HS 6508
2D-Code Handscanner

Quick Start Guide

Version 1.1

Preamble

Congratulations on your purchase of one of the most powerful hand-held scanner for decoding direct marked 2D-Codes. This document is intended for information about the handling and use of the HS 6508 from Leuze electronic.

The most important information that is needed for operation is explained. Furthermore, even explains the main types of connections and presented the programming using the codes.

You can find more in the document Users Guide, which you can find on our home page www.leuze.com.

Content

Delivery HS 6508 xx

- Handheldscanner HS 6508 DPM
- Leaflet for Quick Start

Parts

The model designation is on the Top panel

Connection for cable
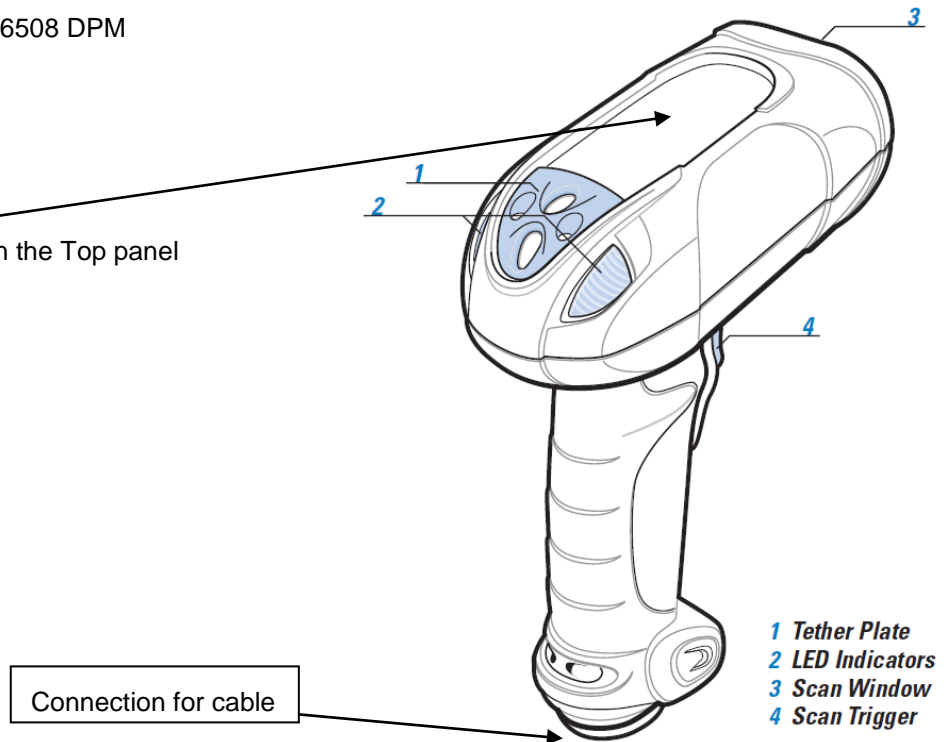
1 Tether Plate
2 LED Indicators
3 Scan Window
4 Scan Trigger

References to standards are located on the bottom side

LASER LIGHT- DO NOT STARE INTO BEAM .
CLASS 2 LASER PRODUCT. LASERLICHT - NICHT IN DEN
STRAHL BLICKEN. LASER KLASSE 2.
LUMIÈRE LASER - NE PAS REGARDER DANS LE FAISCEAU.
APPAREIL À LASER DE CLASSE 2   630-680nm, 1mW

激光辐射 勿直视光束 2 类激光产品

COMPLIES WITH 21 CFR1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS
PURSUANT TO LASER NOTICE No. 50, DATED JUNE 24, 2007, AND
EN60825-1:2007 AND IEC 60825-1(ED.2).
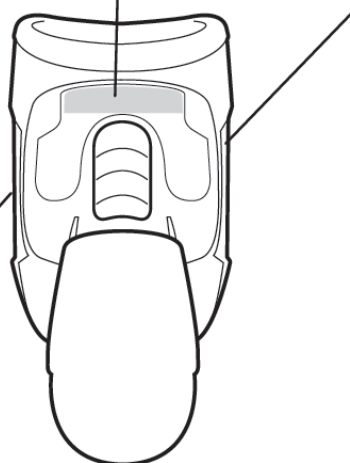
CAUTION- CLASS 2 LASER LIGHT WHEN OPEN. DO NOT
STARE INTO THE BEAM. ATTENTION- LUMIÉRE LASER
EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.
VORSICHT- LASERLICHT KLASSE 2, WENN ABDECKUNG GEÖFFNET.
NICHT IN DEN STRAHL BLICKEN.
注 意：打开时及联锁失效时有激光辐射 勿直视光束

