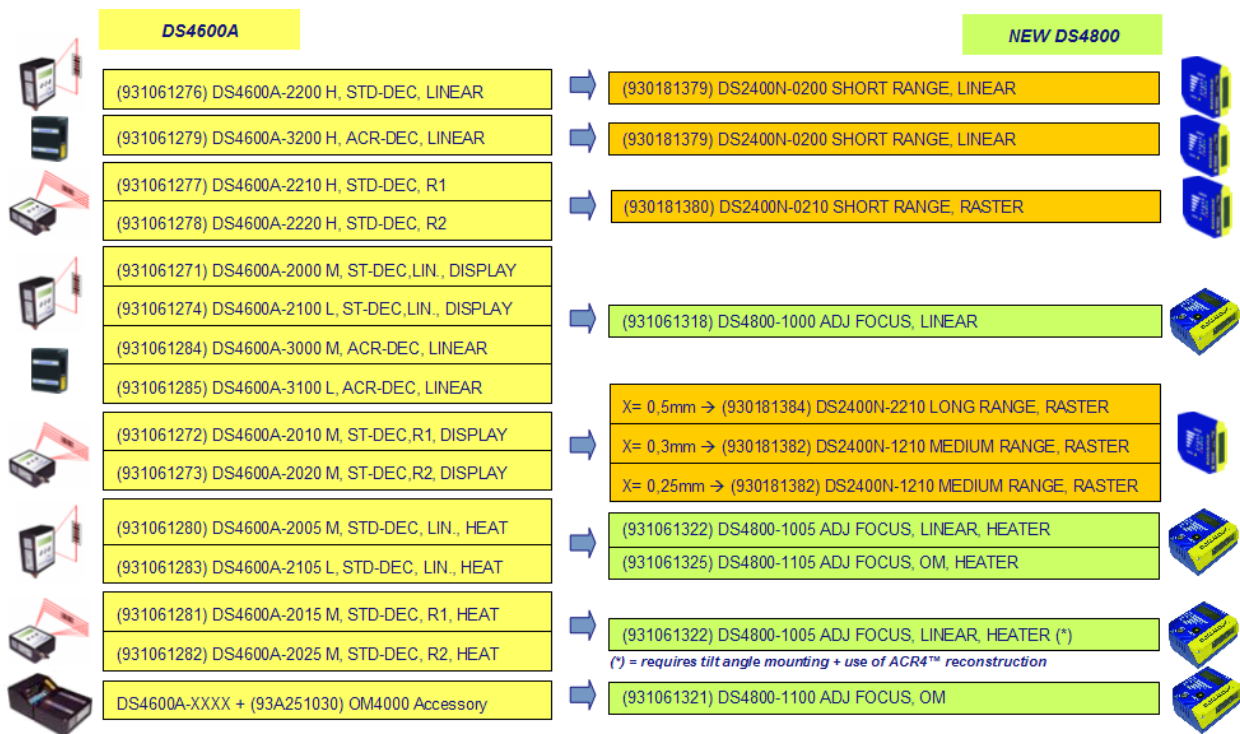| DS4600A	NEW DS4800
(931061276) DS4600A-2200 H, STD-DEC, LINEAR	(930181379) DS2400N-0200 SHORT RANGE, LINEAR
(931061279) DS4600A-3200 H, ACR-DEC, LINEAR	(930181379) DS2400N-0200 SHORT RANGE, LINEAR
(931061277) DS4600A-2210 H, STD-DEC, R1	(930181380) DS2400N-0210 SHORT RANGE, RASTER
(931061278) DS4600A-2220 H, STD-DEC, R2	
(931061271) DS4600A-2000 M, ST-DEC,LIN., DISPLAY	(931061318) DS4800-1000 ADJ FOCUS, LINEAR
(931061274) DS4600A-2100 L, ST-DEC,LIN., DISPLAY	
(931061284) DS4600A-3000 M, ACR-DEC, LINEAR	
(931061285) DS4600A-3100 L, ACR-DEC, LINEAR	
(931061272) DS4600A-2010 M, ST-DEC,R1, DISPLAY	X= 0,5mm → (930181384) DS2400N-2210 LONG RANGE, RASTER
(931061273) DS4600A-2020 M, ST-DEC,R2, DISPLAY	X= 0,3mm → (930181382) DS2400N-1210 MEDIUM RANGE, RASTER
	X= 0,25mm → (930181382) DS2400N-1210 MEDIUM RANGE, RASTER
(931061280) DS4600A-2005 M, STD-DEC, LIN., HEAT	(931061322) DS4800-1005 ADJ FOCUS, LINEAR, HEATER
(931061283) DS4600A-2105 L, STD-DEC, LIN., HEAT	(931061325) DS4800-1105 ADJ FOCUS, OM, HEATER
(931061281) DS4600A-2015 M, STD-DEC, R1, HEAT	(931061322) DS4800-1005 ADJ FOCUS, LINEAR, HEATER (*)
(931061282) DS4600A-2025 M, STD-DEC, R2, HEAT	(*) = requires tilt angle mounting + use of ACR4™ reconstruction
DS4600A-XXXX + (93A251030) OM4000 Accessory	(931061321) DS4800-1100 ADJ FOCUS, OM

Mechanics

DS4800 keeps the same footprint of DS4600A.
Fixing positions are unchanged.

