the professional labeling software

www.nicelabel.com.

NiceLabel

Printing labels to thermal printers from SAP R/3

White Paper

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http://www.nicelabel.com

Head Office
Euro Plus d.o.o.
Ulica Lojzeta Hrovata 4c
SI-4000 Kranj, Slovenia
tel.: +386 4 280 50 00
fax: +386 4 233 11 48
www.europlus.si
info@europlus.si

Nice Software. Nice Partner. Nice Value.

North American Office
Niceware International, LLC
10437 Innovation Drive, Ste. 225
Milwaukee, WI 53226
Tel.: 414-476-6423
Fax: 414-476-7955
www.nicewareintl.com
info@nicewareintl.com

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1 Introduction

SAP R/3 is an ERP (Enterprise Resource Planning) software that contains many applications used for warehousing, shipping, goods tracking, as well as in the automotive and chemical industry. In short, SAP R/3 is used everywhere where labeling printing demand exists. NiceLabel offers very user-friendly support for SAP R/3 applications. One of the most important things with NiceLabel support for SAP R/3 is that you do not need to understand a printer's programming language to create and print a label.

This White Paper contains all necessary information how to print labels in SAP R/3 environment with NiceLabel software.

1.1 SAP R/3

SAP R/3 is an integrated software solution for client/server and distributed open systems. SAP R/3 is the world's most used standard business software for client/server computing. R/3 meets the needs of customers from the small grocery store with 3 users to the multi-billion dollar company with multiple users. The software is highly customizable using SAP proprietary programming language, ABAP/4. R/3 is scalable and highly suited for many types and sizes of organizations.

The R/3 architecture includes application and database servers. The application servers house the software and the database servers handle document updates and master file databases. The system can support an unlimited number of servers and a variety of hardware configurations. SAP R/3 is based on various hardware and software architectures, running on most types of UNIX, on Windows and OS/400.

SAP R/3 runs on several databases such as Oracle, Adabas D, Informix, DB2 for UNIX, DB2/400 and Microsoft SQL Server 6.0. Since the release of R/3, SAP has made significant development and installed thousands of R/3 systems.

For more information about SAP R/3 please visit SAP home page at http://www.sap.com/.

1.2 NiceLabel Software

NiceLabel is a family of professional labeling software products that brings a complete bar code printing solution and RFID Smart Label printing to desktop, mobile and enterprise users. NiceLabel offers an intuitive user interface, wide range of functionality, and numerous ways of integration and customization. NiceLabel software runs on any 32-bit windows based operating system such as Windows 98 SE, Windows NT 4.0, Windows ME, Windows 2000, Windows XP and Windows Server 2003.

NiceLabel software can be used with any kind of printer drivers but works best with NiceDrivers. NiceDrivers create the optimal printer command file that is sent to the printer and accelerate printing. In some label printing methods from SAP system (**Upload method**[1]) you must use NiceDrivers, for other methods NiceDrivers are not necessary and you can use any printer driver.

NiceLabel software is available in several editions. To print labels from SAP R/3, you need the edition NiceLabel Suite. NiceLabel Suite is the most powerful package of the NiceLabel software family. NiceLabel Suite consists of several applications, such as NiceLabel Pro as the main label design software and additional modules like NiceWatch, NiceForm, NiceData, and NiceMemMaster.

For more information about NiceLabel software please visit the website http://www.nicelabel.com/.

[1] *Explained later in the document. Refer to the chapter Upload Method on page 6*

1.3 NiceDrivers

NiceDrivers present full-featured Windows drivers developed for all major thermal printer brands. NiceDrivers can be used with any Windows application in Windows 95/98, Windows NT 4.0, Windows ME, Windows 2000, Windows XP and Windows Server 2003. However, the optimal printing results can only be achieved in the combination with NiceLabel software.

NiceLabel software can communicate with NiceDrivers using the direct method to ensure fast label processing and printing. The major benefit using NiceDrivers is their knowledge about the printer's internal commands and functionality. NiceDrivers enable you to use all internal printer elements, such as internal fonts, bar codes, lines, rectangles, serialization counters, and memory cards. NiceDrivers forward all this knowledge about printer functionality to the NiceLabel software.