Installation

Connect the hand-held scanner

Switching off the computer

Information on switching off and shut down the connected computer - what ever before to connect peripheral devices such as a scanner is - please refer to the instruction manual of your computer.

Connect the cable from HS 6508

The following illustrations show the steps required to install the cable on the scanner are shown, which are described below.

To connect the interface cable to the scanner, proceed as follows:

Loosen the strain relief on the scanner by removing the 2 Phillips screws.

Fold the 2 halves of the cable clamp to the side. Plug the RJ 41 connector into the socket on the underside of the hand scanner, until the cable snapped.

Fold the 2 halves of the strain relief back.

 Attach the strain relief on the scanner, by tightening the 2 Phillips screws.

Further steps:

Connect the interface cable to the appropriate socket on the computer.

You may need a power supply to the power supply, or you can use a cable in which the tension of the computer system is used. Use the pin assignments (see page 7), you can select the appropriate cable for your application

Connect the AC adapter to the AC outlet (not required for power supply from the computer).

Check the operational readiness of the scanner by pointing the scanning surface against a flat surface and pulling the trigger. A green target line and the red light should now be visible. Now scan a sample label. The scanner confirmed by an acoustic signal, which is decoded, where appropriate, the data are transmitted to the computer.
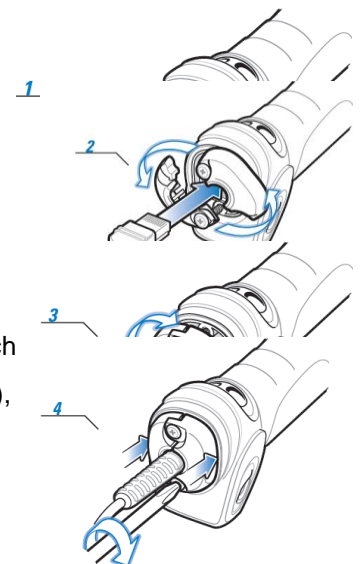
How to scan?

Here are some notes on how to get the best scan performance (see Fig.)

The scanner must be kept at a slight angle to the bar code. (Hold the scanner perpendicular to the barcode.)

Cross the red line should be addressed as an aiming aid centered on the code. So that the camera is aligned with the center of the code. (The scanner cannot recognize the label correctly if it is not completely covered by the camera and recorded).

Cross the red line is smaller and narrower when the scanner is closer to the code. Smaller codes should be read with a smaller reading distance, with larger codes, the distance chosen such that the camera can be fully
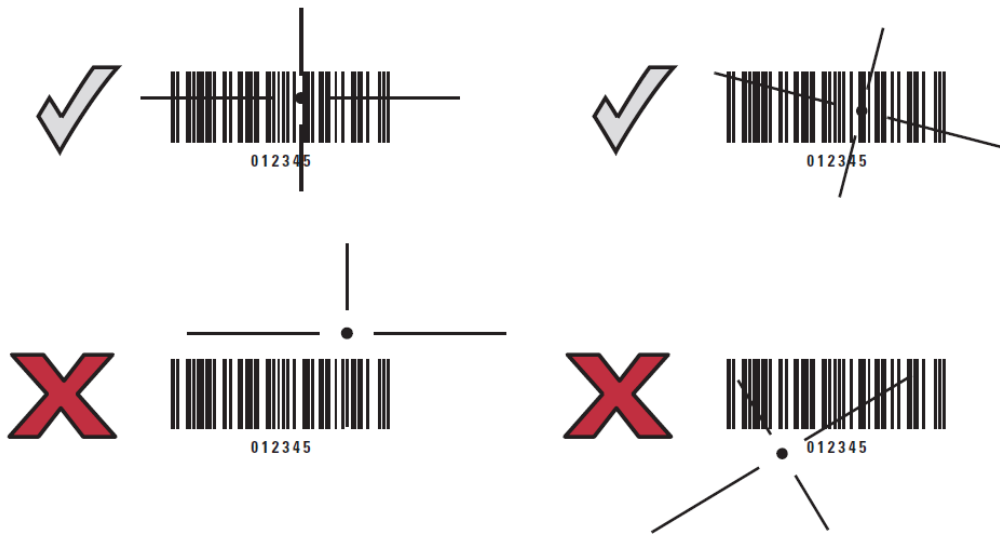
grasp it.

