

Products need labeling

Tube labeling system



AXON 2
Made in Germany

Labeling tubes reliably in real time



In order to evaluate analyses reliably and quickly, tubes must be labeled uniquely.

In practice, 2D codes or linear barcodes are printed on self-adhesive labels and the labels are applied on the tubes.

Print resolutions of 300 or 600 dpi, a sharp-edge print image and high contrast enable even tiny 2D codes to be verified. Thermal direct and thermal transfer printing are possible.

AXON 2 suits for labeling tubes individually as a manual workstation or integrated in sample processing systems.

Tubes of diameters 10 to 17 mm can be processed, capped or uncapped. Printing and labeling take less than two seconds.

After the tubes have been labeled, they can be removed one by one or be ejected to a tray.

Self-explanatory symbols enable intuitive operation. The label roll and the ribbon are easy to remove. If it comes to cleaning or in cases of wear, print rollers and transport rollers can be removed easily by the operator with the help of a tool attached.

AXON 2 may be integrated in a Laboratory Information Management System (LIMS). Data transfer from a PC is possible via interfaces such as RS232, USB, Ethernet, or via WLAN.

In stand-alone operation, when no PC is connected, variable data are set with a keyboard or a scanner.

Power may be supplied by 110 to 240 VAC voltage or 24 to 60 VDC voltage.

Details on tube labeling on the label printer, see SQUIX



1 Stop

With the help of spacers assembled to the tightening axles, slim ribbons can be set easily.

2 Slim print rollers

In order to achieve accurate imprint on small labels, slim print rollers are needed. These prevent from roller wear, print head contamination and errors during label feed.

3 Peel-off function

Labels are guided over a deflection roller to be applied reliably on the tubes.

4 Transport rollers

They apply the labels on the tubes. Three types are provided for different tubes.

5 Wipe-down rollers

During labeling, they press the tubes to the transport rollers.

6 Pivot arms

They are set according to the length of a tube and the position of the label.

7 Material replacement

Pivoting the applicator allows labels and ribbon to be inserted.



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

Technical data

● typical ○ possible ■ standard □ option

Tube labeling system		Type	AXON 2 4.3	AXON 2 4	
		Material guide		centered	
Printing method	Thermal transfer		●	●	●
	Thermal direct		●	○	–
Printable resolution	dpi		300	300	600
Print speed	mm/s		100	100	100
Print width	up to mm		108.4	105.7	105.7
Material					
Tubes	Orientation during labeling		horizontal		
	Diameter	mm	10 - 17		
	Length capped	mm	38 - 105		
	Conicity (change of diameter)	up to %	0.8		
Labels	Material	Paper, plastics PP, PC			
	Width	mm	10 - 56		
	Height	from mm	15		
	Roll diameter	up to mm	205		
	Core diameter	mm	38 - 76		
	Winding		outside		
Liner material width	up to mm	60			
Ribbon	Ink side		outside or inside		
	Roll diameter	up to mm	80		
	Core diameter	mm	25		
	Variable length	up to m	450		
	Width	mm	25 - 114		
Printer sizes and weight					
Width x Height x Depth	mm	252 x 288 x 520			
Weight	approx. kg	12			
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			
1xUSB host on the operation panel	for	Service Key, USB memory stick			
1xUSB host on the operation panel	for	USB WLAN stick 2.4 GHz 802.11b/g/n			
2xUSB host on the back of the device	for	keyboard, barcode scanner, USB Bluetooth adapter, USB WLAN stick			
Digital I/O interface		providing 8 inputs and outputs			□
Operating data					
Power supply		100 - 240 VAC, 50/60 Hz, PFC			■
		24 - 60 VDC			□
Power consumption		Standby <10 W / typical 100 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, FCC Class A, ICES-3, cULus, CB			
Operation panel					
Colored LCD touch display	Screen diagonal	"	4.3		
	Resolution W x H	px	272 x 480		
Monitoring					
	Ribbon pre-warning	Periphery error			
	End of ribbon	Print head voltage			
	Direction of ribbon winding	Print head temperature			
	End of labels	Print head open			
		Pinch roller open			
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				

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	Widths and heights 0.9 - 128 mm Continuous 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		
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	
	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		
2D and stacked	DataMatrix DataMatrix Rect. Extension QR code Micro QR code GS1 QR code GS1 DataMatrix PDF 417	Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F RSS 14 truncated, limited, stacked / omnidirectional	
Software			
Label software	cablabel S3 Lite	cablabel S3 Viewer	■
	cablabel S3 Pro	cablabel S3 Print	□
Running also with Stand-alone operation	CODESOFT, NiceLabel, BarTender		
Windows printer drivers WHQL certified	for	Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10	Server 2008 Server 2008 R2 Server 2012 Server 2012 R2 Server 2016 Server 2019
Apple Mac OS X printer drivers		from version 10.6	■
Linux printer drivers		from CUPS 1.2	■
Programming		JScript printer language abc Basic Compiler	■ ■
Integration		SAP Database Connector	■ ■
	Administration		Printer control Configuration in Intranet and Internet Network Manager (in preparation)

