



**Barcode / Label printer**

**MACH4** The Business Class

Edition 2  
International

## Precision - Made in Germany



For more than 30 years now cab has been developing and manufacturing label marking systems for industry, commerce and services. The constant requirements of changing markets demand innovative ideas and form tomorrow's products.

Our experience and our aim to make our printers more simple in operation have made cab to a leading manufacturer world-wide.

Made in Germany with a large vertical range of manufacture our quality system is subject to DIN ISO 9001 - from receiving inspection up to consignment.

<b>Transfer printer MACH4</b>	<b>3</b>
<b>Technical details</b>	<b>4</b>
<b>Interfaces</b>	<b>5</b>
<b>Technical data</b>	<b>6 - 7</b>
<b>Accessories</b>	<b>7</b>
<b>Software tools</b>	<b>8</b>
<b>Label software</b>	<b>9</b>
<b>Delivery program</b>	<b>10</b>



## MACH4 – The new generation of transfer printer

## Primary features

The future “made by cab”: MACH4, the new label printer which sets new, innovative benchmarks.

It offers all the features of a high class industrial printer with a wide application range.

Labels and ribbons can be inserted from the front. The print mechanism and the cover are made of premium materials and are perfectly harmonised in their form and their functions.

Easy and comfortable handling and high reliability were the requirements during development. The large display with white backlight offers best readability.

The navigation pad with the additional “Enter” button simplifies the operation - thereby only the operated functions are indicated.

The centred label path makes adjustments unnecessary and avoids creases on the ribbon.

On the high-tech electronic board all required interfaces are serially integrated and applicable for every adapter.

MACH4 is available in three designs.

1. Basic device
2. „P“ with serial dispense plate
3. „C“ Equipped with a cutter for material up to 250 g/m<sup>2</sup>

The software is compatible with the cab devices A+ and Hermes A.



## 4 Technical details

### Detailed Perfection Convincing product advantages

#### 1. Cover with big window

It is made of shock-resistant synthetic material. The integrated absorbability mechanism provides smooth closing. The labels, the ribbon and the printing device are protected against contamination.

#### 2. Media hub

The label roll is placed within the media hub and centred automatically. Materials varying in width can be easily bedded within the box.

#### 3. Ribbon re-winder and un-winder

The ribbon is slid onto a ribbon supply hub with spring mounted brackets. It can be centred with a movable flange and a positioning indicator. Inserting the ribbon into the print mechanism is now easy and comfortable.

#### 4. Printing with 200, 300 or 600 dpi

The print heads can be exchanged easily. Automatic print head identification.

#### 5. Gap sensor

To detect the beginning or end of labels the gap sensor is mounted in the centre of the label path. For two or four labels in a row it is possible to use a gap sensor which can be shifted 8 mm.

#### 6. Label guidance

With the adjustment knob the user can adjust the width of the printing area. This is to centre the labels.