| 1D bar code symbol | 2D bar code symbol | 2D dot peen DPM symbol |

Aiming Pattern

Testing the Scanner

The adjacent bar code (code 39) is for testing the scanner,

The module size is 0.5 mm (20 mil)

Test

Technical Data
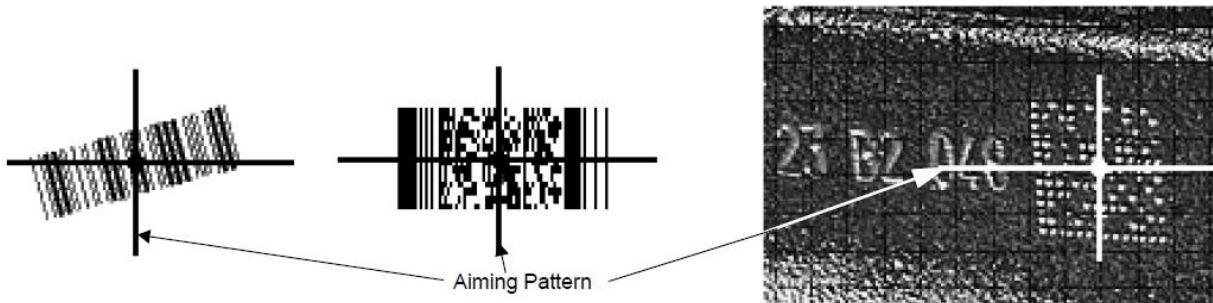
For the technical Data please refer the data sheet of the HS 6508.

Pinning of the cables

KB 232-1 HS65x8   Part-No. 50120436

Coiled cable with a length of 2.8 meters (Stretched).

Pinning 9 pin D-sub connector (female) for cable CBA-R36-C09ZAR

PIN-Number	Signal	Description
1	nc	Not connected
2	TX	Transmit Data
3	RX	Recieve Data
4	nc	Not connected
5	GND	Signal Ground
6	DTR	Data set ready (Output with +5 Volt)
7	CTS	Clear to send
8	RTS	Request to send
9	VCC IN	4,75 – 5,25 Volt DC

KB 232-2 HS65x8   Part-No. 50120434

Coiled cable with a length of 2.8 meters (Stretched).

Pinning 9 pin D-sub connector (female) for cable CBA-R02-C09PAR

PIN-Number	Signal	Description
1	nc	Not connected
2	TX	Transmit Data
3	RX	Recieve Data
4	nc	Not connected
5	GND	Signal Ground
6	DTR	Data set ready (Output with +5 Volt)
7	CTS	Clear to send
8	RTS	Request to send
9	nc	Not connected
PIN Power supply	Signal	Description
Inner	VCC IN	5 Volt DC
Outer	GND	Ground

The right power supply for the HS 6508 (100-230V/50-60Hz) is the article no. 50120428.

KB PS2-1 HS65x8   Part-No. 50120438

Coiled cable with a length of 2.8 meters (Stretched).

Pinning PS2 female and male connector of cable CBA-K02-C09PAR

PIN PS2 male	PIN PS2 female	Signal	Description
1	-	PC Data	Data PC
2	2	NC	Not connected
3	3	GND	Signal Ground
4	4	VCC IN	5 Volt DC
5	-	PC Clock	Clock PC
6	6	NC	Not connected
-	1	KB Data	Data Keyboard
-	2	KB Clock	Clock Keyboard

KB USB-1 HS 65x8   Part-No. 50120432

Coiled cable with a length of 2.8 meters (Stretched).