NiceDrivers are in constant development and new versions are released frequently. They can be used free of charge and are available for download from the NiceLabel website. For more information and latest updates visit the NiceLabel website at http://www.nicelabel.com/nicedrivers/nicedrivers.php.

1.4 NiceMemMaster

NiceMemMaster is the utility used to download TrueType/Type 1 and similar fonts and graphics to the printer's internal memory, FLASH memory, external memory cards, etc. NiceMemMaster is also very useful when your label contains variable text elements formatted in True Type fonts, or when you want to use variable graphics on the label. Such True Type fonts and images behave like resident elements and can be downloaded to the printer's memory.

When you print labels from SAP R/3 using the **Upload method**[2] some limitations apply to the label design. Because NiceLabel in this printing mode is not available at print time, all variable elements on the label need to be installed on the printer. Usually, this means using only internal printer fonts. But with NiceMemMaster you can break this barrier. You can download True Type fonts to the memory card that can be used as internal fonts.

For more information about NiceMemMaster please refer to the NiceLabel Suite documentation.

1.5 NiceWatch

NiceWatch is an integration middle-ware. It is an event-driven application monitoring and detecting many different formats of incoming data that can trigger a start of label production. NiceWatch also makes the label production from non-windows applications possible. In most cases, data is exported from external or non-windows applications and saved to a text file that is intercepted and parsed by NiceWatch. However, the text file is only one possibility for data exchange. Other trigger methods are also available.

Label printing with data from SAP R/3 is possible with NiceWatch. SAP R/3 prepares all necessary data to be used on the label. NiceWatch detects the data, uses it on the label and triggers the label production.

For more information about NiceWatch please refer to the NiceLabel Suite documentation.

[2] *Explained later in the document. Refer to the chapter Upload Method on page 6*

1.6 NiceCommands

NiceCommands represent commands that can be used for automated label production. NiceCommands must be written one per line in the batch file (JOB file). Label production can be started from NiceLabel, NiceWatch or directly from a command line.

For more information about NiceCommands please see the NiceLabel User Guide.

2 Printing methods

2.1 Introduction

This white paper presents the options for bar code label printing from SAP R/3. It describes the fundamentals of different printing methods and provides the pros and cons for each method.

The available output methods for label printing from SAP R/3 are:

- Upload Method (SAPscript)
  The labels are created in NiceLabel software and uploaded into R3 through SAPscript programming. This easy method is commonly used but lacks some functionality that is available with the other methods. The label can be printed only to the printer for which the export was made.
- Automated Printing (Middleware)
  The labels are created and printed in NiceLabel software that acts as a middle-ware on some PC computer. The data for the label coming from SAP system is processed by NiceLabel software, which produces the appropriate printer command file and sends it to the printer. The same label design can be printed to multiple printers, not just one.
- Batch printing – JOB command files (Middleware)
  Similar to Automated Printing, only the incoming file with data from SAP is formatted differently.

SAP recommends **Upload Method**, but with the PC-based labeling software (middle-ware) NiceLabel you can also use the **Automated Printing** or **Batch Printing** options that will give you more versatility and freedom for your label layouts.

There are some other methods to print labels from SAP R/3 that are not connected to the NiceLabel software. Those two methods will be mentioned briefly in the document.

- SAPWin
- Direct printing from SAP (SAP Smart Forms)

2.1.1 Upload Method

The upload method has been recommended by SAP as the most popular way to print bar code labels. You can use NiceLabel software for bar code label design and preparation of the ITF file. The ITF file contains description of the label. To actually prepare the ITF file use the command Export to SAP in NiceLabel Pro. The SAPscript ITF file is uploaded to SAP R/3 system and labels with bar codes are printed directly from SAP system without any middleware or additional label processing. This operation is also very user friendly because there is no need for users to understand the printer's programming language.

NiceLabel software is used solely for label design. After you have designed the label with NiceLabel, SAP R/3 handles all procedures. You do not have to maintain any middleware solution.

For detailed information about the Upload method please refer to the chapter **Upload method explained step by step** on page 12.