#### 7. Reflex sensor

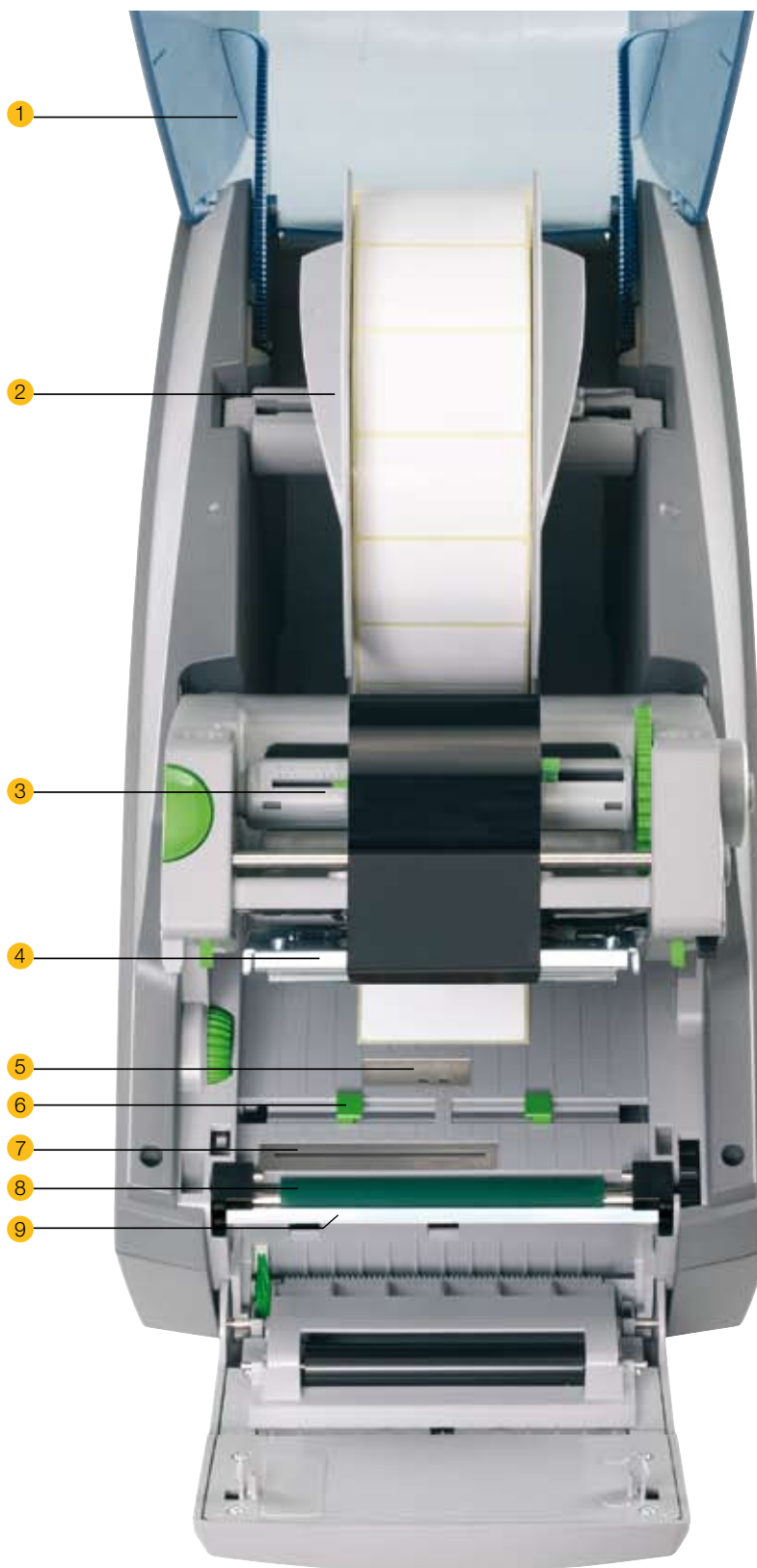
Start of label, printer's imprint and cut outs can be identified with a relocatable reflex sensor.

#### 8. Drive roller

The drive roller can be easily removed for cleaning or replacement.

#### 9. Peel-off-plate

The ribbon is guided down behind the operation panel. The label is peeled off at the peel-off-plate.



## All interfaces built in

Back side of printer



### PC-Connections

- 1. **Serial RS232 C** interface up to 230.400 Baud
- 2. **USB 2.0 High Speed Slave** interface

### For Stand-alone operation without PC

- 3. Two **USB-Master** interfaces for keyboard or scanner
- 5. Slot **CompactFlash-card** to store fixed data
- 7. Slot for **PC-Card Type II** (PCMCIA)

### Network connections

**4. Ethernet 10/100 Base T**- interface with TCP/IP protocol Printing with LPR/LPD, Raw IP or FTP. IP adress can be set manually or obtained via DHCP. Status information and set up via internet browser. FTP for firmware updates and PC-card Type II/CompactFlash administration. Error messages can be sent via e-mail or SNMP. Time and date synchronisation through time server

- 7. **Wireless LAN**-connection via plug-in-card

### Additional optional interfaces



- 7. WLAN-card IEEE 802.11 b/g** for wireless network connection, depending on chip set  
IEEE 802.11 b: 11 MBit/s, 2.4 GHz Band  
IEEE 802.11 g: 54 MBit/s, 2.4 GHz Band



- 8. Parallel Centronics** acc. IEEE 1284  
The data from the Centronics interface are converted onto the USB 2.0 High Speed interface.  
PC connection: 25-pin SubD plug  
Printer connection: USB Master



- 9. Serial RS422** interface for long distance communication.  
**Serial RS485** for networking up to 26 printers.  
Serial interface: 25-pin SubD plug  
Printer connection: USB Master



- 10. Twinax-Converter** for connection with IBM AS/400  
Printer connection: serial RS 232 C 9-pin SubD plug



- 11. Coax-Converter** for connection with IBM 3270  
Printer connection: serial RS 232 C 9-pin SubD plug

