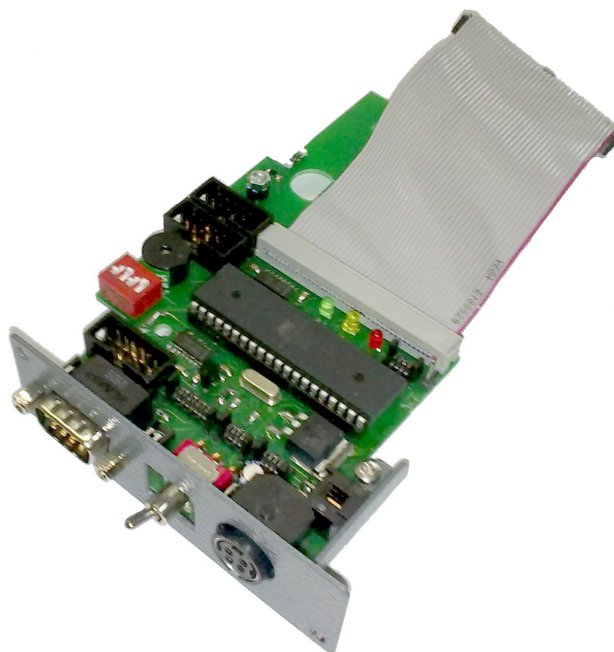ANA-U GmbH
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ANA-U CompatibilityBox
User Manual

Version: 1.2
Date: 01.February 2011
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Contents

Versionhistory

Version 1.0 – 27.September 2010:

- Document created

Version 1.1 – 10.December 2010:

- Dil-Settings added

Version 1.2 – 01.February 2011:

- Connectors added

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General informationen

The ANA-U CompatibilityBox allows you to replace the CX-one printer by the SMART-printer.

The existing system as represented below,
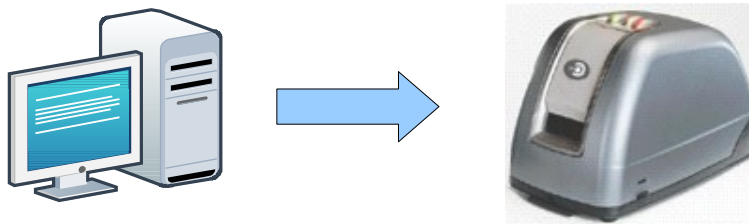
can be replaced by the following system, without any changes to the PC-Software.
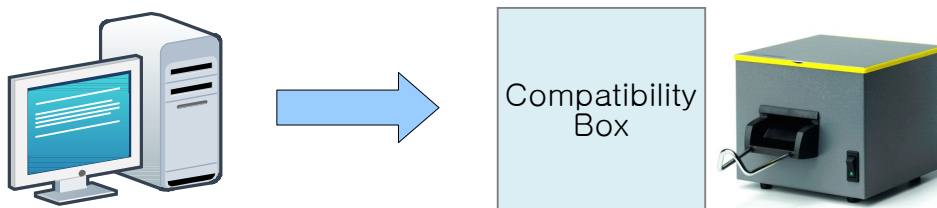
The ANA-U CompatibilityBox has two serial interfaces. One interface (host) receives the commands for the CX-one printer, and the second (printer) transmits the converted commands to the SMART-printer.

The whole command-set of the CX-one printer is not implemented at this time. This document will give an overview of the already implemented commands.

Especially no chip card commands as the transparent mode are implemented. We recommend to use PC/SC to do so.

