

2D barcode recognition with new power

Egg. 9.6.2022: For many years, the ArchivistaBox has supported the recognition of QR codes. However, when implementing the recognition of the Swiss-QR invoice, it became apparent that better recognition and processing makes a lot of sense. This blog presents the new solution based on ArchivistaBox 2022/VI.



This is why the previous solution was no longer up to date

QR codes have been able to be processed with ArchivistaBox or WebDMS for years. Over the years, however, QR codes have become larger and larger because they contain more information.

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<p>Empfangsschein</p> <p>Konto / Zahlbar an CH34 3076 1016 1248 7058 1 iWay AG Badenerstrasse 569 8048 Zürich</p> <p>Referenz 81 04580 00000 21292 42022 01021</p> <p>Zahlbar durch Archivista GmbH Urs Pfister Stegstrasse 14 8132 Egg</p> <p>Währung Betrag CHF 1 069,45</p> <p style="text-align: right;">Annahmestelle</p>	<p>Zahitell</p>  <p>Währung Betrag CHF 1 069,45</p>	<p>Konto / Zahlbar an CH34 3076 1016 1248 7058 1 iWay AG Badenerstrasse 569 8048 Zürich</p> <p>Referenz 81 04580 00000 21292 42022 01021</p> <p>Zahlbar durch Archivista GmbH Urs Pfister Stegstrasse 14 8132 Egg</p>
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The Swiss QR invoice is a prime example. In the currently encountered version 2.0, there are over 30 fields "hidden" in the QR code. There are no fixed lengths, such as 30 characters for the name or the location. Only those characters that are necessary are stored. The individual information is separated by lines. Here is an example:

SPC
0200

1
 CH3430761016124870581
 S
 iWay AG
 Badenerstrasse
 569
 8048
 Zürich
 CH

This produces impressive “results” in barcode recognition. In the case of the Swiss-QR invoice, this is up to 997 characters as well as well over 30 lines. The barcode recognition of the ArchivistaBox has been on board since the beginning, i.e. since 2005. At that time there were only so-called 1D barcodes (zebra stripes). In contrast, the QR codes are also called 2D barcodes (square with small dots).

The old (classic) 1D barcodes take up a relatively large amount of space and can only hold a few characters per barcode. For this reason, multiple barcodes were sometimes placed on one receipt. Barcode 1 stored the customer number, barcode 2 the invoice number, etc.

Until now, the ArchivistaBox was able to process a maximum of 5 barcodes. When implementing the Swiss-QR invoice, the question arose as to how the individual lines or elements of a QR code could be processed most easily in the ArchivistaBox. It should be noted that a Swiss-QR invoice can contain well over 30 elements.

The screenshot displays the ArchivistaBox software interface. At the top, a grid of eight QR codes is shown, each with a small thumbnail of the original document. Below the grid, a metadata panel on the left lists various fields extracted from the QR code, such as MediaCodex, Bereich, Buchungperiode, PersonalNr, PersonalName, QRiban, QRto, QRamount, QRcurrency, QRcode, QRref, QRcred, QRcountry, Firmennummer, Firmenname, Dokumententyp, MediaDevice, Export, Dateiname, Export2, omdbid, omdbArtists, and omdbCategories. The main area on the right shows a detailed view of a Swiss-QR invoice from iWay.ch. The invoice includes a header with the company name and logo, a table of line items with columns for description, quantity, unit, price, and total, and a footer with payment information and a QR code.

ArchivistaBox 2022/VI processes QR codes with up to 48 elements.

Version 2022/VI considers the individual line elements of QR codes as individual barcodes during processing. This makes it very easy to assign the desired sub-elements of the QR code to the desired fields. First, however, it is necessary to activate the new QR code recognition:

Barcode recognition @ archivista

Name	<input type="text" value="Barcode"/>
1. Barcode type	<input type="text" value="QRCode"/>
2. Barcode type	<input type="text" value="Automatic"/>
Orientation	<input type="text" value="Automatic"/>
Check character	<input type="text"/>
Vertical stretch	<input type="text" value="No correction"/>
Recognition always after every page	<input type="checkbox"/>
Side with barcode to old record	<input type="checkbox"/>
Barcode engine	<input type="text" value="Second engine"/>
Script	<input type="text"/>

The question remains, how to activate the new QR recognition in WebAdmin. To do this, simply activate the sub-item 'Barcode recognition' in the barcodes in WebAdmin. After that the option 'QRCode' can be activated at 1st barcode type. Note: The menus for the barcodes will of course only appear if the 'Barcode recognition' module has been purchased for the respective ArchivistaBox.

Multiple assignment of elements to a field

In Swiss-QR-Invoice, the addresses are coded in a rather special way. Permitted is both:

iWay AG
Badenerstrasse
569
8048
Zürich

Further it is possible to show the address more compactly:

iWay AG
Badenerstrasse 569
8048 Zürich

The processing of the address is therefore not entirely trivial. In the ArchivistaBox, individual elements can be assigned to a specific element multiple times. The following example illustrates this:

Barcode processing @ archivista

Barcode definition

	Barcode	Length	Field
Edit Delete	4	All	QRiban
Edit Delete	6	All	QRto
Edit Delete	19	All	QRamount
Edit Delete	20	All	QRcurrency
Edit Delete	28	All	QRcode
Edit Delete	29	All	QRref
Edit Delete	22	All	QRcred
Edit Delete	11	All	QRcountry
Edit Delete	7	All	QRto
Edit Delete	8	All	QRto
Edit Delete	9	All	QRto
Edit Delete	10	All	QRto

Elements 6 to 10 are all assigned to the QRto field. This results in the following processing for the ArchivistaBox:

```

QRiban  CH3430761016124870581
QRto    iWay AG Badenerstrasse 569 8048 Zürich
QRamount 1069.45
QRcurrency CHF
QRcode   QRR
QRref    810458000000212924202201021
QRcred   Archivista GmbH
QRcountry CH

```

Note: No scripts are necessary for this example. It is sufficient to make the above assignments during barcode processing.

Five advantages of ArchivistaBox QRCode recognition

No need for manual interaction: Unlike solutions where the QR code has to be individually scanned on the document, the ArchivistaBox QR code recognition works without interaction. The QR codes on the documents are located and processed completely automatically on the document during capture.

Automatic forwarding to ERP solution: The data captured in this way can be forwarded to the accounts payable management of (almost) any ERP solution without the need to purchase additional QR code devices.

No need to cut/separate payment parts: QR code readers are nice to have, but they require the payment parts to be either appropriately separated or cut.

Same interface for digital and analog documents: QR codes can be processed with the same technology, regardless of whether PDF files or scanned documents are used.

Support directly from the manufacturer: The ArchivistaBox is developed and manufactured in Switzerland. The maintenance contract for all ArchivistaBox products is included in the price for the first year.



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