Status: 03/2026

Products need labeling

Label printers for industrial applications



MACH 4S

Made in Germany

Key features



MACH 4S

Label printers for industrial applications

The **MACH 4S** provide all features of an industrial printer with a wide application range.

The print mechanics and the chassis are made of high-quality materials and perfectly match in terms of shape and function.

The large, colored touchdisplay with self-explanatory symbols offers best operability.

Labels and ribbons are easy to insert from the front.

The centered material guide eliminates any need of adjustments.

The hightech electronic board integrates all the needed interfaces as standard and is ready for any connection.

- reliable and fast printing
- accurate imprint
- compact, appealing design
- easy operation
- little footprint

Sample applications:

PCB labels
When only little space is available – smallest label size 5 x 5 mm

Type plates
Pin sharp fonts, graphics and barcodes up to 600 dpi

Cardboard box and pallet labels
up to a passage width of 120 mm







Types

Material guide
centered



1.1 **Type B with tear-off edge**

for printing on all materials that are wound on rolls or reels or fanfold.

Label printer		MACH 4.3S		MACH 4S	
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	300	300	300	150
Print width	up to mm	104	108.4	105.7	105.7



1.2 **Type P with peel-off function**

for printing on all materials that are wound on rolls or reels or fanfold. In addition, the labels can be dispensed.

Label printer		MACH 4.3S		MACH 4S	
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	300	300	300	150
Print width	up to mm	104	108.4	105.7	105.7
Label height	from mm	12			



1.3 **Type C with cutter**

for printing on all materials that are wound on rolls or reels or fanfold. From 12 mm in height, the labels and continuous materials can be cut.

Label printer		MACH 4.3S		MACH 4S	
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	300	300	300	150
Print width	up to mm	104	108.4	105.7	105.7
Cutting length	from mm	12			
Gap height	up to mm	2.5			
Cuts/min, without material	up to	100			
Stop print job when		final cutter position has not been reached			

Accessories



2.16 **External rewinder ER4/210**

Label winding is either outside or inside. An adapter kit for exact alignment of the external rewinder is included in the delivery.

External rewinder		ER4/210
Material width	up to mm	120
Roll diameter	up to mm	210
Core diameter	mm	40 in cases of a rewind axle or a cardboard core 76 in cases of a cardboard core and an adapter
Winding		outside or inside

Details



1 Cover with a large panoramic window
It can be opened wide. The integrated damping mechanism provides smooth closing. Label stock is visible at any time.

2 Roll holder
The label roll is put onto the holder and, at this, is automatically centered. Materials of different widths can be placed within the box.

3 Ribbon holder
The ribbon is pushed onto the spring-mounted holder and is centered by means of a margin stop and the position indication. The insertion in the print mechanics is simple and comfortable.

4 Print mechanics
It opens at the push of a button and offers easy access.

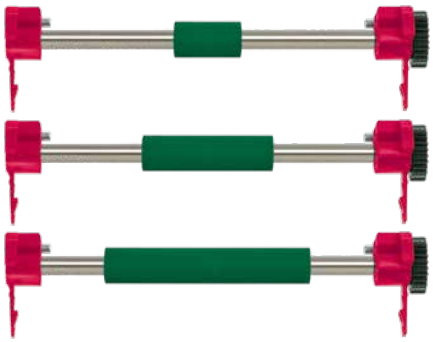
5 Print heads
All print heads are freely interchangeable. They are automatically detected and calibrated by the CPU. Major data sucha s running performance, maximum operating temperature and heat energy are directly stored in the print head. The data can be read at the plant.

6 Gap sensor
It is arranged for labels or punch marks and end of material as well as for print marks in a centered position. In case of multi-track labels, you can switch to a sensor that is shifted 10 mm to the left.