Advantages	Description
Advanced label design with NiceLabel	It is possible to use almost all NiceLabel features.
Completely integrated within SAP R/3	No PC needed for label production.
Fast printing	Usage of NiceDrivers speed up label production because of the optimized printer stream.
Easy modifications to label designs	Label can be changed easily and fast with NiceLabel software. There is no need to change the ITF file by hand. The label is designed in graphic environment and then exported to ITF file.
No programming knowledge required	There is no need to be familiar with the printer's programming language. NiceLabel will prepare the proper printer command file.

Disadvantages	Description
More work for setting up printing of bitmap graphics and text elements formatted in True Type fonts	Not all thermal printers can print such elements when using Upload method. Workaround with separate download of such elements can be used with some printer models but not all of them. When using such workaround, all graphics have to be downloaded to printer's internal memory before they can be used on the printer. The application NiceMemMaster (part of NiceLabel Suite edition) must be used.
Non-binary escape codes support in the printer	Printer has to be able to receive non-binary escape codes. SAP system has a strict data format for SAPscript ITF text file. Printer commands cannot include characters below ASCII code 32. Not all thermal printers support this and in such case the command Export to SAP in NiceLabel software cannot be selected.
No Unicode support	Binary files cannot be uploaded, which prevents the use of Asian characters.
Limited label design possibilities	Not all NiceLabel functionalities and objects are available for the exported label. For example, limitations apply to text wrapping, best fit and justification options.

Limited support for EAN.UCC 128 bar code standard	Thermal printers usually cannot handle printing of EAN.UCC 128 bar codes by themselves. The syntax of the bar code requires some processing before bar code can be printed (check digits, Application Identifiers with variable lengths, non-printable characters).

2.1.2 Automated Printing

With automated printing, SAP R/3 system prepares a file with the data for the label. In most cases this is the text file formatted as CSV file or the file with columns of fixed widths. The fields in the file contain the values for fields on the label, for example article code, article description, bar code, image of the product, etc.

The appearance or change in the file is a signal for NiceLabel software to print the bar code labels. NiceWatch application takes action here. NiceWatch application opens the text file, gets the values from it, sends the values to the label opened in NiceLabel Pro and instructs NiceLabel Pro to start printing the required amount of labels to the selected printer. NiceWatch runs as a middleware on the PC computer, accepting input connections and instructing NiceLabel Pro (the main label printing application) what to do. NiceWatch can be run as a service application on the Windows computer.

If there is a need for additional data manipulation, it can be done in NiceWatch using the internal support for MS Visual Basic Script. Even powerful data manipulation is available in NiceLabel Pro. Besides Visual Basic Script, additional internal NiceLabel functions are available. You can also acquire some additional data from any database, which you can combine with data from SAP R3.

NiceLabel software provides support for all common linear and two-dimensional bar codes. Even if your thermal printer does not internally support some bar code type, it can still be printed as image on the label. NiceLabel will generate such image at print time and put it on the label. The automated printing method is a universal solution for any kind of thermal printer you might have.

Advantages	**Description**
Fast printing	Usage of NiceDrivers speed up label production because of the optimized printer stream. NiceDrivers are available for all major printer brands. An optimized printer command file is generated for each supported printer model.
No programming knowledge required	There is no need to be familiar with the printer's programming language, NiceLabel will prepare the proper printer command file.
Easy modifications of label designs	Label can be changed easily and fast with NiceLabel software. There is no need to change the ITF file by hand. The label is designed in graphic environment and then exported to ITF file.
Usage of Bitmap graphics and TrueType fonts	It is possible to use bitmap graphics and True Type fonts with no limitation. All NiceLabel functions are available.

Support for advanced label layouts	Because NiceLabel software is processing and printing the labels, all advanced label design functionality is available for you: use of variable images on the label, printing of variable True Type text elements, including Paragraph and RTF objects, text justification and scaling etc.
Support for printers from different manufacturers	The labels are processed and printed on-demand on the fly. You can create the label layout once and use it for printing to many printers.
The solution is set up and deployed easily	A set of wizards and intuitive approach to the workflow help you set up and test the label printing system in minutes.
Full support for EAN.UCC 128 bar codes	NiceLabel processes the label data. Because NiceLabel supports EAN.UCC 128 bar code generation, every possible combination of Application Identifiers is supported.
Unicode support	There is a true Unicode support available in NiceLabel software, so you can create labels with Easter European, Middle-Eastern and Asian languages easily.

