



Products need labeling
UHF RFID label printers

SQUIX
Made in Germany

SQUIX UHF RFID label printers



SQUIX label printers integrating UHF RFID options enable highest industrial reliability in processes related to writing and printing RFID labels.

Three UHF RFID modules are provided as options, each optimized for a specific class of RFID labels: common RFID tags, on-metal RFID tags and mini RFID tags

A UHF RFID option qualifies already for a wide range of RFID labels. In addition, cab supports the development and qualification of customized solutions.

Comprehensive periphery and excellent programmability further qualify SQUIX UHF RFID label printers for solutions based on applications.

Next to RFID technology, cab supports the latest communication interfaces such as OPC UA and WebDAV, enabling a printer integrate to complex logistics systems.



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

Technical data of label printers

● typical ○ possible ■ standard □ option

| RFID label printer | | Type | SQUIX 4.3 M | | SQUIX 4 M | |
|---------------------------------------|---|--|-------------------|-------|-----------|---|
| Material guidance | | | 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 | |
| Materials | | | | | | |
| RFID labels | according to specifications as described separately, added by all materials printable by a SQUIX 4M printer | | | | | |
| | Roll diameter | up to mm | 205 | | | |
| | Core diameter | mm | 38 - 76 | | | |
| | Winding | | outside or inside | | | |
| Liner | Width | up to mm | 9 - 114 | | | |
| Ribbon | Coating | | outside or inside | | | |
| | Roll diameter | up to mm | 90 | | | |
| | Core diameter | mm | 25 | | | |
| | Length | up to m | 600 | | | |
| | Width | mm | 25 - 114 | | | |
| Printer dimensions and weight | | | | | | |
| Width x Height x Depth | | mm | 252 x 288 x 520 | | | |
| Weight | | kg approx. | 12 | | | |
| Interfaces | | | | | | |
| RS232C | | 1,200 to 230,400 bauds / 8 bits | | | | |
| USB 2.0 | | Hi-speed device to connect a PC | | | | |
| Ethernet | | 10/100 Mbit/s | | | | |
| 1 USB host on the operation panel | to plug a | service key or USB memory stick | | | | |
| 1 USB host on the operation panel | to plug a | USB WLAN stick 2.4 GHz 802.11b/g/n | | | | |
| 2 USB hosts on the back of the device | to plug a | keyboard, barcode scanner, USB Bluetooth adapter or USB WLAN stick | | | | |
| Digital I/O interface providing | | 8 inputs and outputs | | | | □ |
| Operating data | | | | | | |
| Voltage | | 100 - 240 VAC, 50/60 Hz, PFC | | | | |
| Power consumption | | < 10 W in standby / 100 W are typical | | | | |
| 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 | | | | |
| in preparation for CW 20 from CW 33 | | FCC Class A, ICES-3 cULus, CB | | | | |
| | | others may be provided on request | | | | |
| Operation panel | | | | | | |
| Colored LCD touch display | | Screen diagonal | " | 4.3 | | |
| | | Resolution Width x Height px | 272 x 480 | | | |
| Controls | | | | | | |
| Printer | Ribbon pre-warning ending winding | Peripheral error Print head voltage temperature open | | | | |
| | Labels ending | Pinch roller open | | | | |
| Fonts | | | | | | |
| Provided internally | 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 store | 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 type |
| Character spacing | variable or monospace |
| Graphics | |
| Elements | lines, arrows, rectangles, circles, ellipses - filled and gradient |
| 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 Rect. Extension QR code Micro QR code GS1 QR code GS1 DataMatrix PDF 417 Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, stacked / omnidirectional All codes may vary in height, modular width and ratio. Orientations 0°, 90°, 180°, 270° Check digits, plain text printouts and start/stop codes are options depending from the type of code. |
| Software | |
| Label software | cablabel S3 Lite cablabel S3 Pro cablabel S3 Viewer cablabel S3 Print |
| Stand-alone operation | |
| Programming | JScript printer language abc Basic Compiler |
| Integration | Database Connector |
| Administration | Printer control Configuration on the Intranet and Internet |

cab makes use of free and Open Source software in its products. See information provided on www.cab.de/opensource