7 Material guide
With the lateral retaining wheel the width is adjusted. At this, the labels are automatically centered.

8 Reflective sensor
Labels and end of material as well as print marks are identified by the slideable sensor.

9 Print roller DR4
It can be quickly and easily unlocked in few steps for cleaning or replacement. Coating: synthetic rubber



To achieve accurate imprint with slim materials and ribbons slim print rollers are needed. These prevent from print roller wear, print head contamination and errors during material feed.

10 Peel-off function (with "P" type)
The liner tape is lead down behind the operation panel. The label separates from the liner tape on the peel-off edge. In terms of application safety, label peel-off has to be tested.

Operation panel

Intuitive and easy operation with self-explanatory symbols to configure the device setups

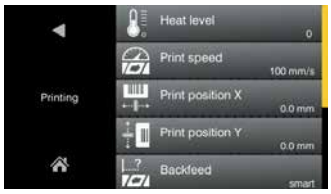
1. **LED signal:** Power ON
2. **Status bar:** Data reception, Record data stream, Ribbon pre-warning, SD memory card / USB memory stick plugged, WLAN, Ethernet, USB Slave, Time
3. **Printer status:** Ready, Pause, Number of printed labels per print job, Label in peel-off position, Awaiting external start signal
4. **Operation**

Cutter	cutting a material	Jump to menu	Reprint	Suspend and continue a print job
Tear-off mode / peel-off mode	print a label	Stop and delete all print jobs	Label feed	
Tear-off mode	label backfeed			

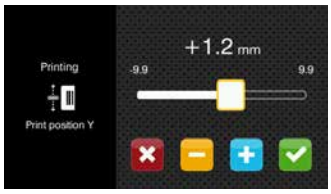




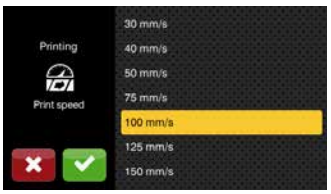
Setup options



Printing parameters



Print position Y



Print speeds

External operation panel

If the operation panel of a printer cannot be accessed, an additional external one can be plugged.

Same functionality as on the printer
Landscape or portrait mode
Operability as desired on the external operation panel or on the printer

Printer connectivity: USB 2.0 Hi-Speed device

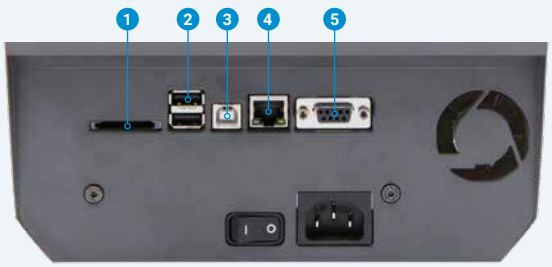
1. **LED:** Power ON
2. **USB port** to plug a service key or a memory stick, to transfer data to the IFFS memory
3. **Connecting USB cable** for power supply
   cab provides specified cables. Lengths are 1.8 m to 16 m.



Video tutorials



Interfaces on the back of the device



1. Slot for a **SD memory card**
2. **2 x USB host** to connect a Service Key, USB stick, keyboard, barcode scanner, USB WLAN stick, external control panel
   WLAN hotspot or infrastructure mode: In hotspot mode it is possible to directly connect a mobile device with the printer via WLAN.
3. **USB 2.0 Hi-speed device** to connect a PC
4. **Ethernet 10/100 Mbit/s**
5. **RS232C** 1,200 to 230,400 baud/8 bit