Disadvantages	**Description**
PC needed for data detection and label production	Additional PC is needed for automatic data detection and label production. NiceLabel software (NiceLabel Pro and NiceWatch) is installed on this computer. This adds up to the overall costs (installation, maintenance etc).
Printing from middleware	The connection is not as tightly integrated with SAP R/3 as with upload method. There might be a slight delay in label print because of the external data processing and printing.

2.1.3 Batch printing - JOB command files

Batch printing provides almost the same functionality as automated printing method. The major difference between automated printing and batch printing methods is in the type of file prepared by SAP R/3 system.

Automated printing method prepares a text file with data for the labels. NiceWatch needs to parse this file to extract the values for fields on the label and send the values to NiceLabel Pro.

Batch printing method prepares a JOB file with description of label printing process. A JOB file contains NiceCommands that exactly describe the printing process. NiceWatch

detects the appearance or change of the JOB file and starts the label production. NiceWatch does not have to do anything except for following the NiceCommands in the JOB file.

With batch printing method there is another new possibility to skip NiceWatch entirely. SAP R/3 can start NiceLabel Pro and provide the file name of the created batch JOB file in the command-line options. When JOB file appears in the NiceLabel Pro command-line, the commands in the JOB file will be executed. In such cases, you do not need the NiceLabel Suite edition but only the NiceLabel Pro edition.

For more information about JOB files, NiceCommands and automatic printing using NiceWatch please refer to the **Integration and Connectivity White Paper** which you can download from the NiceLabel website at www.nicelabel.com.

2.1.4 ActiveX integration (SAP Business One)

SAP has developed the low-price solution SAP Business One (SBO) that gives small and midsize businesses (SMBs) an immediate and complete view of their business operations and customers. It is developed for small companies that require less complex industry-specific functionality from SAP IT solutions.

Different third-party software solutions exist that act as an interface between SBO and NiceLabel software. The 3rd party solution links both applications. Such solution can be an ActiveX component activated on an HTML page. The application acts as an additional window of SBO. On one end the application uses direct access to the SBO database in order to retrieve the desired data. On the other end it employs NiceLabel's ActiveX interface to activate it as a label printing server.

Such approach with 3rd party application allows the user to use all the powerful functions of NiceLabel software in designing and printing the label. When the user selects the print command in such third-party solution the application obtains the necessary data for the label from the SBO system and transfers the data to NiceLabel to print the label.

For more information about ActiveX integration please refer to the **ActiveX Programming Guide** which can be downloaded from NiceLabel website www.nicelabel.com.

Advantages	Description
The same advantages that apply to 'Automated printing' method	The printing principle is the same as for 'Automated printing' because NiceLabel software is processing and printing the labels.
Accustomed solution for the end user.	The third-party software is developed based on customer's requirements. It is easy to use and provides answers to all user needs.

Disadvantages	Description
The same disadvantages that apply to 'Automated printing' method	The printing principle is the same as for 'Automated printing' because NiceLabel software is processing and printing the labels.
Obtaining the third-party solution	The third-party solution (interface between SAP and NiceLabel) needs to be developed or purchased.

2.1.5 SAPWin

SAP R/3 also supports printing with Windows drivers using the SAPWin device type and SAPlpd.

Advantages	Description
Support for all printers	All printers that have windows driver can be used for printing via SAPWin device type.

Disadvantages	Description
PC computer	Additional PC is needed for printing.
Slow printing	No printing optimization is available (internal elements, downloaded graphics, etc.).
No bar code support	Bar codes are not supported as with other methods of printing.
Deep knowledge of printer commands (programming language)	You need to have some programming knowledge because you need to create the file with printer commands yourself. There is no NiceLabel software to generate the ITF file or print labels automatically.

2.1.6 Direct printing from SAP (SAP Smart Forms)

SAP R/3 natively supports any printer using PCL-5, Postscript, Prescribe or Line Printer emulation. Recently, the ZPL (Zebra Programming Language) was added. The label with bar codes and form for output from SAP applications are created in the familiar Smart Forms environment and printed from SAP directly. There is no need for any additional software, licenses or PC computers.