Pinning USB Type A connector of cable CBA-U12-C09ZAR

USB-Type A-Connector	Signal	Description
1	VCC IN	5 Volt DC
2	Data -	Data -
3	Data -	Data +
4	GND	Signal Ground

Reading distances

Codetype	Modul size	Modul size	from (mm)	to (mm)
Code 39	3 mil	0,076 mm	27,9	40,6
Code 39	5 mil	0,127 mm	0	88,9
Code 39	7,5 mil	0,19 mm	0	137,2
Code 39	20 mil	0,508 mm	27,9	233,7
UPC / EAN 13	100 %	0,33 mm	20,3	157,5
PDF 417	6,67 mil	0,169 mm	0	94,0
PDF 417	10 mil	0,254 mm	0	114,3
PDF 417	15 mil	0,381 mm	0	142,2
Data Matrix Code	4 mil	0,102 mm	25,4	53,3
Data Matrix Code	5 mil	0,127 mm	10,2	68,6
Data Matrix Code	7,5 mil	0,19 mm	0	88,9
Data Matrix Code	10 mil	0,254 mm	0	111,8
QR Code	4 mil	0,102 mm	27,9	35,6
QR Code	5 mil	0,127 mm	12,7	55,9
QR Code	7,5 mil	0,19 mm	0	83,8
QR Code	10 mil	0,254 mm	0	101,6

Note:
Note that the real reading distances are still influenced by factors such as labeling, quality printing, scanning angle, printing contrast etc.
 and therefore may differ from those given here reading distances.

Reset the HS 6508 to factory settings

To reset all parameters to the factory setting you have to scan the code below..

Attention all settings will lose!

STANDARDEINSTELLUNGEN
Factory Default

Parameterization

Basically, the hand-held scanner is configured via barcodes. This, first select the bar code is in the manual, and then press the trigger button to read the code. The configuration is then immediately active.

A second option is to configure the hand scanner with USB and RS232 interface using the PC program ESP. This program lets you download and install from our website www.leuze.de. With the program settings can be made and transmitted to the hand-held scanner. The configuration can also be stored, so that later it can be reused.
For more information see also in the User's Guide to HS 6508.

In the following are some of the most important configurations.

HS 6508 on the PC serial port

With KB 232-2 HS65x8   Part-No. 50120434

Required Parts:

1x 50120442 HS 6508 DPM

1x 50120434 KB 232-2 HS65x8

1x 50120428 NT HS6508

Coiled cable CBA-R02-C09PAR has a length of 2.8 meters (Stretched).

The pin assignment of the 9 pin D-sub connector (female) can be found on page 7

Please connect the HS 6508 in
 accordance with the illustration.

RS232-Interface

Connection cable

Connection for power supply
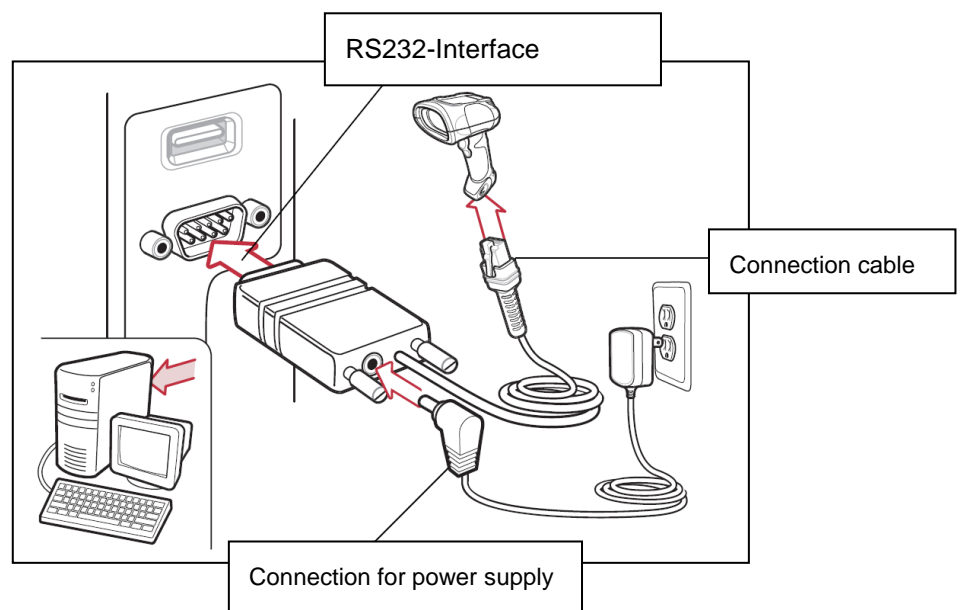
STANDARD RS-232