Technical data

● typical ○ possible ■ standard □ option

Label printer		Type	MACH 4.3S		MACH 4S	
Material feed			centered			
Printing method	Thermal transfer		●	●	●	●
	Thermal direct		●	●	○	–
Printable resolution		dpi	203	300	300	600
Print speed		up to mm/s	300	300	300	150
Print width		up to mm	104	108.4	105.7	105.7
Print length		up to mm	13,500	6,000	6,000	1,500
Start of printing	Distance to locating edge	mm	centered			
Material[1]						
Paper, cardboard, plastics PET, PE, PP, PI, PVC, PU, acrylate, Tyvec			●	●	●	●
Shrink tubes	ready-for-use		●	●	●	●
Textile tapes			●	●	●	●
Packing	on rolls, reels, fanfold		●	●	●	●
	Roll diameter	up to mm	205			
	Core diameter	mm	38.1 - 76			
	Winding		outside or inside			
Labels	Width	mm	5 - 116			
	Height excl. label backfeed	from mm	5			
	incl. label backfeed	from mm	12			
	Peel-off, single cut	from mm	20			
	Thickness	mm	0.03 - 0.6			
Liner material	Width at core diameter 38 mm	mm	9 - 120			
	76 mm	mm	25 - 120			
	Thickness	mm	0.03 - 0.16			
Continuous material	Width at core diameter 38 mm	mm	5 - 120			
	76 mm	mm	25 - 120			
	Thickness	mm	0.03 - 0.5			
	Weight (cardboard)	up to g/m²	180			
Shrink tubes	Width ready-for-use	up to mm	120			
	Thickness	up to mm	1.1			
Ribbon[2]	Ink side		outside or inside			
	Roll diameter	up to mm	72			
	Core diameter	mm	25,4			
	Variable length	up to m	360			
	Width	mm	25 - 114			
Printer sizes and weight						
Width x Height x Depth		mm	240 x 317 x 435			
Weight		kg	6			
Label sensor indicating the position						
Gap sensor		for	labels or punch marks and end of material, print marks on transparant materials			
Reflective sensor	reflex from below	for	labels and end of material, print marks on non-transparent materials			
Distance of sensor	gap	mm	centered or shifted by 10 mm to the left			
from centre to locating edge	reflex from below	mm	adjustable from centre by 56 mm to the left or by 10 mm to the right			
Material passage		up to mm	2			
Electronics						
Processor 32 bit clock rate		MHz	800			
Main memory (RAM)		MB	256			
Data memory (IFFS)		MB	50			
Slot to connect a SD memory card (SDHC, SDXC)		up to GB	512			
Battery for time and date, real-time clock			■			
Data memory when power is switched off (e.g. serial numbering)			■			
Interfaces						
RS232C 1,200 to 230,400 baud/8 bit			■			
USB 2.0 Hi-speed device to connect a PC			■			
Ethernet 10/100 Mbit/s IPv4 and IPv6			LPD, RawIP printing, SOAP web service, OPC UA, WebDAV DHCP, HTTP/HTTPS, FTP/FTPS, TIME, NTP, Zeroconf, SNMP, SMTP, VNC			
2 x USB host on the back of a unit			Service Key, USB stick, USB WLAN stick, USB WLAN stick with a rod antenna, keyboard, barcode scanner, external control panel			
USB WLAN stick 2.4 GHz 802.11b/g/n			hotspot mode or infrastructure mode □			
2.4 GHz 802.11b/g/n + 5 GHz 802.11a/n/ac, rod antenna						
Peripheral connection for cutter or peel-off function			■			
Operating data						
Power supply			100 - 240 VAC, 50/60 Hz, PFC			
Power consumption			Standby < 10 W / typical 80 W / max. 200 W			
Temperature / humidity	Operation		+5 - 40°C / 10 - 85 %, not condensing			
	Stock		0 - 60°C / 20 - 85 %, not condensing			
	Transport		–25 - 60°C / 20 - 85 %, not condensing			
Approvals			CE, UKCA, FCC Class A, ICES-3, cULus, CB, CCC, BIS, BSMI, KC-Mark, Mexico Reg. → BIS not provided for 4.3 S/C types			
Operation panel						
Colored LCD touch display	Screen diagonal	"	4.3			
	Resolution Width x Height	px	480 x 272			

[1] The material specifications are standard values. Applications with small labels, thin, slim, thick and stiff materials as well as strongly adherent labels have to be tested, so is the peel-off function. [2] The ribbon should at least correspond with the width of the liner material.