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

Technical data of UHF RFID modules

| UHF RFID module on SQUIX 4 | Dual UHF RFID module | | | High Sensitivity UHF RFID module |
|------------------------------------|---|---------------------------------|------------------|----------------------------------|
| | Standard UHF RFID module | On-metal UHF RFID modul | | |
| RFID | | | | |
| Standard | UHF EPC Class 1 Gen 2 | | | |
| Interface specification | ISO/IEC 18000-63 | | | |
| Frequency scope | ETSI & FCC | ETSI & FCC | ETSI | FCC* |
| Input interface | JScript | | | |
| Features | Tag calibration, invalid labels be identified, proof printing, memory banks be locked | | | |
| Tags | | | | |
| RFID tags | Standard | On-metal | High Sensitivity | |
| Material guidance | centered | | | |
| RFID print speed up to mm/s | 100 | | | |
| Materials | | | | |
| Printable | see SQUIX 4M | | | |
| Approved RFID labels / tags | | | | |
| identitytag | Wet Inlay 53 x 53 mm | | | |
| | Antenna Smartrac FROG 3D | | | |
| | Tag IC Impinj Monza 4D | | | |
| identitytag | SmartLabel 100 x 150 mm | | | |
| | Antenna Smartrac DogBone | | | |
| | Tag IC Impinj Monza R6 | | | |
| identitytag | | Smart Label On-metal 54 x 25 mm | | |
| | Tag IC | NXP UCODE 7XM | | |
| Confidex | Automotive Carrier Pro M4QT 92 x 24 mm (3000446) | | | |
| | Tag IC Impinj Monza 4QT/4G | | | |
| Confidex | Casey MR6-P 92 x 24 mm (3002400) | | | |
| | Tag IC Impinj Monza R6-P | | | |
| Confidex | Automotive Kanban 80 x 208 mm (3001985) | | | |
| | Tag IC Impinj Monza 4E | | | |
| Avery Dennison | BJ 269 AD663U7XM WET WHITE 93 x 22 mm | | | BU117 AD151 G2iM |
| | Antenna AD-663u7xm | | | WET WHITE 25 x 18 mm |
| | Tag IC NXP UCODE 7xm | | | AD-151iM |
| Avery Dennison | BR800 AD665U8 WET WHITE 93 x 22 mm | | | NXP G2iM |
| | Antenna AD-665u8 | | | |
| | Tag IC NXP UCODE 8 | | | |
| Omni-ID | IQ400 P | | | |
| | Antenna Alien ALN-9610 | | | |
| | Tag IC Alien Higgs 3 | | | |
| Omni-ID | | IQ150 EU 54 x 12 mm | | |
| | Tag IC | Impinj Monza R6 | | |
| Omni-ID | | IQ150 US 54 x 12 mm | | |
| | Tag IC | Impinj Monza R6-P | | |
| Omni-ID | | IQ600 EU 94 x 24 mm | | |
| | Tag IC | Impinj Monza R6 | | |

* on request

RFID labels

SQUIX UHF RFID label printers have been tested and approved for a consistently growing range of RFID labels. Find examples below. cab will provide as well information about further RFID labels.

If any required label cannot be found here, we will gladly review proposals or find suitable solutions, along with you, our label development department and qualified partners.



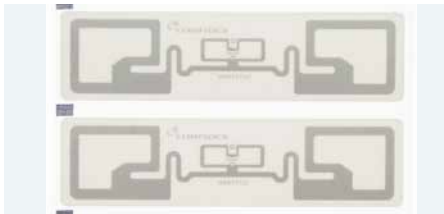
identitytag
Wet Inlay 53 x 53 mm
Smartrac FROG 3D



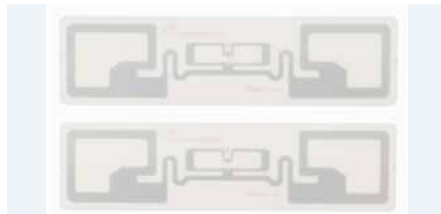
identitytag
SmartLabel 100 x 150 mm
Smartrac DogBone



identitytag
Smart Label On-metal 54 x 25 mm



Confidex
Automotive Carrier Pro
M4QT 92 x 24 mm (3000446)



Confidex
Casey MR6-P 92 x 24 mm (3002400)



Confidex
Automotive Kanban 80 x 208 mm
(3001985)



Avery Dennison
BJ 269 AD663U7XM
WET WHITE 93 x 22 mm AD-663u7xm



Avery Dennison
BR800 AD665U8
WET WHITE 93 x 22 mm AD-665u8



Avery Dennison
BU117 AD151 62iM
WET WHITE 25 x 18 mm AD-151iM



Omni-ID
IQ400 P
Alien ALN-9610



Omni-ID
IQ150 EU 54 x 12 mm



Omni-ID
IQ150 US 54 x 12 mm



Omni-ID
IQ600 EU 94 x 24 mm

RFID-related functions

RFID UHF antennas

Optimized antennas are provided for any application:

1. **Standard** antenna to cover a wide range of common RFID tags
2. **On-Metal** antenna for on-metal tags
3. **High Sensitivity** antenna for tags requiring special signal demands

RFID features

Tag calibration

Read/write positions and performances, at which the RFID printer can write and read a tag best possible, can be determined for many common RFID tags.