Simplicity is the biggest advantage of printing bar codes directly from SAP. The user is not confronted with any new labeling software. The familiar environment is used for label design and print.

Advantages	Description
No PC computer needed	No PC computer, middleware, or Windows drivers are required for printing. No extra costs for hardware or software equipment are necessary.
Fast printing	Printing directly to printer.
Integrated with SAP R/3	Completely integrated with SAP R/3.

Disadvantages	Description
Printer programming knowledge required	Printing commands are manually programmed. You have to know printer commands and their syntax.

Poor design environment	Label design environment is not as powerful as the one of the NiceLabel Pro application. Not so many different label elements and formatting features are available.
Poor support for thermal printers	Does not support label printing to all thermal printers.[3]
Poor support for bar codes	Does not support any bar codes.[4]

2.2 Upload method explained step by step

2.2.1 Requirements for the Upload method

If you want to use Upload method for label printing from SAP R/3 system, you must meet the following:

Requirements	Description
NiceDriver for the printer model	Install NiceDriver for your printer model. Without NiceDriver the Export to SAP functionality is not available.
NiceLabel Suite edition	Export to SAP functionality is only available in NiceLabel Suite edition.
Printer with support for alternate escape codes (above ASCII code 32)	NiceDriver prepares the printer stream with instructions for the printer. Based on these instructions (programming commands) the printer prints the label. To be able to print labels from SAP R/3, the printer must support instructions that are sent to it using alternate escape codes. No character below ASCII code 32 must be sent to the printer. Not all printers comply with this demand.
Printer with support for graphic printing from SAP R/3	When you are using fixed text elements (formatted in True Type fonts) or images on the label, they all are sent to the printer as graphic elements. If your printer model does not support printing of graphic elements from SAP R/3, such elements cannot be used on the label. Your printer might still print graphic elements directly from NiceLabel software, but SAP R/3 demands different syntax when printing them and this syntax is not applicable to all printers.

[3] *Support for ZPL (Zebra Programming Language) was recently added.*

[4] *Support for bar codes on Zebra printers was recently added thru support for ZPL.*

2.2.2 Step 1: Designing label with NiceLabel

Design the label using NiceLabel software on a Windows-based PC computer. Please note that the Upload method of label printing is not available for all thermal printers. An easy way to verify the method is to check if the command **Export to SAP** is available in the Export submenu under the File menu. If the command is available, the connected printer supports the required functionality and the necessary ITF file can be generated.

Define the R/3 form fields on the PC

In NiceLabel software define prompted variable fields on the label. During print process these fields will be filled with the data from SAP R/3 system. Make sure they are defined as prompt variables, not database variables, function variables etc.

Each variable field in the label has its own unique name. You can define variable names similar to the actual R/3 field names, for example MATNR. This approach will simplify the connection process later, when you will need to make links between variables on the label with variables in the SAP R/3 system. However, the field names may not be just any length. Therefore, the complete R/3 field names might not be directly used.

For better preview of the label you are designing, assign some value to these prompted variables and make sure to enable Data View on the label. Current values will be displayed with elements on the label simplifying the design.

Use the same approach for the bar codes. Assign some value to their variables, such as 12345678 for eight-digit numeric bar code.

Define text fields

NiceLabel allows both internal printer fonts and True Type fonts to be used with the text elements. Please note, variable text elements can only be formatted in resident printer fonts. Fixed text elements can be formatted as resident fonts or True Type fonts. When printing fixed text formatted in True Type font, convert the text to graphic and sent it the printer as an image.

It depends on the printer model if you can print text elements formatted as True Types or not. If you are not sure about your printer, do the following: Select the command **Export to SAP** in NiceLabel software. If there is anything wrong with the label design, you will see an error message. If the printer cannot print True Type fonts from SAP R/3 system, the system will warn you and you can correct the label design.

But in general, all variable fields on the label must use the printer's internal fonts. If you want to use TrueType fonts, you must download them to the memory card on the printer using the application NiceMemMaster. NiceMemMaster is part of the NiceLabel Suite edition. However, downloading fonts with NiceMemMaster is not available for all printer types.