RS 232 with 9600 Baud, 8 Data bit, 1 Stopbit, No Parity, no Prefix and Postfix

Parameterization for Leuze-Standard-Protocol

Leuze Standard-Protocol:
RS 232 with 9600 Baud, 8 Data bit, 1 Stopbit, No Parity, Prefix STX and
Postfixes CR/LF; Code 2/5 Interleaved with 10 digits.
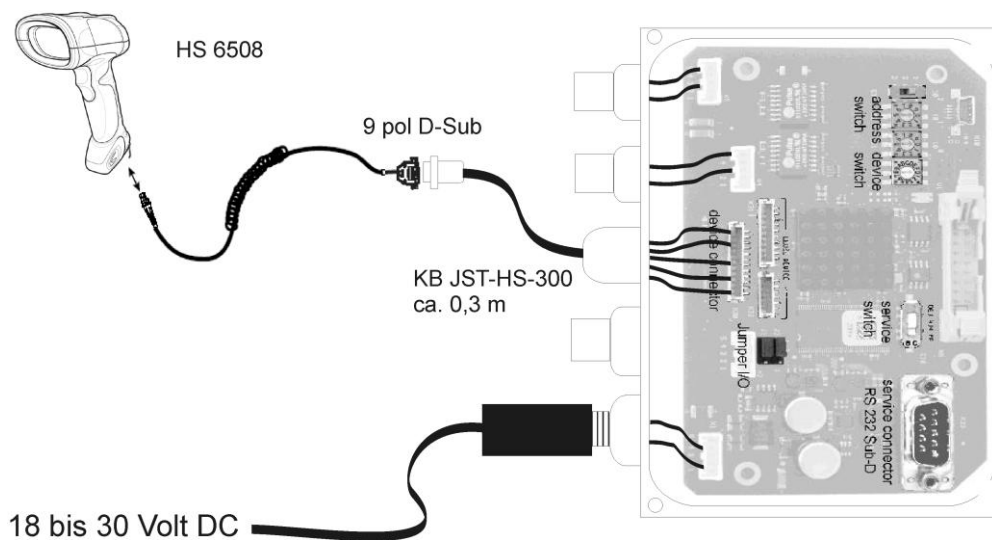
HS 6508 at MA 200*i*

RS 232-Data Transmission with 9600 Baud, 8 Data bit, 1 Stopbit, No Parity, Postfix CR/LF.

Required parts:

1x	50120442 HS 6508 DPM	
1x	50120436 KB 232-2 HS65x8	
1x	50113397 KB JST-HS-300	
1x	50112893 MA 204i	Profibus Gateway
or	50112892 MA 208i	Ethernet Gateway
or	50112891 MA 248i	Profinet Gateway

Initial Operation

- Open the MA 200i
- Install the KB JST-HS 300 with the high strength cable gland through the threaded hole and connect the 12-pin JST connector plug.
- Connect the cable to the connector at the handheld scanner
- Connect the 9-pin D-sub connector on the KB JST-HS-300
- Set on the address selection switch the address
- Plug in the fieldbus connection cables
- Connect the Power to the MA 200i
- Close the MA 200i

Please refer for details on connecting the MA 200i from the technical description MA 200i.

Parameterization

HS 6508 at MA 21

RS 232-Data Transmission with 9600 Baud, 7 Data bit, 1 Stopbit, Parity Even, Postfix CR/LF.

Required parts:

1x   50120442 HS 6508 DPM

1x   50120436 KB 232-2 HS65x8

1x   50035421 KB 021 Z

1x   50030481 MA 21 100

Connection KB021 Z

Color:	Signal	Terminal in MA 21:
Brown	(RXD)	26
White	(TXD)	27
Blue	(GND)	28
Red	(VCC)	30
Black	(GND)	31
bare (shield)	(PE)	21

Please connect the HS 6508 according to the figure below.