Technical data

■ standard ☐ option

Setup options		
	Print Labels Ribbon Tear-off Peel-off Cut Interfaces Error	Region: - Language - Country - Keyboard - Time zone Time Display: - Brightness - Power saving mode - Orientation Interpreter
Status bar		
	Data reception Record data stream Ribbon pre-warning SD memory card plugged USB memory stick plugged	WLAN Ethernet USB slave Time
Monitoring		
	Ribbon pre-warning End of ribbon Direction of ribbon winding End of material	Periphery error Print head voltage Print head temperature Print head open
Test routines		
System diagnostics	on start-up, including print head detection	
Information display, test printout, analysis	Status printout Fonts list List of devices WLAN status	Test grid Label profile List of events Monitor mode
Status reports	- Printout of device settings, e.g. print lengths and service hours - Device status request by software command - Display of, e.g., network errors, no links, barcode errors, periphery errors, etc.	
Fonts		
Font types internally provided	5 bitmap fonts: 12 x 12 dots 16 x 16 dots 16 x 32 dots OCR-A OCR-B	7 vector fonts: AR Heiti Medium GB-Mono CG Triumvirate Condensed Bold Garuda HanWangHeiLight Monospace 821 Swiss 721 Swiss 721 Bold
to be stored	TrueType fonts	
Character sets	Windows-1250 to -1257 DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869 EBCDIC 500 ISO 8859-1 to -10 and -13 to -16 WinOEM 720 UTF-8 MacRoman DEC MCS KOI8-R Western European Eastern European Chinese simplified Chinese traditional Thai	Cyrillic Greek Latin Hebrew Arabic
Bitmap fonts	Widths and heights 1 - 3 mm Zoom factors 2 to 10 Orientations 0°, 90°, 180°, 270°	
Vector / TrueType fonts	Size in width and height 0,9 - 128 mm Variable zoom Orientation 360° in steps of 1°	
Font styles	bold, italic, underlined, outline, inverse - depending from the font types	
Character spacing	variable or monospace	

Graphics		
Graphic elements	Lines, arrows, rectangles, circles, ellipses - filled or filled with fading	
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG	
Codes		
1D barcodes (linear)	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C EAN 8, 13 EAN/UCC 128/GS1-128 EAN/UPC Appendix 2 EAN/UPC Appendix 5 FIM HIBC	Interleaved 2/5 Ident and routing code of Deutsche Post Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0
2D and stacked codes	DataMatrix DataMatrix Rectangle Extension QR code Micro QR code rMQR code GS1 QR code GS1 DataMatrix GS1 Digital Link (QR and DataMatrix) PDF 417 Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, stacked, stacked omni-directional	
	All codes are variable in terms of height, modular width and ratio; orientations 0°, 90°, 180°, 270° check digit, plain text printout and start / stop code are options depending from the type of code	
Software		
Label software	cablabel S3 Lite cablabel S3 Viewer cablabel S3 Pro cablabel S3 Print	■ ■ ☐ ☐
Also running with	CODESOFT Loftware Spectrum NiceLabel BarTender	
Stand-alone operation		■
Windows printer drivers certified WHQL for	Windows 10 Windows 11 Server 2016 Server 2019 Server 2022 Server 2025	■
Apple printer drivers	Mac OS X 10.6 or any later release	■
Linux printer drivers	CUPS 1.2 or any later release	■
Programming	JScript printer language abc Basic Compiler ZPL II (Datastream be tested in advance)	■ ■ ☐
Integration	SAP Database Connector	■ ■
Administration	Printer control Configuration in Intranet and Internet	■ ■