The ANA-U CompatibilityBox is integrated to the SMART OEM printer chassis.
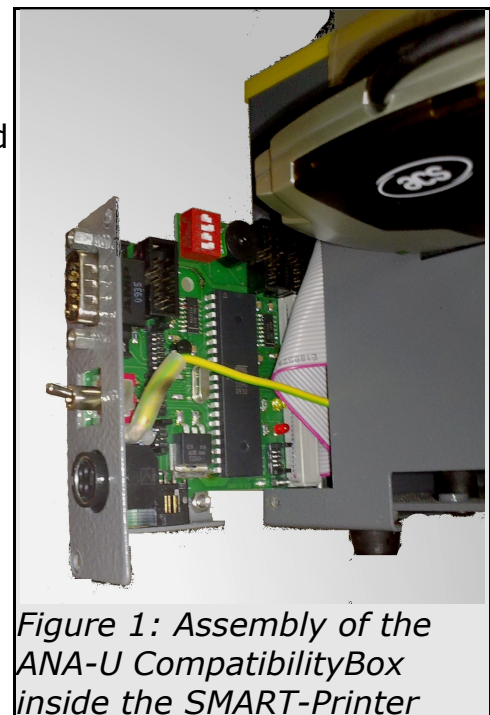
Figure 1: Assembly of the ANA-U CompatibilityBox inside the SMART-Printer

DIL-Settings

The DIL-Settings are used to conigure the function of the CompatibilityBox.

The following list will provide an overview of the implemented settings.
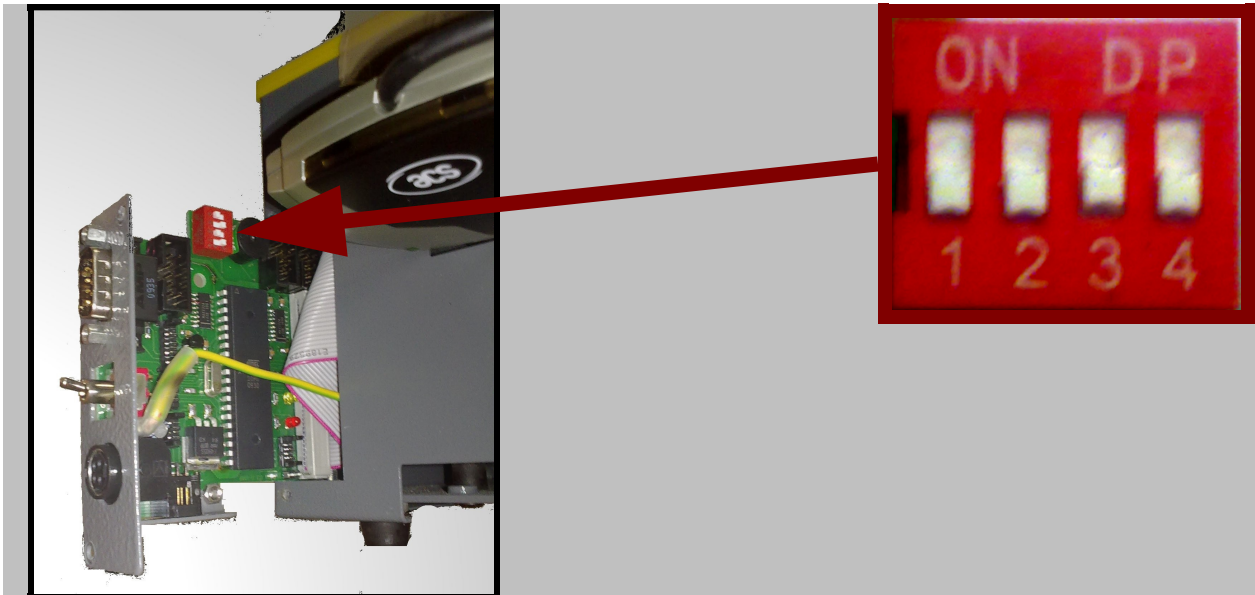
DIL1	DIL2	DIL3	DIL4	Function
OFF	OFF	OFF	ON.........	CXone Mode, 57600 Baud
ON	OFF	OFF	ON.........	Not used
OFF	ON	OFF	ON.........	Version CP2 with Contactchip, 9600 Baud
ON	ON	OFF	ON.........	Version Smartmode with CXone LED emulation, 57600 Baud
OFF	OFF	ON	ON.........	20mm partial erase, 57600 Baud
ON	OFF	ON	ON.........	CP2 Emulation, 9600 Baud
OFF	ON	ON	ON.........	CXone with contact chipreader (Card moves to reader-position), 20mm partial erase, 57600 Baud
ON	ON	ON	ON.........	CXone (hopper) with chipreader (Card moves to reader-position), full erase area, 57600 Baud