- 12. Label selection box**  
Up to 16 different input signals for automatic loading and printing of labels from the memory card.  
Serial interface: 25-pin SubD plug  
Printer connection: USB Master



## 6 Technical data

### The data for all devices

■ Standard □ Option

1. Printhead		MACH4		
Printing method	Transfer	■	■	■
	thermal direct	□	□	-
Print resolution dpi		203	300	600
Print speed up to mm/s		200	200	100
Print width up to mm		104	105.6	105.6
2. Labels				
Material: labels, continuous mat. on rolls or leporello				
Thermal- a. Standard paper, Cardboard, Textil, plastic foils PE, PP, PVC, PA, PI				
Material thickness mm / Weight g/m <sup>2</sup>		0.07 - 0.35 / 60 - 250		
Media roll: Total diameter up to mm		210		
Core diameter mm		38 - 100		
Winding direction		inside or outside		
Material width mm with a thickness 0.07 - 0.35 mm		25 - 120		
	with a thickness 0.25 - 0.35 mm	10 - 120		
Label width mm		4 - 116		
Label width when dispensing <sup>1)</sup> min. mm		25		
Label height min. mm		5		
Label height when dispensing <sup>1)</sup> min. mm		12		
Label height max. mm		2.000		
3. Ribbon				
Ink		inside or outside		
Roll diameter up to mm		72		
Core diameter mm		25		
Ribbon length variable up to m		360		
Width up to mm		114		
5. Dimension printer				
Height x Depth x Width mm		290 x 425 x 240		
Weight kg		6		
6. Label sensor				
See through for start of label and end of material				
middle fixed, optional 8 mm adjusted				
Reflex sensor from below				
for label start, printed marks, cut outs, adjustable from the middle 56 mm				
7. Electronics				
Processor high speed 32 Bit ColdFire/speed MHz		266		
RAM MB		64		
ROM MB Flash		8		
Slot for CompactFlash card Type I up to 1 GB		■		
Slot for Cardbus / PC-Card Type II		■		
Real-time clock, Printout of date and time		■		
8. Operation panel				
Digits/LEDS illuminated while operation Pause, Feed, Cancel, Menu, Enter, 4 x Cursor				
LCD-Graphics Display	Width x Height in mm	60 x 40		
	Text lines/characters	4 / ca. 20		
9. Interfaces				
Parallel Centronics bi-direktional acc. IEEE 1284		□		
Serial RS 232 C 1200 up to 230400 Baud/8 Bit		■		
USB 2.0 High Speed Slave for PC-connection		■		
Ethernet 10/100 Base T, LPD, RawIP-Printing, DHCP, HTTP, FTP, SMTP, SNMP, NTP		■		
RS 422, RS 485 1200 up to 230400 Baud/8 Bit		□		
Peripheral connection		■		
WLAN card 802.11b/g		□		
USB Master for keyboard and Scanner	2x	■		
Twinox/Coax-Converter		□		

10. Settings		
		Country specific (Arabisch, CZ, D, DK, E, F, GB/USA, H, I, IL, N, NL, P, PL, RUS, S, SF, TR), Geräteeinstellungen, Druckparameter, Schnittstellen, Sicherheit.
11. Monitoring		
Stop printing if		End of ribbon End of labels Printhead open
12. Test routines		
		System diagnosis of memory and print head when switched on, Short status, status print, font list, device list, profile of print head, profile of label, test grid, monitor mode.
Status reports		Extensive status print with information about instrument setting, for example print length counter, runtime counter. Request of the machine status via software command. Detailed status messages on the display, for example network error-no link, barcode error etc.
13. Fonts		
Font types		5 Bitmap fonts incl. OCR-A, OCR-B and 3 Vector fonts Swiss 721, Swiss 721 Bold and Monospace 821 available internally, loadable TrueType fonts.
Character sets		Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBCDIC 500, ISO 8859-1 up to -10 and -13 up to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, KOI8-R. All West and East European latin, cyrillic, greek, hebrew and arabic characters are supported. Optional chinese (simplified chinese)
Bitmap fonts		Size of width and height 1 - 3 mm zoom 2-10 Orientation 0°, 90°, 180°, 270°
Vector-/TrueType fonts		Size of width and height 0.9 - 128 mm variable zoom , Orientation 360° in steps of 1°
Font formats		Bold, italic, underlined, outline, negative, grey, vertical, depending on character fonts
Font width		Variable
14. Graphics		
Graphic elements		Line, arrow, box, circle, ellipse, filled and filled with fading
Graphic formats		PCX, IMG, BMP, TIF, MAC, GIF, PNG

<sup>1)</sup> Depending on label size, material and adhesive limitations are possible. Critical material or applications have to be tested and cleared.