Please refer to the documentation of NiceMemMaster for more information.

Define bitmap graphics

It depends on your printer model whether you can use bitmap graphics on the label or not (for example, to include your company logo as .BMP file). If you are not sure if your printer can print graphics in SAP R/3 mode, use the same test as for text fields: Select the command **Export to SAP** in NiceLabel software. If there is anything wrong with the label design, you will see an error message. If the printer cannot print graphics from SAP R/3 system, the system will warn you and you can correct the label design.

If you need to print graphic elements on printers that do not support direct printing of graphics from SAP, you can download these images to the memory card and recall them from the card. Use NiceMemMaster application to download images to memory cards. However, the feature for image downloads is not available for all printer types.

Please refer to the documentation of NiceMemMaster for more information.

Apply different printer settings

If you need to modify the printer settings, now is the time to do so. You can change standard settings like print speed, darkness and label media but also advanced settings like enabling the cutter or specifying different sensor type.

These options can be set using the command Printer Settings in the File menu. The printer settings will be saved into the label file and recalled every time you open the label with NiceLabel software.

2.2.3 Step 2: Downloading label definition into the ITF file

When you have designed the label, you need to export it to a properly formatted text file that is readable by the SAP R/3 system. This is the ITF file.

To generate the ITF file, select the command **Export to SAP** in the Export submenu of File menu. If there is anything wrong with your label design and it cannot be exported to ITF format, you will see an error message explaining the problem. Correct the problem and try to export the label again.

If there are not any variable elements on the label, but only fixed ones, the label will be exported immediately. The location of the exported ITF file will be displayed on the screen.

If you have variable elements on the label, you will need to link them to appropriate variable from the SAP R/3 system. A dialog box with the list of label variable will open. Select each of the variables listed and provide the name of the SAP variable you want to link to it. Enter the actual R/3 field name here, for example, VBAK-KUNNR.

NOTE!
Do NOT enter the “&” (ampersand) in the name of the variables. Ampersand is only used in SAPscript for indicating the variables. NiceLabel software automatically creates the ampersand during the export.

The result of the export process is a file formatted in the SAPscript ITF format. This file resides on your PC computer in the subdirectory Labels in the My Documents folder structure. The location of this folder can be modified in NiceLabel preferences. The file name is identical to that of your label and the file extension is .ITF.

2.2.4 Step 3: Uploading label file to SAPscript

When you have the ITF file with label description ready, you must upload it to your SAP system and make it available for printing.

Use the standard text editor (Transaction SO10) to upload the print file to SAPscript. However, SO10 is only used here as "temporary storage" for the print file before you insert the print file into a form window.

Create a new standard text with any name. In the text editor load the created print file (.ITF file) with the function "Text->Upload" and select "ASCII" as a format. Store the ITF print file as a standard text.

2.2.5 Step 4: Adjusting SAPscript form

To print the label, you must adjust the SAPscript form by using the SAPscript form maintenance (Transaction SE71).

- The MAIN window must extend over the entire page format (for example, DINA4). There may be no upper and left border between MAIN and the border of the page.
- You should delete all the windows except for the MAIN. If not deleted, then these windows should at least not contain any more data to be output (you may need to deactivate texts).

- The MAIN window should only contain a text element that includes the label file that you just created. To reduce the line breaks to a minimum, the font in the layout set header can be set to COURIER 6 point.
- The name of this text element depends on the application program used by R/3. You can add the label file into this text element by copying the entire text from SO10 into the form window.
- If you need to define additional text elements in the MAIN that are called from the print program, you can leave these essentially unchanged because the printer ignores commands it does not recognize. Because of the easier maintenance, it is recommended that you deactivate unused texts in additional text elements of the MAIN window.
- The first page of the form should refer to itself as the next page because the label file in the MAIN window may be quite large particularly if graphics have been included.

2.2.6 Step 5: Creating a suitable R/3 device type

Generally, a special device type (a variant of the device type ASCIIPRI) must be used for the correct printout of the layout set on a label printer. SAP supplies these device types on the ftp server sapservX and delivers them in the standard SAP system. The device type ASCIIPRI can normally be used for the basic test of procedure with other label printers.