Pinout and connector

DS4800 is electrically compatible with DS4600A, with the following changes:

→ Gender type of 25pin connector of DS4800 is <u>male</u>
→ New ID-NET™ communication channel has been <u>added</u>
→ Third input (INPUT2) has been <u>removed</u>

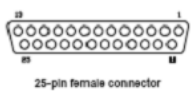Pinout comparison is depicted in following pictures:

DS4600A PINOUT

25-pin D-sub female connector pinout		
Pin	Name	Function
13	VS	Power supply input voltage +
25	GND	Power supply input voltage -
1	CHASSIS	Chassis Ground
9	VS	External Trigger supply voltage +
18	EXT TRIG+	External Trigger +
19	EXT TRIG-	External Trigger -
6	IN1+	Input 1 +
10	IN1-	Input 1 -
14	IN2+	Input 2 +
15	IN2-	Input 2 -
8	OUT1 +	Output 1 +
22	OUT1-	Output 1 -
11	OUT2 +	Output 2 +
12	OUT2-	Output 2 -
20	RXAUX	Auxiliary RS232
21	TXAUX	Auxiliary RS232
23	SGND Aux	Signal Ground Auxiliary interface
24	GND	Power Supply Voltage -
16	Reserved	
17	Reserved	

25-pin female connector

Pin	RS232	RS485 Full-Duplex	RS485 Half-Duplex
2	TX232	TX485+	RTX485+
3	RX232	RX485+	
4	RTS232	TX485-	RTX485-
5	CTS232	RX485-	
7	SGND Main	SGND Main	SGND Main

DS4800 PINOUT

25-pin D-sub male connector pinout		
Pin	Name	Function
13, (9)	VS	Power supply input voltage +
25, 7	GND	Power supply input voltage -
1	CHASSIS	Cable shield connected to chassis
18	ETA	External Trigger A (polarity insensitive)
19	ETB	External Trigger B (polarity insensitive)
6	I2A	Input 2 A (polarity insensitive)
10	I2B	Input 2 B (polarity insensitive)
8	O1+	Output 1 +
22	O1-	Output 1 -
11	O2+	Output 2 +
12	O2-	Output 2 -
20	RXA	Auxiliary RS232 RX
21	TXA	Auxiliary RS232 TX
23	ID+	ID-NET™ network +
24	ID-	ID-NET™ network -
14, 15, 16, 17	NC	Not Connected

Pin	Name	RS232	RS485 Full-Duplex	RS485 Half-Duplex
2		TX 232	TX 485+	RTX 485+
3	MAIN INTERFACE	RX 232	*RX 485+	
4	(SW SELECTABLE)	RTS 232	TX 485-	RTX 485-
5		CTS 232	*RX 485-	

Software

The main software features of DS4600A are still available in DS4800. Moreover, scanner firmware includes several improvements from 2000N and scanner 6000/8000 series, such as diagnostics, statistic counters and flexible data format programming.

Genius™ configuration tool replaces the WinHost™ software. This goes in the direction to have a multilanguage interface and to get a unified setup tool along the USS product offer. Genius™ and ID-NET™ interface allow simple programming of the whole cluster of readers. All operations (scanner configuration, software upgrade, etc.) can be accomplished through the master on each slave transparently.

Accordingly, scanner programming through Escape Sequences will be substituted by Host Mode Programming commands already available for the 6000/8000 families.

DATALOGIC™

Order Information and availability

Starting from *now* the order processing department will accept your orders, with first delivery date from *February 1st, 2008*.

Models

Order No.	Description	Ready for sale
931061318	DS4800-1000 ADJ FOCUS, LINEAR	Now
931061321	DS4800-1100 ADJ FOCUS, OM	Available Q2/2008
931061322	DS4800-1005 ADJ FOCUS, LINEAR, HEATER	Available Q2/2008
931061325	DS4800-1105 ADJ FOCUS, OM, HEATER	Available Q2/2008

Accessories

Order No.	Description	Ready for sale
93ACC1837	BK-4000 L-SHAPE BRACKET (5 PCS)	Now
93ACC1838	BK-4001 U-SHAPE BRACKET (5 PCS)	Now
93ACC1785	GFC-40 90 DEGREES MIRROR DS4800	Available Q2/2008

Connection Boxes

Order No.	Description	Note
93A301067	CBX100 CONNECTION BOX COMPACT	
93A301069	CBX100LT CONN. BOX COMPACT LOW TEMP.	
93A301068	CBX500 CONNECTION BOX MODULAR	
93ACC1808	BM100 BACKUP MODULE	
93ACC1809	BM150 DISPLAY MODULE	
93ACC1810	BM300 PROFIBUS MODULE	Dedicated announcement will be sent in next few days including product availability
93ACC1811	BM310 PROFIBUS IP65 MODULE	
93ACC1812	BM500 ETHERNET MODULE	
93ACC1813	BM510 ETHERNET IP65 MODULE	
93ACC1840	BM520 ETHERNET IP54 MODULE	
93ACC1814	BM400 DEVICENET IP65 MODULE	
93ACC1821	BA100 DIN RAIL ADAPTERS	
93ACC1822	BA200 BOSCH ADAPTERS	

Sales Conditions

Price list: Please refer to the attached Corporate End User Price List in EUR.
General Conditions: Standard conditions for the USS product range.

Marketing Materials

Internet product page : *http://www.automation.datalogic.com/ds4800*

We take this opportunity to send you our best regards.

DATALOGIC AUTOMATION AB

Johan Cornskiöld   c.c. Viktor Habén
Sales Manager   *Technical Sales Support*

                                                Helena Persson
                                                Marketing