Parameterization

For connection to MA21 in default

HS 6508 at PS2-Interface

In this chapter, the operation of the HS 6508 in keyboard wedge mode is described. In this mode, a PC keyboard is emulated. The downloaded data is written directly to the currently active program. Thus, the data can be processed in all standard programs.

Required parts:

1x   50120442 HS 6508 DPM

1x   50120438 KB PS2-1 HS 65x8

Please connect the HS 6508 according to the figure below.

Initial Operation

Please do the following:

1. Power down the PC

2. Disconnect the keyboard from the PC

3. Connect the Handheldscanner HS 6508 between the keyboard and the PC with the PS 2 Wedge cable

4. The Scanner send a Beep as acknowledge.

5. Open a Program on the PC (Notepad, Editor, or another Word processing program ..)

6. Scan the code below

7. Scan for testing a Barcode or 2D-Code, e.g. Test Symbol
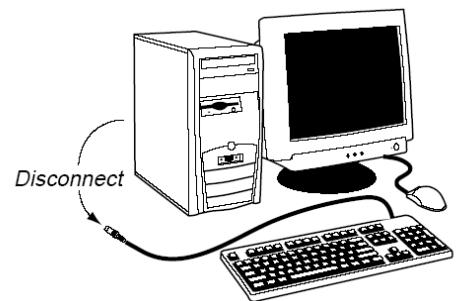
Parameterization

German PS2-Tastatur with CR LF,
Code 2/5 Interleaved with 10 digits.
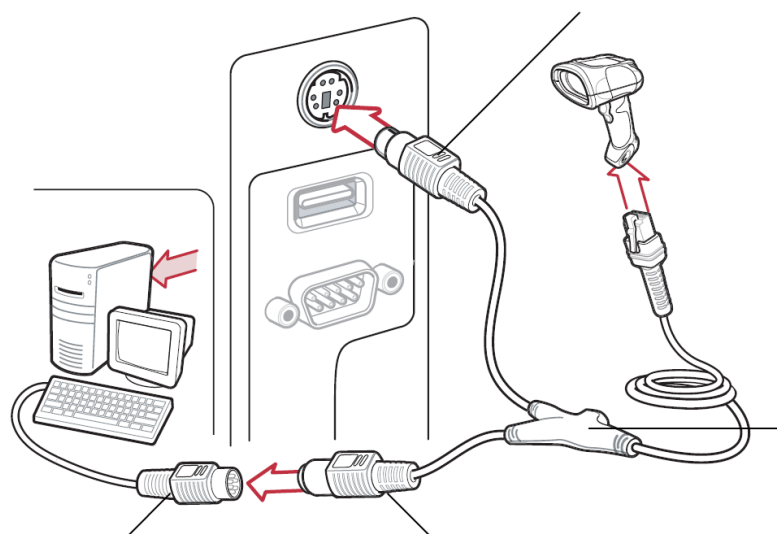
HS 6508 at USB-Interface (Keyboard-Emulation)

In this chapter, the operation of the HS 6508 in USB keyboard wedge mode is described. In this mode, a PC keyboard is emulated. The downloaded data is written directly to the currently active program. Thus, the data can be processed in all standard programs.

Required parts:

1x   50120442 HS 6508 DPM

1x   50120432 KB USB-1 HS 65x8

Please connect the HS 6508 according to the figure below.

Initial Operation

Please do the following:

1. Connect the Handheldscanner HS 6508 to a free USB-Port.
2. The Scanner send a Beep as acknowledge.
3. Open a Program on the PC (Notepad, Editor, or another Word processing program ..)
4. Scan the code below
5. Scan for testing a Barcode or 2D-Code, e.g. Test Symbol
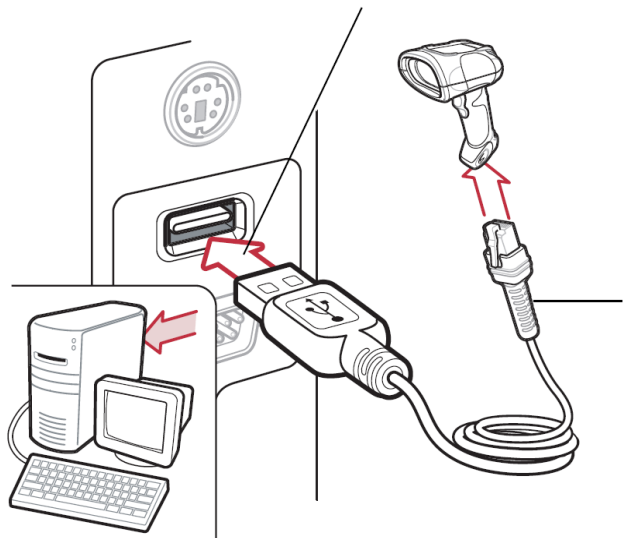
Parameterization

German USB-Keyboard Emulation with CR LF, Code 2/5 Interleaved with 10 digits.

HS 6508 at USB-Interface (COM-Port-Emulation)

In this chapter, the operation of the HS 6508 is described as a serial interface to USB. In this mode, a COM port is emulated. The scanned data is sent to a new COM port. The driver allows you to emulate this COM interface, you can download on our website www.leuze.de. Thus, the data in the data programs via COM interfaces expected to be further processed.

Required parts:

1x   50120442 HS 6508 DPM

1x   50120432 KB USB-1 HS 65x8

Please connect the HS 6508 according to the figure below.

Initial Operation

Please do the following:

1. Connect the Handheldscanner HS 6508 to a free USB-Port.
2. The Scanner send a Beep as acknowledge.
3. Scan the code below
4. Install usbcdc.inf the USB serial driver when prompted by Windows.
5. Open a Terminalprogram or your Program for the serial interface on the PC, and choose the new COM-Port
6. Scan for testing a Barcode or 2D-Code, e.g. Test Symbol

Parameterization

COM-Port-Emulation at the next free COM-Port with CR/LF as Postfix.
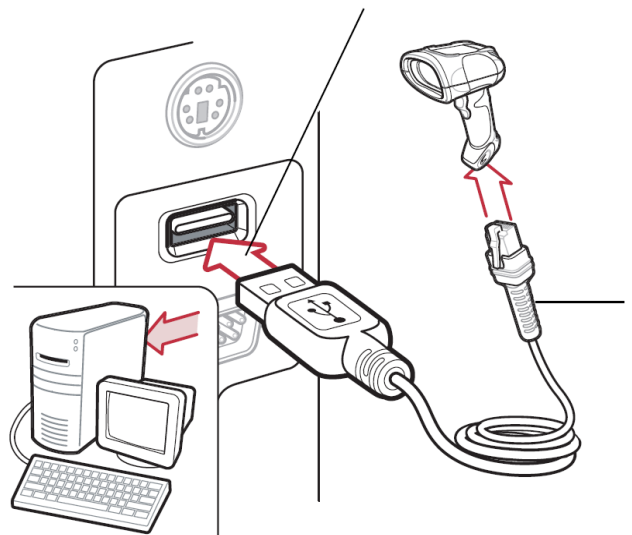
Code 2/5 Interleaved

First Configure the HS 65x8 DPM for the interface.

- RS 232 (PC or MA…)
- USB Keyboard-Emulation
- PS2 Keyboard-Emulation

It will read the Code 2/5 interleaved with the number of digit 10. Another number of digit can also be read, please read for this the following Configurationbarcode.

I 2 of 5 - Any Length

Please note that decoding security can be increased in 2/5 interleaved codes by a check digit. This check can be activated with the following bar code.

**USS Check Digit
(01h)**

The check digit validation will be switched off again, please scan code.

***Disable
(00h)**

This check digit should be also transferred is to scan the following bar code.

**Transmit I 2 of 5 Check Digit (Enable)
(01h)**

The check digit is not transferred, please scan code.

***Do Not Transmit I 2 of 5 Check Digit (Disable)
(00h)**

Data transmission with Suffix Enter

Parameterize the HS 65x8 DPM for data transmission before.

- RS 232
- USB Keyboard-Emulation
- PS2 Keyboard-Emulation

If the data can be transmitted, but an enter character (or CR / LF or newline) is missing, you can with the following codes it can be added. Scan all codes in the printed order please.