2.2.7 Step 6: Defining output device

As the last step, an output device (printer) must be set up in the R/3 with Transaction SPAD. The special device type or ASCIIPRI is assigned to this output device (printer). The application program must now use this output device to print the labels. The label printer connects itself to the R/3 via one of the standard available connection types in SAP R/3 (local print on the application server/removed print via lpd server/removed print via Windows PC and SAPlpd/frontend print).

Your thermal printer must be connected to one of the available output channels for print output. Possible methods are:

Output channel	Access Method
Local printing on the application server	L, C
Remote printing via lpd host	U
Remote printing via PC and SAPlpd	U, P

It would be easiest to connect the printer to a Windows PC and install NiceDriver Windows printer driver. Then start the output program SAPlpd. You can then define the printer with access method “P” or “U” in the spool administration (Transaction SPAD).

2.2.8 Special notes for thermal printers

For Avery

Select LB_AVE as the device type. If this device type does not yet exist in your release, download the device type ZLB_AVE from the SAP ftp server sapservX and import this type (to do this, see Note 8928).

For SATO

Select SC_SAT as the device type. If this device type does not yet exist in your Release, download the device type ZLB_SAT from the SAP ftp server sapservX and import this (to do this, see Note 8928).

For Zebra

Select LB_ZEB as the device type. If this device type does not yet exist in your release, download the device type ZLB_ZEB from the SAP ftp server sapservX and import this type (to do this, see Note 8928).

3 Frequently Asked Questions

3.1 How can I change label design if I use upload method?

Making modification to the label design is quite simple. Just follow these steps.

1. Open the label design in NiceLabel Pro software on the PC computer.
2. Make the necessary modifications to the label.
3. Save the label.
4. Select the command Export to SAP.
5. Upload the new ITF file to SAP R/3 system.

If there are any errors during the export, you will see an error message explaining the errors. Make the corrections and then perform the export again. When the new label is exported to ITF file, upload it to SAP R/3 system again as explained in the chapter **Upload method explained step by step**.

3.2 Does Upload method support EAN.UCC 128 bar code?

The quick answer is No. But read on to learn about a workaround that can be used to print EAN.UCC 128 bar code anyway.

EAN.UCC 128 bar code in NiceLabel software is printed using one NiceLabel function. This function makes all calculations regarding bar code contents and interpretation. It makes sure the structure of the bar code is correct.

However, in the Upload method NiceLabel software is not printing the labels. You just use the Export to SAP command that prepares the ITF file for you. NiceLabel software does not have control over label printing process and no NiceLabel function is available, including EAN.UCC 128 function.

The workaround in this case is to simulate this function by yourself. For it to work, you must understand the basics of EAN.UCC 128 bar code structure. In fact, this is bar code Code 128 with specially structured contents. If you prepare the contents for your bar code according to standard, the result will be code EAN.UCC 128.

Just put bar code Code 128 on the label and provide the proper contents for it. What you need to do is include a special character Function Code 1 <FNC1> in the beginning of the bar code contents. This will result in identifying bar code Code 128 as bar code EAN.UCC 128.

If you need to decode Application Identifier 420 with value 12345 into the bar code, you will need to prepare the following data stream and feed it to the bar code Code128.

Example:

<FNC1>42012345

Description:

Code128 with the upper contents is the same as EAN.UCC 128 bar code for application identifier 420. For each application identifier there are separated specifications that can be found in EAN.UCC 128 bar code standard.

In the above sample a fixed data is encoded in the bar code. You can also use the variable data that is encoded in the bar code. Your Code 128 bar code on the label must be linked to the appropriate variable on the label. When you make the export to SAP, the

resulting ITF file will link the bar code on the label with one variable from SAP R/3 system.

You have to be aware that SAP R/3 must provide the formatted contents for the bar code element. That means you have to include on the label the data for the Application Identifier, the leading <FNC1> character, and the mark for the Application Identifier (420 in the example above).