Characteristic curves for calibration may be printed as well as label profiles.

On-the-fly reading of tag contents

Contents such as TID, EPC, User Memory can be read **on the fly** on the RFID printer and displayed by the GUI.



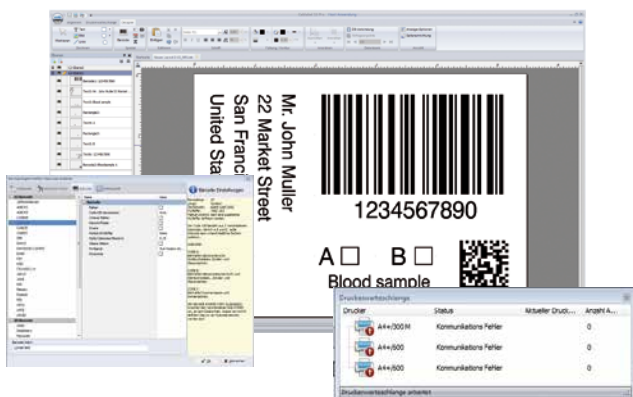
Further features are

statistics, number of allowed write/read errors be specified, invalid labels be identified (void label)

cablabel S3 software

Design, print, administrate - RFID edition in preparation

cablabel S3 opens up the full potential of cab devices. Creating a label is the first step. cablabel S3 adapts to requirements easily using a modular design. Plug-ins like the JScript Viewer support native JScript programming, as well as other features. The designer user interface and the JScript code synchronize in real time. The Database Connector and other special features can be integrated, so are barcode verifiers.



Printer control

Programming

JScript commands

- assign RFID resources (e.g. tag type, number of retries, write / read positions ...)
- write and read TID, EPC and User Memory
- type password
- generate GS1/JAIF URN Notation EPC
- lock memory bank



abc Basic Compiler

An integral part of the firmware, it adds to JScript in terms of programming a printer before data are edited for processing. For example, external printer languages can be replaced without intervening in the print job in process. Data may be transferred also from other systems, such as scales, barcode scanners or PLC.

Printer administration

Configuration on the Intranet and Internet

cab printers integrate a HTTP and FTP server. A printer can be controlled and configured, firmware updated and memory cards managed using a standard web browser or FTP client. Administrators and operators are notified of states, warnings and errors via email or datagrams, based on a SNMP/SMTTP client. Time and date are synchronized by a time server.



Database Connector

Printers connected to a network are enabled to access data directly from a central ODBC / OLEDB database and transfer it to a label. While labels are printed, data can be rewritten to the database.

Stand-alone printing

A printer can select and print labels even when the system is disconnected from a host.



Labels are designed using software such as cablabel S3 or a text editor on a PC. Label formats, texts, graphics and data taken from a database are transferred to a memory card, a USB memory stick or the internal IFFS memory.

Only variable data are sent to the printer using a keyboard, a barcode scanner, scale or another host system and/or are recalled from a host by the Database Connector and printed.



Delivery program

Label printers

| Pos. | Part no. | Designation |
|------|---|--|
| 1.7 |  | 5977018.xxx Label printer SQUIX 4.3/200M |
| | 5977019.xxx Label printer SQUIX 4.3/300M | |
| | 5977010.xxx Label printer SQUIX 4/300M | |
| | 5977011.xxx Label printer SQUIX 4/600M | |
| 1.8 |  | 5977022.xxx Label printer SQUIX 4.3/200MP |
| | 5977023.xxx Label printer SQUIX 4.3/300MP | |
| | 5977007.xxx Label printer SQUIX 4/300MP | |
| | 5977008.xxx Label printer SQUIX 4/600MP | |

xxx = with option UHF-RFID


Options UHF-RFID

| Pos. | Part no. | Designation |
|------|--------------------|--|
| 6.1 | xxxxxxx.406 | Standard UHF RFID module |
| | xxxxxxx.407 | On-metal UHF RFID module |
| | xxxxxxx.408 | High Sensitivity UHF RFID module |
| | xxxxxxx.409 | Dual UHF RFID module (Standard and On-metal) |

xxxxxxx = Label printer from Pos. 1.7/1.8

Wear parts

Print heads for modules Standard/HS/Dual

| Pos. | Part no. | Designation |
|---|--------------------|--------------------|
|  | 5977382.001 | Print head 4.3/200 |
| | 5977383.001 | Print head 4.3/300 |
| | 5977444.001 | Print head 4/300 |
| | 5977380.001 | Print head 4/600 |