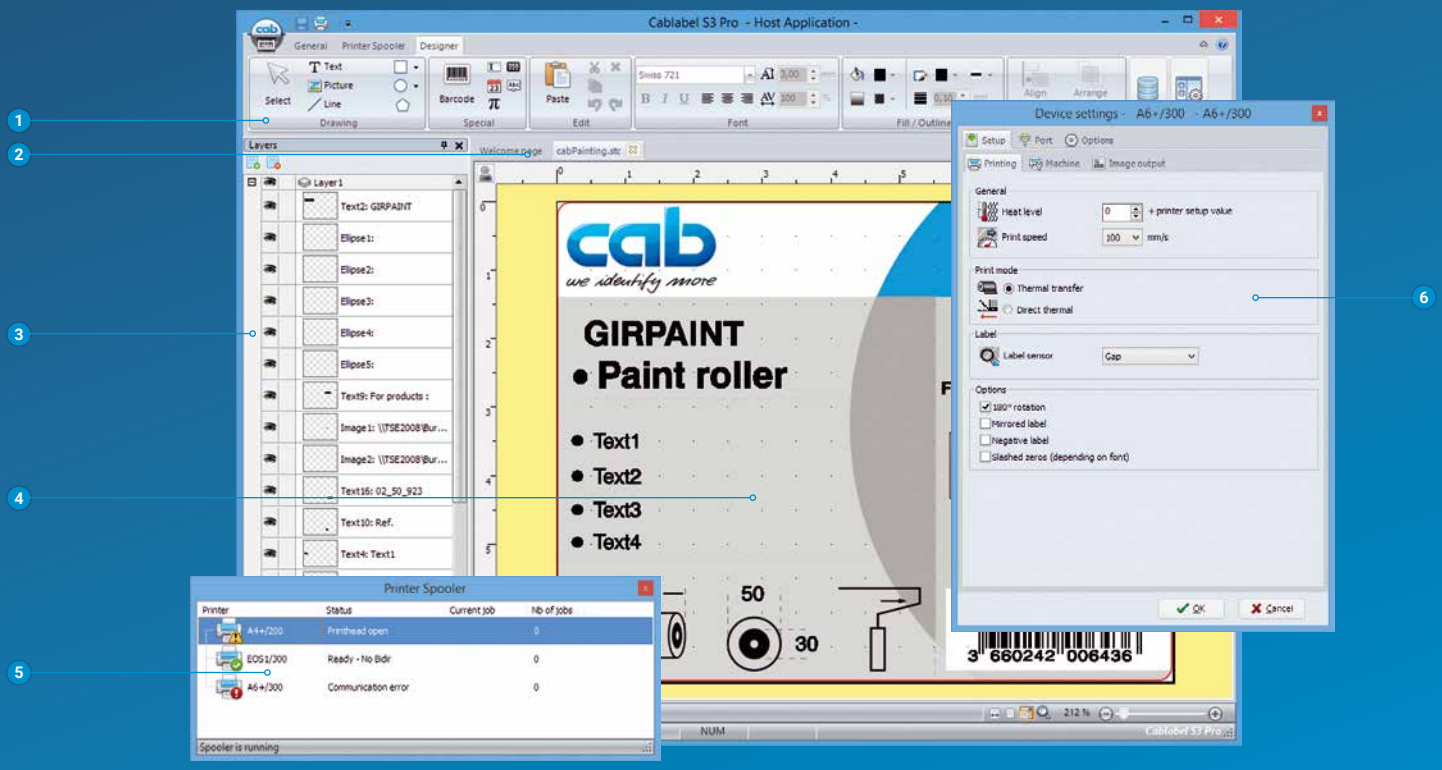
cab uses free and Open Source Software in its products.
For information see **www.cab.de/opensource**

Label software cablabel S3

Designing, printing, administrating with cablabel S3
cablabel S3 opens up the full potential of cab devices.

First of all, the label must be designed. Only when it comes to printing
it has to be decided whether the label shall be processed on a label printer, a print and apply or marking laser system.

cablabel S3 is of a modular design which makes it adaptable to requirements step by step. To support functions like native JScript programming, elements such as the JScript Viewer are embedded as plug-ins. The designer user interface and the JScript code are synchronized in real time. Special functions like the Database Connector or barcode testers can be integrated.