■ Standard □ Option

## 15. Codes

Linear Barcodes	Code 39, Code 93	Interleaved 2/5
	Code 39 Full ASCII	Ident- and lead
HIBC	Code 128 A, B, C	code of german
	Codabar	Post AG
EAN 8, 13	EAN/UCC 128	JAN 8, 13
	EAN/UPC Appendix 2	MSI
FIM	EAN/UPC Appendix 5	Plessey
	RSS 14	Postnet
2D-Codes	Aztec, Codablock F, Data Matrix, PDF 417, Micro PDF 417, UPS Maxicode, QR-Code, RSS 14	UPC A, E, E0
	All codes variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and Start/Stop code, depending on code type.	

The current specifications are according to our technical knowledge. They are subject to change.

## 16. Software

Programming	J-Script direct programming	■
	abc-Basic Compiler	■
	Database Connector	□
System diagnosis/ Administration	cab-printer monitoring	■
	cab-Network Manager	□
	cab-Card Manager	□
cab Label software	cablabel R2 Lite	■
	cablabel R2 Pro	□
More Label software	Easylab, Codesoft, Nicelabel, Bartender, Label Matrix, Labelview	□
Windows driver	98, ME, 2000, 2003, XP	■
	Windows NT from version 4.0	
Mac driver	OS X printer driver from version 10.3	■
Linux driver	Testet with Suse 9.0, CUPS based	■

## 17. Operation data

Power supply	100 - 240 V ~ 50/60 Hz, PFC
Energy consumption	max. 250 W
Operation temperatur.	10 - 35°C
Humidity not condensing	30 - 85%
Safety regulations	CE, FCC class A, CB, CCC

## Accessories 7

### 1. Memory card



Label formats, fonts, texts and graphics can be saved. It can be accessed from the printer or from the PC.

#### Memory card

CompactFlash Type I	256 MB
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### 2. Numerical keyboard



For the input of numeric data in stand-alone-mode.

#### Numerical keyboard

Connection	USB
No. of keys	19
L x W mm	120 x 76

### 3. Compact keyboard



For direct input of variable data in stand-alone-mode.

#### Compact keyboard

Connection	USB
No. of keys	86
L x W mm	282 x 132

### 4. Label un-winder



For a quick supersedure of labels they can be provided in additional un-winders.

### 5. External re-winder



#### External re-winder

Roll Ø max. mm	ER4 210
Material width up to mm	120
Winding speed up to mm/s	300
Power supply	100 - 240 V~ 50/60 Hz
Core Ø mm	40 -with or without cardboard c.
Adapter mm	76 - re-winding with cardboard c.
Winding of labels	inside or outside
Adapter plate	MACH4 - ER4

### 6. Ribbon holder



For a quick supersedure of ribbons they can be stored in additional trays.

## 8 Software tools

# Optimal output through optimal input

### Printer Control

#### Direct programming with J-Script

J	Job Start
H 100	Speed (100 mm/s)
O R	Orientation rotated by 180°
S 11;0,0,68,70,100	Size of label (100x68 mm, gap 2 mm)
T 10,10,0,5,pt20;sample	Text object/font: Swiss bold, 20 pt
B 10,20,0,EAN-13,SC2;401234512345	Barcode EAN 13, size SC 2
G 8,3.5,0;R:30,9,0,3,0.3	Graphic, box 30 x 9 mm,
	Line strength 0.3 mm
A 1	Number of labels (in this example 1)

cab J-Script allows easy programming of the printer by using text strings and this independently from the used label software. Labels can be designed and the status of the printer can be en-quired. The memory card allows to save complex layouts, graphics and fonts, which reduces the data transmission time.

#### abc - Basic Compiler

```
default.lbl - Editor
Datei Bearbeiten Format Ansicht ?

<ABC>
DO
  LINE INPUT a$
  IF LEFT$(a$,15)="194300301480070" THEN
    PRINT "R t2;";MID$(a$,16)
  ENDIF
  IF LEFT$(a$,15)="194300300580172" THEN
    PRINT "R t3;";MID$(a$,16)
  ENDIF
  IF LEFT$(a$,15)="194300301970073" THEN
    PRINT "R t1;";MID$(a$,16)
  ENDIF
  IF a$="Q0001" THEN
    PRINT "A 1"
  ENDIF
LOOP
</ABC>
```

The cab Basic Compiler is always one step ahead. With an easy basic programming data is operated or logically combined before they are sent to the printer for further processing. This offers e.g. the possibility to emulate other printers or to integrate data strings from barcode readers or scales in printing processes. All data received is printed in real time.