Print head for module On-Metal incl. RFID antenna

| Pos. | Part no. | Designation |
|------|--------------------|--------------------|
| | 5987177.001 | Print head 4.3/200 |
| | 5987178.001 | Print head 4.3/300 |
| | 5987179.001 | Print head 4/300 |
| | 5987180.001 | Print head 4/600 |



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

Scope of delivery

Label printer
Power cable Type E+F, 1.8 m
Connecting USB cable, 1.8 m
Instructions DE/EN

Available online

Instructions in 30 languages
Configuration manuals DE/EN/FR
Service manuals DE/EN
Spare parts lists 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
cablabel S3 Lite software
cablabel S3 Viewer
Database Connector

<https://setup.cab.de/en>

Label software

| Pos. | Part no. | Designation |
|-------|----------------|--|
| 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 additional licence |
| | 5588151 | cablabel S3 Pro 4 additional licences |
| | 5588152 | cablabel S3 Pro 9 additional licences |
| | 5588002 | cablabel S3 Print 1 WS |
| | 5588105 | cablabel S3 Print 5 WS |
| | 5588106 | cablabel S3 Print 10 WS |
| 11.10 | 5588155 | cablabel S3 Print 1 additional licence |
| | 5588156 | cablabel S3 Print 4 additional licences |
| | 5588157 | cablabel S3 Print 9 additional licences |
| | in preparation | cablabel S3 Print Server |
| | 9009950 | Programming manual EN, printed copy |

User languages

| Language | Menu | Windows drivers | cablabel S3 | Instructions |
|----------------------|------|-----------------|-------------|--------------|
| Arabic | X | - | - | - |
| Bulgarian | X | - | X | X |
| Chinese, traditional | X | X | X | X |
| Chinese, simplified | X | X | X | X |
| Danish | X | X | - | X |
| German | X | X | X | X |
| English | X | X | X | X |
| Estonian | X | - | - | X |
| Finnish | X | X | - | X |
| French | X | X | X | X |
| Greek | X | - | - | X |
| Italian | X | X | X | X |
| Korean | - | X | X | X |
| Latvian | X | - | - | X |
| Lithuanian | X | - | - | X |
| Macedonian | X | - | - | - |
| Dutch | X | X | - | X |
| Norwegian | X | X | - | X |
| Persian | X | - | - | - |
| Polish | X | X | X | X |
| Portuguese | X | X | - | X |
| Romanian | X | - | - | X |
| Russian | X | X | X | X |
| Swedish | X | X | - | X |
| Serbian | X | - | - | - |
| Slovak | X | X | - | X |
| Slowenian | X | X | - | X |
| Spanish | X | X | X | X |
| Thai | x | X | - | X |
| Czech | X | X | X | X |
| Turkish | X | X | - | X |
| Hungarian | X | X | - | X |

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.

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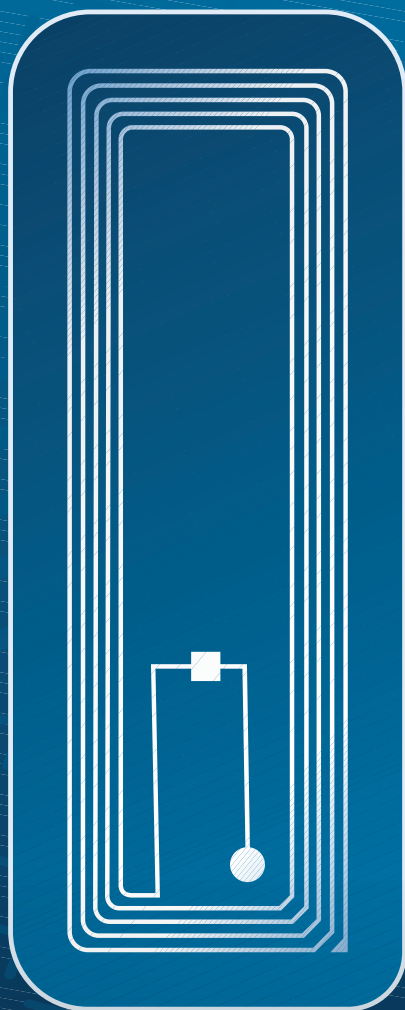
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