4 Appendix

Euro Plus d.o.o. and Niceware International, LLC

Euro Plus d.o.o. and Niceware International, LLC develop, supply and support software for automatic identification and data collection (AIDC) solutions on the desktop PC, the corporate server or the mobile enterprise environment. Our flagship product NiceLabel has become one of the world's major label design and printing software combining easy-to-use interfaces with the integration of advanced thermal transfer technology, ERP systems solutions, RFID technology and data collection tools. NiceLabel cooperates with printer manufacturers, partners and customers from all over the world.

Microsoft has certified all NiceLabel products with the "Designed for Windows 98, ME, NT 4.0, 2000 and XP" logo, indicating reliability and operational compliance in the latest Windows ME, 2000 and XP environments. As a Microsoft Certified Partner, Euro Plus and Niceware present an excellent business opportunity for all those searching for a reliable, high-tech and advanced partner in the automatic identification and data collection industry.

NiceLabel Product Overview

NiceLabel is the most advanced professional labeling software for desktop and enterprise users. NiceLabel offers an easy-to-use interface and meets any label design and printing requirement for efficient label printing solutions to users in retail, logistics, health care, chemical, automotive and other industries.

NiceLabel Suite: Complete software solution for any kind of label design and print requirement. Multiple connectivity options allow users to perform stand-alone printing or integrate label printing into any network environment.

NiceLabel Suite provides you with interactive label printing capabilities such as integrating label printing to existing applications (ActiveX) or non-programming embedding of label printing to existing systems (NiceWatch).

NiceLabel Pro: Full-featured software designed for professional label design and printing, including complete database support and ActiveX integration possibilities. A wide range of features and options makes NiceLabel Pro a perfect and easy-to-use tool for any labeling requirement.

NiceLabel Express: Wizard-based software meeting basic barcode labeling needs. The entry-level software includes many design elements of the Pro edition with the emphasis on simplified user interaction.

NiceLabel Pro Print Only: NiceLabel Pro Print Only offers printing of pre-designed labels but cannot be used to design and alter existing labels. Advanced settings for changing the labels are not available.

NiceLabel Suite Print Only: NiceLabel Suite Print Only offers printing of pre-designed labels, using pre-designed forms and automatic printing from pre-designed trigger actions. NiceLabel Suite Print Only cannot be used to design and alter existing labels, forms and trigger configuration. Advanced settings for changing the labels are not available.

NiceLabel Pocket PC Designer: NiceLabel Pocket PC Designer is a software package for desktop Windows computers that brings the power of label and form design to portable Windows CE terminals. After you have designed the required labels on the desktop PC, synchronize the labels with and print them from the Windows Mobile Device.

Pocket NiceLabel: Pocket NiceLabel is a program package for Windows CE that brings the power of label printing to portable Windows CE computers (Windows Mobile Device). Pocket NiceLabel is part of the editions NiceLabel Suite or NiceLabel Pocket PC Designer.

NiceLabel SDK: NiceLabel SDK is an ActiveX integrator edition of NiceLabel software developed for software publishers who need label printing capabilities in their software. NiceLabel SDK can be embedded in existing information systems or existing applications to provide support for label printing. NiceLabel SDK provides all label printing functionality of the NiceLabel software.

Contacts

Head Office

Euro Plus d.o.o.
Ulica Lojzeta Hrovata 4c
SI-4000 Kranj, Slovenia
Tel: +386 4 280 50 00
Fax: +386 4 233 11 48
www.europlus.si
info@europlus.si
sales@europlus.si
support@europlus.si

North American Office

Niceware International, LLC
10437 Innovation Drive, Ste 225
Milwaukee, WI 53226
Tel: 414-476-6423
Fax: 414-476-7955
www.nicewareintl.com
info@nicewareintl.com
sales@nicewareintl.com
support@nicewareintl.com

Australia, New Zealand, New Guinea Office

Univex Electronics Pty Ltd.
P.O. Box 150, Glen Waverley
Melbourne, Victoria 3150 Australia
Tel: +61 3 9844 4408

support@nicelabel.com.au
www.nicelabel.com.au

French Office

Cobarsoft SARL
Le rempart
32320 Montesquiou
France
Tel: +33 (0) 562 709 201
Fax: +33 (0) 562 708 004
support@nicelabel.fr
www.nicelabel.fr