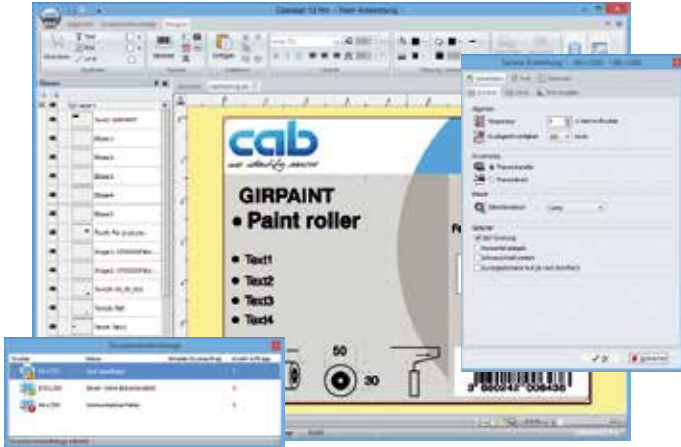
For comprehensive technical data see SQUIX 4, www.cab.de/en/squix

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

Label software cablabel S3

Designing, printing, administrating

cablabel S3 opens up the full potential of cab devices. First of all, the label must be designed. 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.



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

Stand-alone printing

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 are recalled by the Database Connector from the host and printed.



Printer control

Drivers

To control the printer with a software other than cablabel S3, cab provides drivers in 32 / 64 bit for operating systems starting from Windows Vista, Mac OS 10.6 and Linux CUPS 1.2.



Windows¹⁾ drivers

cab printer drivers are WHQL-certified. They ensure optimum stability on the Windows operating system.

Drivers are offered on the DVD delivered with the printer and for free download at www.cab.de/en/support

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.

Integration



Printer Vendor Program

As a partner in SAP's²⁾ Printer Vendor Program, cab has developed a replace method to enable easy control of a cab printer via SAPScript from SAP R/3. Only variable data are sent to the printer by the host. Pictures and fonts that had priorly been stored in the local memory (IFFS, memory card, etc.) are merged.

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.



Network Manager in preparation

It is possible to simultaneously manage several printers within a network. Control, configuration, firmware updates, memory card administration, data synchronization and PIN administration are supported centrally.



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.

¹⁾ Windows is a registered trademark of Microsoft Corporation

²⁾ SAP and all corresponding logos are trademarks or registered trademarks of SAP SE

Delivery program

Pos.	Part no.	Tube labeling system
1.1	5979605.xxx	Tube labeling system AXON 2/4.3/300 100 - 240 VAC
	5979610.xxx	Tube labeling system AXON 2/4/300 100 - 240 VAC
	5979615.xxx	Tube labeling system AXON 2/4/600 100 - 240 VAC
	5979625.xxx	Tube labeling system AXON 2/4.3/300 24 - 60 VDC
	5979630.xxx	Tube labeling system AXON 2/4/300 24 - 60 VDC
	5979635.xxx	Tube labeling system AXON 2/4/600 24 - 60 VDC
	5561500	System adjustment and check
Scope of delivery		
DVD:		Tube labeling system Power cable Type E+F, length 1.8 m Connecting cable USB, length 1.8 m Operation manual DE/EN Operation manuals Configuration manual DE/EN/FR Service manual DE/EN Spare parts list DE/EN Programming manual EN Windows printer drivers WHQL certified for Windows Vista Server 2008 Windows 7 Server 2008 R2 Windows 8 Server 2012 Windows 8.1 Server 2012 R2 Windows 10 Server 2016 Server 2019 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.	Accessories
2.7	5977370	SD memory card 8 GB
2.8	5977730	USB memory stick 8 GB
2.9	5978912.001	USB WLAN stick 2.4 GHz 802.11b/g/n
2.10	5977731	USB WLAN stick with a rod antenna 2.4 GHz 802.11b/g/n + 5 GHz a/n/ac
2.11	5977732	USB Bluetooth adapter
3.2	5917651	I/O interface connector SUB-D 25 pins
3.4	5955710	Hand switch TR2
4.1	5550818	Connecting cable RS232C 9/9 pins, length 3 m