#### Database Connector

The cab database connector allows to link up stand-alone printers via TCP/IP interface to central SQL databases in the network. Data can be requested, printed and written back during the printing process.

### Monitoring

#### cab printer monitoring with Intra and Internet



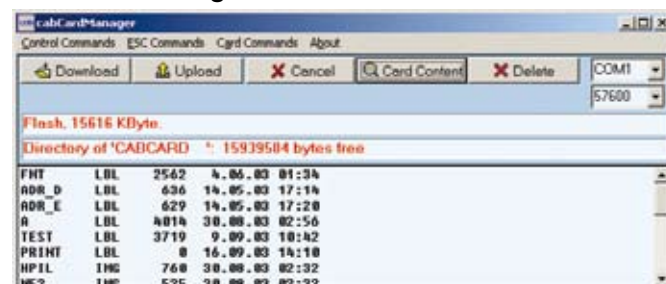
cab printers provide to be monitored and configured with standard web browsers or FTP clients. Firmware updates or data management on the memory card are easy to handle. By the use of SNMP- and SMTP clients, status, warning and error messages are sent via email or SNMP telegram to the network.

### Administration

#### cab-Network Manager

The cab network administration enables the administrator to manage all printers connected to one network at the same time. With a single mouse click different printers can be monitored, configured or updated with firmware; furthermore PIN codes of the printers are changed and data on the memory card can be managed.

#### cab-Card Manager



Via RS 232 port the memory card can be administrated fast and easily. Label layouts, special text fonts, complex graphics or databases can be up- or downloaded.



## cablabel software for cab printers



Perfect labels need optimized text fonts. cab offers a large number of bit-map and vector fonts. Height and width of the font can be scaled and the object can be positioned and arranged. Additional true type fonts can be downloaded to the memory card.

Most of the country specific codepages are supported.

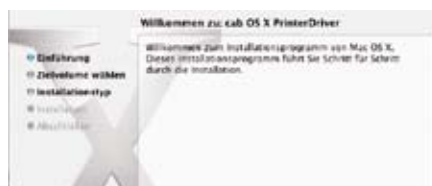
### cab Windows driver



Create and print your label with a Windows program for ex. MS Word, Excel, Access, Works, Corel Draw etc.

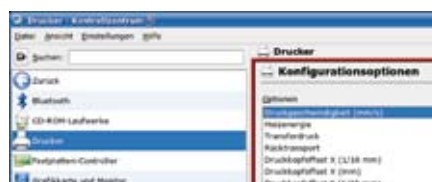
Windows printer driver are provided for Windows 98, ME, 2000, XP, 2003 and NT 4.0

### Mac OS X driver



For MAC OS X cab offers a CUPS based printer driver. Please ask us.

### Linux driver



For LINUX cab offers also a CUPS based printer driver.

### The software to create labels

Powerful functions enable the creation and printing of even complex labels within minutes.

Take advantage of using the multiple possibilities of cablabel R2.

#### ● cablabel R2 Lite

is equivalent to the previous Advanced-version. You get it - free of charge - with every cab printer.

#### ● cablabel R2 Pro

Assistant for UCC/EAN 128 barcode. Allows the collection of printing data from different data bases.

Whether simple texts, barcodes, graphics and the connection of databases, cablabel R2 is most flexible - all in 24 languages.

MDI (Multiple Document Interface) helps to open and handle several labels at the same time. Objects can be copied, moved and inserted into another label.

cablabel R2 provides its own drivers with individual respond to all different function of cab printers. This most effective way of communication between software and printer enables to achieve perfect results.

### Further label Software

cab offers a range of additional label software (Easylabel, Codesoft, Nice-Label) enabling to program printers, to print and to apply systems.