Plug connections
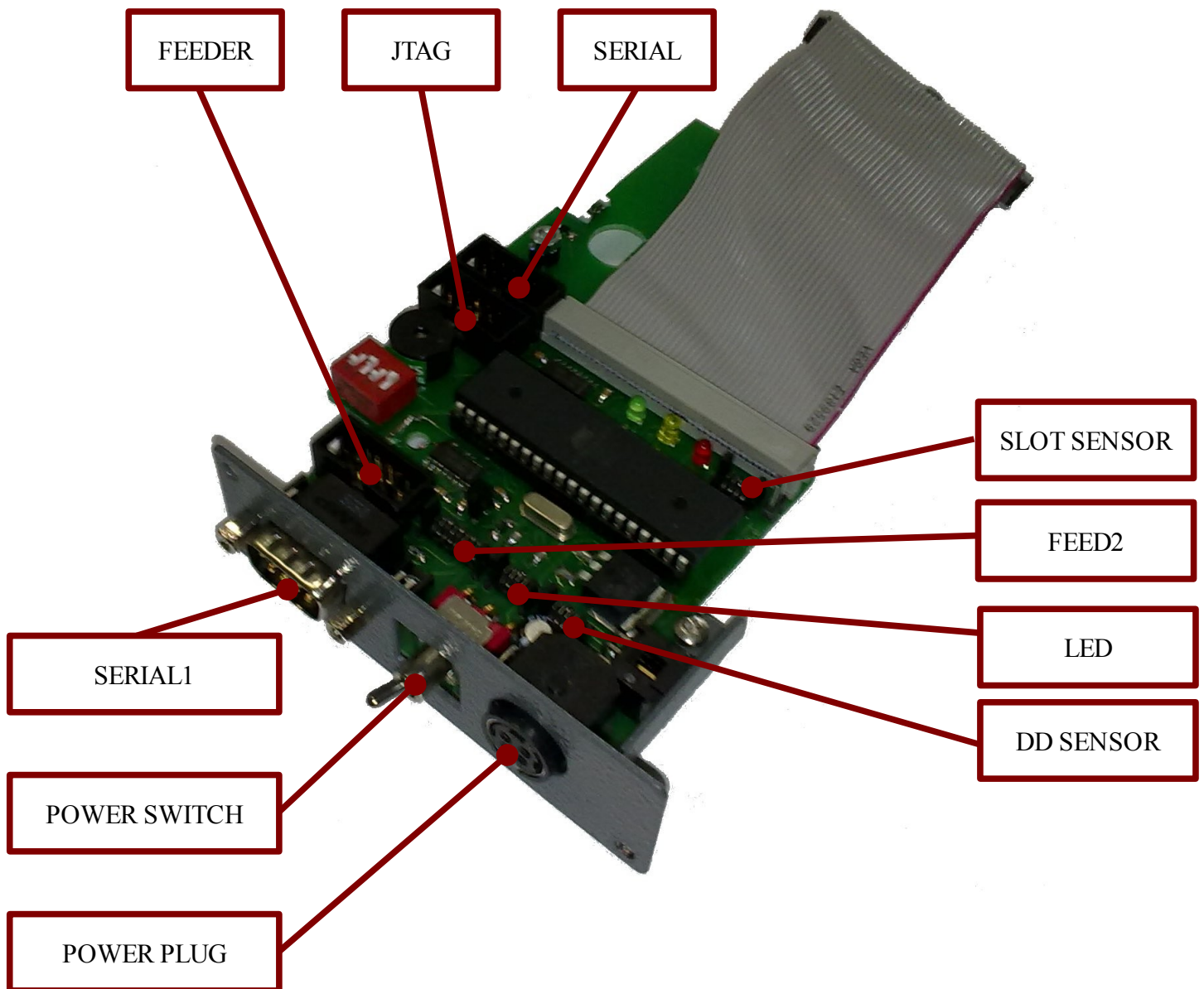
SERIAL1...............................Serial Host Interface

FEEDER...............................Serial Feeder Interface

JTAG....................................Debugconnector

SLOT SENSOR.......................Interface to the slot sensor

FEED2..................................Interface to an edge-triggered feeder

LED.....................................Interface to LED-Module

DD SENSOR..........................Interface to the direction detection sensor

SERIAL2...............................Serial Printer Interface

Pin assignment

FEEDER

PIN Nr.	Function
1	+24V
2	+24V
3	+24V
4	GND
5	GND
6	GND
7	CTS
8	RTS
9	RxD
10	TxD

SLOT SENSOR

PIN Nr.	Function
1	GND
2	SLOT SENSOR
3	VCC
4	N.U.