1 **Toolbar**
to create different label objects

2 **Tabs**
to quickly switch from one running label design to another

3 **Layers**
to administrate different label objects

4 **Designer**
simplifies the design and displays the label WYSIWYG

5 **Printer spooler**
to monitor all print jobs and the state of the printer

6 **Drivers**
for setting and the communication with devices

Printing in stand-alone operation

This operating mode is the printer's ability to select and print labels even when it is not connected to a host system.

The label has to be designed with a software such as cablabel S3 or by direct programming with a text editor on a PC. Label formats, texts, graphics as well as database contents are stored on a memory card, a USB memory stick or in the internal IFFS memory.

Only variable data are sent to the printer via a keyboard, a barcode scanner, scales or other host systems and/or recalled by the Database Connector from the host and printed.



For further information see
www.cab.de/en/cablabel

Printer control and administration

Printer drivers

cab provides drivers to control a printer with software other than cablabel S3.

Free download on **www.cab.de/en/support**

Printer programming

JScript

To control the printer, cab has developed the embedded programming language JScript. See manual for free download at **www.cab.de/en/programming**

abc Basic Compiler

In addition to JScript and as an integral part of the firmware, it allows advanced printer programming before data are sent to printout. For example, external printer languages can be replaced without interfering in the current print job. Also data from other systems such as a scale, a barcode scanner or PLC can be integrated.

Connecting to SAP®

Labels can be printed from SAP[1)] on cab devices and systems. There are various methods:

- Printing with SAPscript
- Printing with SmartForms
- Printing with Adobe Interactive Forms

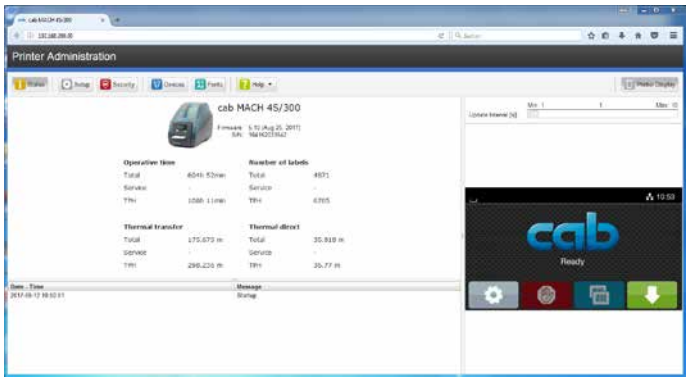
See instructions in detail on **www.cab.de/en/sap**

[1)] SAP and associated logos are trademarks or registered trademarks of SAP SE

Printer administration

Configuration in Intranet and Internet

The HTTP and FTP server integrated in the printer via standard programs like a web browser or FTP clients allows printer control and configuration, firmware updates and memory card administration. Via email or SNMP, the SNMP and SMTP client datagram sends status, warning and error messages to administrators and users. Time and date are synchronized by a time server.



Database Connector

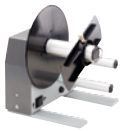
Printers connected to a network may directly access data from a central ODBC or OLEDB-ready database and print it on a label. While printing, data can be rewritten to the database.



Delivery program

Pos.		Part no.	Printers
1.1	 Type B with tear-off edge	**5984630** **5984631** **5984632** **5984633**	Label printer MACH 4.3S/200B Label printer MACH 4.3S/300B Label printer MACH 4S/300B Label printer MACH 4S/600B
1.2	 Type P with peel-off function	**5984634** **5984635** **5984636** **5984637**	Label printer MACH 4.3S/200P Label printer MACH 4.3S/300P Label printer MACH 4S/300P Label printer MACH 4S/600P
1.3	 Type C with cutter	**5984638** **5984639** **5984640** **5984641**	Label printer MACH 4.3S/200C Label printer MACH 4.3S/300C Label printer MACH 4S/300C Label printer MACH 4S/600C
		Scope of delivery	
		Label printer Power cable Type E+F, length 1.8 m Connecting cable USB, length 1.8 m Instructions DE/EN	
		Provided online	
	https://setup.cab.de/en	Instructions in 30 languages Configuration manual DE/EN/FR Service manual DE/EN Spare parts list DE/EN Programming manual EN Windows printer drivers certified WHQL for Windows 10 Server 2016 Windows 11 Server 2019 Server 2022 Server 2025 Apple Mac OS X printer drivers DE/EN/FR Linux printer drivers DE/EN/FR Label software cablabel S3 Lite cablabel S3 Viewer Database Connector	