<b>cablabel R2</b>	<b>Lite</b>	<b>Pro</b>
32-Bit Platform compatibility	■	■
Languages European Version: Arabisch, CZ, D, DK, E, F, FIN, GB/USA, H, I, IL,N, NL, P, PL, RUS, S, TR	■	■
Languages Asian Version : Chinesisch, EST, J, LV, ROK	■	■
Label samples	■	■
Online documentation with tutorials	■	■
Multi-level Undo	■	■
number of levels	1	40
Graphic format import	■	■
Color support	■	■
Color graphic reduction		■
Text art		■
True Type font	■	■
Graphic barcodes	■	■
numbers	9	37
Native printer barcodes	■	■
Hidden (not printable) objects		■
Label preview	■	■
Graphics preview	■	■
Grid view/print		■
OLE-Client		■
Windows driver support		■
Control of printers	1	99
Support of net printer (TCP/IP)	■	■
Bi-directional communication to the printer		■
<b>Stand-alone</b>		
Printing to file	■	■
Font Downloader	■	■
<b>Database</b>		
Database Manager		
Access, DBF	■	■
ASCII, ODBC, OLEDB		■
<b>Variables</b>		
Flexible date and time stamping	■	■
Host of date and time with Date offset		■
Printing counter	■	■
Host counter		■
Variable graphic images		■
Free variables		■
Global files		■
Decimal value formatting		■
Basic formular		■
<b>User Input Fields</b>		
Text alignment		■
Set input format		■
Minimum input length		■
Selection of default values		■
Automatic prompt		■
<b>Extras</b>		
UCC/EAN 128 and Maxicode Assistant		■

# 10 Delivery program



Transfer printer	
Part No.	Description
5540802	Transfer printer MACH4/200
5540803	Transfer printer MACH4/300
5540812	Transfer printer MACH4/200P
5540813	Transfer printer MACH4/300P
5540816	Transfer printer MACH4/600P
5540822	Transfer printer MACH4/200C
5540823	Transfer printer MACH4/300C
5540826	Transfer printer MACH4/600C
55408xx.102	Transfer printer MACH4/XXXX with RFID read-write unit 13,56 MHz
<b>Content of delivery:</b> Label printer, power supply, operation manual, Windows driver, cablabel R2 Lite, Service manual on CD-ROM	
Spare parts	
5540882	Print head 4/203
5540883	Print head 4/300
5540884	Print head 4/600
5540862	Driver roller DR4
Interfaces	
5561041	WLAN card 802.11 b/g
5954200	Parallel Centronics
5954201	Serial RS422/RS485
5551279	Twinax-Converter
5551280	Coax-Converter
5954191	Label selection box
5550818	Connecting cable RS232 C 9/9-pole, length 3 m



without picture



Interfaces	
5901616	Connecting cable USB length 3 m
5901656	Connecting cable USB Mini length 3 m
Accessoreis	
5901630	Compact PC keyboard USB Cherry Classic Line G84 4100
5917909	Numerical PC keyboard USB
5561042	Memory card 256 MB Compact-Flash Type 1
5948100	External re-winder ER4/210 Roll diameter 210 mm
5540848	Adapter plate ER 4
5540849	Label un-winder
5540850	Ribbon holder
Software	
5580212	Database Connector
5580215	Network Manager
5580216	cab-Card Manager
5580220	Label software cablabel R2 Lite
5580221	Label software cablabel R2 Pro





#### Germany

cab Produkttechnik  
GmbH & Co KG  
Postfach 1904  
D-76007 Karlsruhe  
Wilhelm-Schickard-Str. 14  
D-76131 Karlsruhe  
Telefon +49 721 6626-0  
Telefax +49 721 6626-249  
www.cabgmbh.com  
info@cabgmbh.com

#### France

cab technologies s.a.r.l.  
B.P. 50020  
Z.A. Nord du Val de Moder  
F-67350 Niedermodern  
Téléphone +33 388 722 501  
info@cab-technologies.fr

#### España

cab España S.L.  
Josep Pla 9, 6º, 2ª  
E-08304 Mataró (Barcelona)  
Teléfono +34 937 414 605  
info@cabsi.com

#### USA

cab Technology Inc.  
90 Progress Avenue Unit #2  
Tyngsboro MA, 01879  
Phone +1 978 649 0293  
www.cabtechn.com  
info@cabtechn.com

#### South Africa

cab Technology (Pty.) Ltd.  
14, Republic Road  
2125 Randburg  
Phone +27 11-886-3580  
info@cabtech.co.za

#### Asia

cab Technology Co, Ltd.  
19F-1, No. 33, Sec. 1,  
Min Sheng Road  
Panchiao 220,  
Taipei, Taiwan, R.O.C.  
Phone +886 2 2950 9185  
www.cabasia.net  
cabasia@cabgmbh.com

Representatives in other  
countries on request.