\<DATA\> \<SUFFIX 1\>
(01h)
1.)

Scan Suffix 1
(06h)
2.)

7
3.)

0
4.)

1
5.)

3
6.)

More Information to Parameterization you will find in:

User's Guide HS 6508

Parameter for Codetypes activation, number of digit ....

Troubleshooting

For problem detection and troubleshooting, check your scanner as follows:

1. When the scanner is powered through the interface cable. To do this, scanners and computer be connected before using the scanner with each other, must come up with the computer with a power supply of 5 volts DC for the scanner. Check the manual for your computer, that the power supply to hook up your scanner is sufficient.

2. Make sure that the interface cable is securely attached to the computer. In the manual of the computer for information on proper port on the scanner. Support is also available from your technical staff..

3. If your system operates with an external power supply, make sure that the power adapter is securely connected to the scanner and power supply.

4. Verify that the interface cable is securely attached to the handle of the scanner. To do this, loosen the screws (at HS 6508) to the end cap of the handle with an appropriate tool. Remove the wire tie and pull out the cable. Run the cable back on again and make sure that it is properly seated in the cradle. Insert the wire tie back and fix everything with screws.

5. If the scanner does not, despite all the measures taken to be ready, replace the power supply with another recommended power supply device from which you know for sure that it is fully functional.

6. Make sure that the interface of your scanner is compatible with the computer. See the manual for your computer. Also check that the scanner is configured for the desired application. This information is described in the User's Guide of the HS 6508.

7. Verify that the bar code labels that you want to scan are of satisfactory quality and that the used bar code symbology is recognized by your scanner. Sample label for review, contact your dealer, you need accurate information to the label details. (Wrinkled, torn or soiled) Damaged bar code labels can cause the scanner only poorly or not the label recognizes. If you suspect the problem is the quality of the label, check the reading readiness in terms of quality with a good label.

8. If the problems are not now be resolved, please contact Leuze electronic.

Overview Types and Accessories

HS Reihe / series HS			
Part-No.	Bezeichnung/Discription	Schnittstelle/Interface	Bild/Picture
50120442 ▓	DPM-Handleser für Barcode u. 2D- Codes DPM-Handscanner for Barcode and 2D-Code HS 6508 DPM	PS2 / USB / RS232	

	Zubehör / accessories für / for series HS 65x8			6508
Part-No.	Bezeichnung/Discription	P/N-Nr.	Bild/Picture	
50120432 ▓	KB USB-1 HS 65x8 USB-Kabel (gerade 2,8m) USB-cable (straight 2,8 m)	CBA-U12-C09ZAR		X
50120434 ▓	KB RS 232-2 HS65x8 RS232-Kabel/ext (spiral 2,8m) / RS232-cable (colied 2,8m)	CBA-R02-C09PAR		-
50120436 ▓	KB RS 232-1 HS65x8 RS232-Kabel/PIN9 (spiral 2,8m) / RS232-cable/PIN9 (colied 2,8m)	CBA-R36-C09ZAR		X
50120438 ▓	KB PS2-1 HS65x8 PS2-Kabel (spiral 2,8m) / PS2-cable for (colied 2,8 m)	CBA-K02-C09PAR		X
50120428 ▓	Netzteil für HS 6508 Power supply for HS 6508 für/for RS 232 Kabel (5 Volt DC)	PWRS-14000-256R		X
50120444 ▓	BT Wallholder HS65x8 Wandhalter Kunststoff Wall holder Plastic	11-66553-06R		X

Connection to Leuze multinet Plus

MA 21 100	Interface converter / Multinet Slave	Part-No. 500 30 481
KB 021 Z	Connection cable MA 21 to the RS232-Connector	Part-No. 500 35 421

Connection to Fieldbuses with MA 200i

MA 204i	**Profibus-**Gateway	Part-No. 501 12 893
or		
MA 208i	**Ethernet-**Gateway	Part-No. 501 12 892
or		
MA 248i	**Profinet**-Gateway	Part-No. 501 12 891
KB JST-HS-300	Connection cable MA 21 to Rs232-Connector	Part-No. 500 35 421