Pos.		Part no.	Wear parts
2.1		**5977382.001**	Print head 4.3/200
		5977383.001	Print head 4.3/300
		5977444.001	Print head 4/300
		5987070.001	Print head 4/600
2.2		**5984649.001**	Print roller DR4
Pos.		**Part no.**	**Extra equipment**
2.3		**5984223.001**	Print roller DR4-M25
2.4		**5984224.001**	Print roller DR4-M50
2.5		**5984228.001**	Print roller DR4-M80

Pos.		Part no.	Extra equipment
2.6		**6010186**	External operation panel
		**5907718.001**	Connecting cable USB / 1.8 m
		5907730.001	Connecting cable USB / 3 m
		5907750.001	Connecting cable USB / 5 m
		5907760.001	Connecting cable USB / 11 m
		5907765.001	Connecting cable USB / 16 m
2.7		**5977370**	SD memory card
2.8		**5977730**	USB memory stick
2.9		**5978912.001**	USB WLAN stick 2.4 GHz 802.11b/g/n
2.10		**5977731**	USB WLAN stick with rod antenna 2.4 GHz 802.11b/g/n + 5 GHz a/n/ac
2.12		**5948205**	Label selection - I/O box
2.13		**5550818**	Connecting cable RS232 C 9/9 pin, length 3 m
2.14		**5984648.001**	Roll holder
2.15		**5984647.001**	Ribbon holder
2.16		**5540750**	External rewinder ER4/210
Pos.		**Part no.**	**Label software**
11.7		Bundle	cablabel S3 Lite (Download on cab.de/en)
		5588001	cablabel S3 Pro 1 WS
		5588100	cablabel S3 Pro 5 WS
		5588101	cablabel S3 Pro 10 WS
		5588150	cablabel S3 Pro 1 add. licence
		5588151	cablabel S3 Pro 4 add. licences
		5588152	cablabel S3 Pro 9 add. licence
		5588002	cablabel S3 Print 1 WS
		5588105	cablabel S3 Print 5 WS
		5588106	cablabel S3 Print 10 WS
		5588155	cablabel S3 Print 1 add. licence
		5588156	cablabel S3 Print 4 add. licences
		5588157	cablabel S3 Print 9 add. licences
		in preparation	cablabel S3 Print Server
11.10		**9009950**	Programming manual EN, printed copy

Scopes of delivery, design and technical specifications correspond to the date of the printing. Subject to change. The data provided in the catalog do not represent any warranty or guarantee.

Information is also available on the Internet
www.cab.de/en/mach4s

Overview of cab products

Label printers
MACH1, MACH2



Label printers
EOS 2



Label printers
EOS 5



Label printers
MACH 4S



Label printers
SQUIX 2



Label printers
SQUIX 4



Label printers
SQUIX 6.3



Label printers
SQUIX 8.3



Label printers
XD Q double-sided



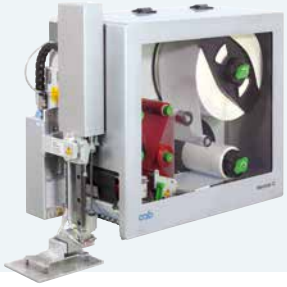
Label printers
XC Q two-colored



Print and apply systems
HERMES Q



Print and apply systems
Hermes C two-colored



Tube labeling systems
AXON 1



Print modules
PX Q



Labels and ribbons



Label software
cablabel S3

Label dispensers
HS, VS



Labeling heads
IXOR



Marking lasers
XENO 4



Laser marking systems



For product information see **www.cab.de/en**



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