FEED2

PIN Nr.	Function
1	N.U.
2	FEED2
3	N.U.
4	N.U.
5	N.U.
6	+24V
7	GND
8	IN1

LED

PIN Nr.	Function
1	GREEN
2	YELLOW
3	RED
4	VCC

DD SENSOR

PIN Nr.	Function
1	GND
2	DD SENSOR
3	VCC
4	N.U.

SERIAL2

PIN Nr.	Function
1	N.U.
2	N.U.
3	RxD
4	RTS
5	TxD
6	CTS
7	N.U.
8	N.U.
9	VCC
10	GND

Command description

Used conventions for command description

To describe functions and commands the following conventions are used in this manual:

> *[xx]*.............Placeholder for a hexadecimal character
>
> [xx,xx]........Placeholder for two hexadecimal character
>
> {DATA}........Placeholder for a Datablock
>
> [c]..............Placeholder for an ASCII-character
>
> [c,c]............Placeholder for two ASCII-character
>
> < >.............Command character
>
>> <ESC>...Character Escape (Hexadecimal: 0x1b)
>>
>> <CR>....Carriage return (Hexadecimal: 0x0d)
>
> _................Character Space (Hexadecimal: 0x20)

ANA_U

Command overview:

The following commandlist will provide an overview of the implemented commands of the CX-one printer in the ANA-U CompatibilityBox.

The complete detailed command-description can be found in the "CX-one Programmers Manual V1.8".

General commands:

Command	Params	Description
<ESC>1		Enable printer
<ESC>2		Disable printer
<ESC>3		Return card
<ESC>r	*[c]*	Reset printer
<ESC>$R		Reboot
<ESC>$Ol	*[c,c,c]*	Eraseenergy offset
<ESC>$Op	*[c,c,c]*	Printenergy offset
<ESC>$Oh	*[c,c,c]*	Printhead contact pressure offset
<ESC>Ml	*0*	Read printenergy offset
<ESC>P		Paperticketmode

Status commands:

Command	Params	Description
<SUB>		Brief status
<ESC>A		Printhead status
<ESC>a		Firmware code
<ESC>?		Printer status

Font and character commands:

Command	Params	Description
<ESC>C		Select font 1 (small)
<ESC>D		Select font 2 (medium)
<ESC>E		Select font 3 (large)
<ESC>b		Print double width characters
<ESC>w		Print double height characters

Print and erase commands:

Command	Params	Description
<FF>		Start printing
<ESC>d	[c,c,c,c,c,c]	Limit print area
<ESC>e	[c,c,c,c,c,c]	Limit erase area
<ESC>G	[xx]{DATA}	Send graphic data
<ESC>N		Reset 90° rotation
<ESC>O		Rotate print image 90°
<ESC>T		Rotate print image 180°
<ESC>U		Reset 180° rotation
<ESC>X	[c]	Windowsmode
<ESC>x	[c,c]	Set X-Position
<ESC>y	[c,c,c]	Set Y-Position
<ESC>$a	[c,c,c,c,c,c, c,c,c,c,c]	Set partial erase

Card transport commands:

Command	Params	Description
<ESC>c		Get card from feeder
<ESC>J	[xx]	Micro line feed
<ESC>j	[xx,xx,xx]	Microstep forward
<ESC>k	[xx,xx,xx]	Microstep backward

Barcode commands:

Command	Params	Description
<ESC>z	[c,c] {DATA} <CR>	Print barcode

Special commands:

Command	Params	Description
<ESC>#		Read direction detection