Modules provided for the tube labeling system

Pos.	Part no.	Label printers SQUIX
5.1	5977023.463	Label printer SQUIX 4.3/300MP 100 - 240 VAC
	5977007.463	Label printer SQUIX 4/300MP 100 - 240 VAC
	5977008.463	Label printer SQUIX 4/600MP 100 - 240 VAC
	5977047.463	Label printer SQUIX 4.3/300MP 24 - 60 VDC
	5977048.463	Label printer SQUIX 4/300MP 24 - 60 VDC
	5977049.463	Label printer SQUIX 4/600MP 24 - 60 VDC
5.2	5953700	Print roller DR4-M25
	5953701	Print roller DR4-M50
	5953702	Print roller DR4-M80
5.3	5977767	Digital I/O interface
Pos.	Part no.	Tube applicator
6.1	5979509.463	Tube applicator AXON 2
6.2	5954180	Print roller DR4 as a transport roller <i>To process flat cylindrical tubes without bulges or threads protruding</i>
6.3	5979672	Transport roller TRV <i>To process all types of tubes, even with caps or threads protruding. Both rollers are aligned to the size of a tube and the position of the label.</i>
6.4	59xxxxx	Transport roller TRK <i>To process all tubes having a cap or thread protruding, if alignment is not possible with a TRV transport roller.</i>
6.5	5535960	One-off costs for TRK
6.6	5979567	Tray AXON 2

Configure an AXON 2 tube labeling system

Please send the filled-in configurator to your cab contact or email to info@cab.de

Configurator no. (filled in by cab) _____
Customer / no. _____
Person in charge _____
Phone _____
Street _____
Zip code / City _____
Email _____

Date of issue _____
Target date _____
Project owner _____
Project controlling _____

1. Label Width B _____ mm
 Height H _____ mm
 Type of material _____
 Width of liner tape T _____ mm

2. Printing method 2.1 Thermal direct
 2.2 with a ribbon
 Width _____ mm
 Type of material _____
 Winding inside outside

3. Tubes Diameter D1 _____ mm
 Diameter D2 _____ mm
 Diameter D3 _____ mm
 Length L1 _____ mm
 Length L2 _____ mm
 Distance C _____ mm

4. Tube orientation Open to the right the left

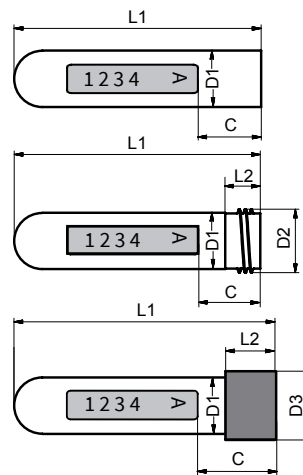
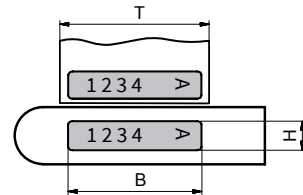
5. Tube removed from a tray from insertion position

6. Label printer

- 6.1 5977023.463 Label printer SQUIX 4.3/300MP 100 - 240 VAC
- 6.2 5977007.463 Label printer SQUIX 4/300MP 100 - 240 VAC
- 6.3 5977008.463 Label printer SQUIX 4/600MP 100 - 240 VAC
- 6.4 5977047.463 Label printer SQUIX 4.3/300MP 24 - 60 VDC
- 6.5 5977048.463 Label printer SQUIX 4/300MP 24 - 60 VDC
- 6.6 5977049.463 Label printer SQUIX 4/600MP 24 - 60 VDC
- 6.7 5953700 Print roller DR4-M25 for liner tape widths up to 25 mm
- 6.8 5953701 Druckwalze DR4-M50 for liner tape widths up to 50 mm
- 6.9 5953702 Druckwalze DR4-M80 for liner tape widths up to 60 mm
- 6.10 5977767 Digital I/O interface

7. Tube applicator

- 7.1 5979509.463 Tube applicator AXON 2
- 7.2 5954180 Print roller DR4 as a transport roller to process flat cylindrical tubes
- 7.3 5979672 Transport roller TRV to process all types of tubes
- 7.4 59xxxxx Transport roller TRK user-specific and as a series
- 7.5 5535960 One-off costs for TRK
- 7.6 5979567 Tray



Filled in by cab:

practicable: yes no
Name _____
Phone _____
Email _____
Part no. _____ **Name** _____
Date _____ **Signature** _____

Customer approval required after practicability check:
 yes no
Name _____
Phone _____
Email _____
Date _____ **Signature** _____

System adjustment and check:

- To do this, we need to have approx. 100 tubes
- 1 label roll
- 1 ribbon roll

Germany

cab Produkttechnik GmbH & Co KG

Karlsruhe

Phone +49 721 6626 0

www.cab.de

France

cab Technologies S.à.r.l.

Niedermodern

Phone +33 388 722501

www.cab.de/fr

USA

cab Technology, Inc.

Chelmsford, MA

Phone +1 978 250 8321

www.cab.de/us

Mexico

cab Technology, Inc.

Juárez

Phone +52 656 682 4301

www.cab.de/es

Taiwan

cab Technology Co., Ltd.

Taipei

Phone +886 (02) 8227 3966

www.cab.de/tw

China

cab (Shanghai) Trading Co., Ltd.

Shanghai

Phone +86 (021) 6236 3161

www.cab.de/cn

China

cab (Shanghai) Trading Co., Ltd.

Guangzhou

Phone +86 (020) 2831 7358

www.cab.de/cn

South Africa

cab Technology (Pty) Ltd.

Randburg

Phone +27 11 886 3580

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