



Device Description

**NXHX 500-RE**

**netX 500 Software Development Board**

Language: English

# 1 Block Diagram

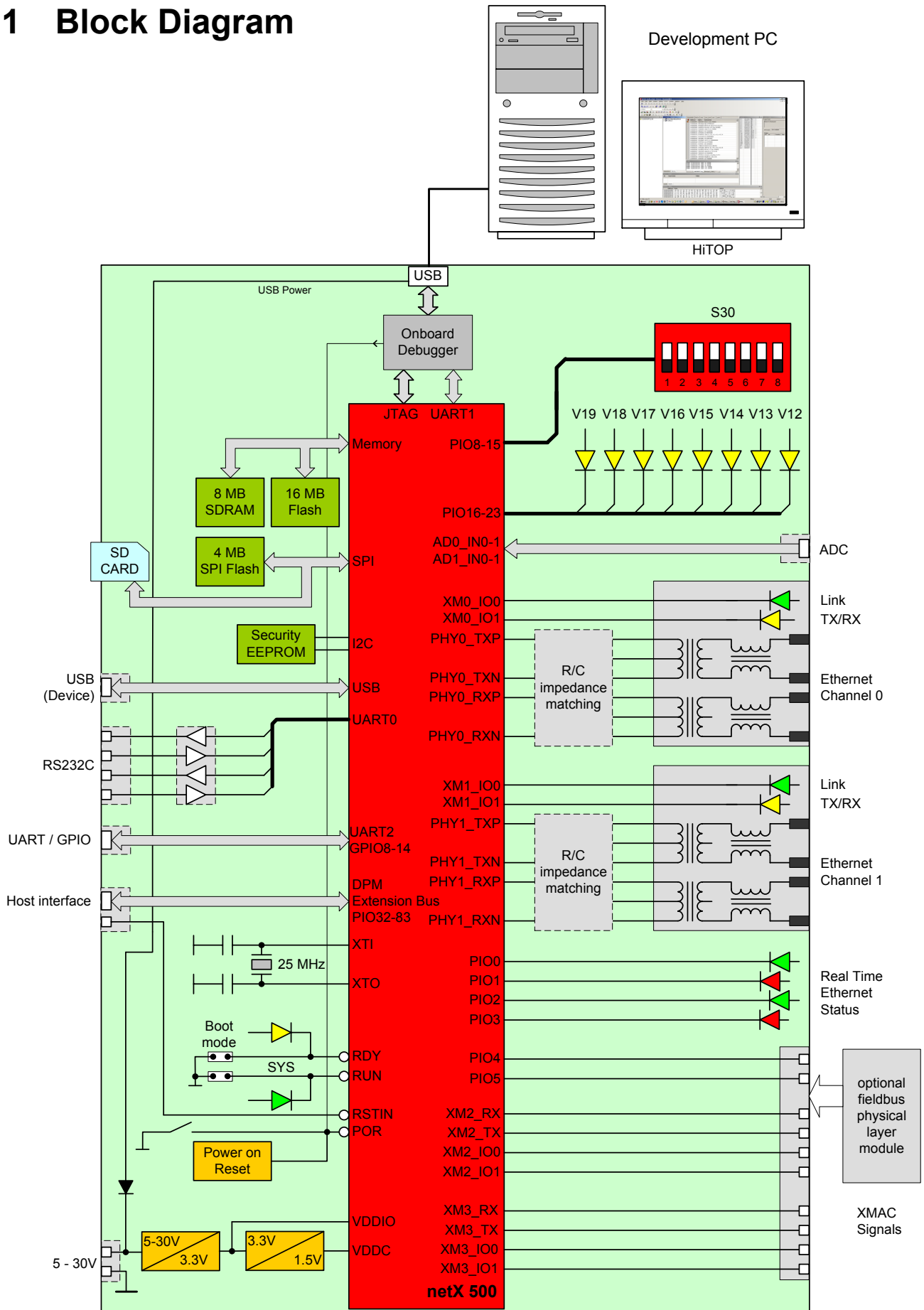


Figure 1: Block diagram NXHX500-RE, Rev.2

## 2 Overview

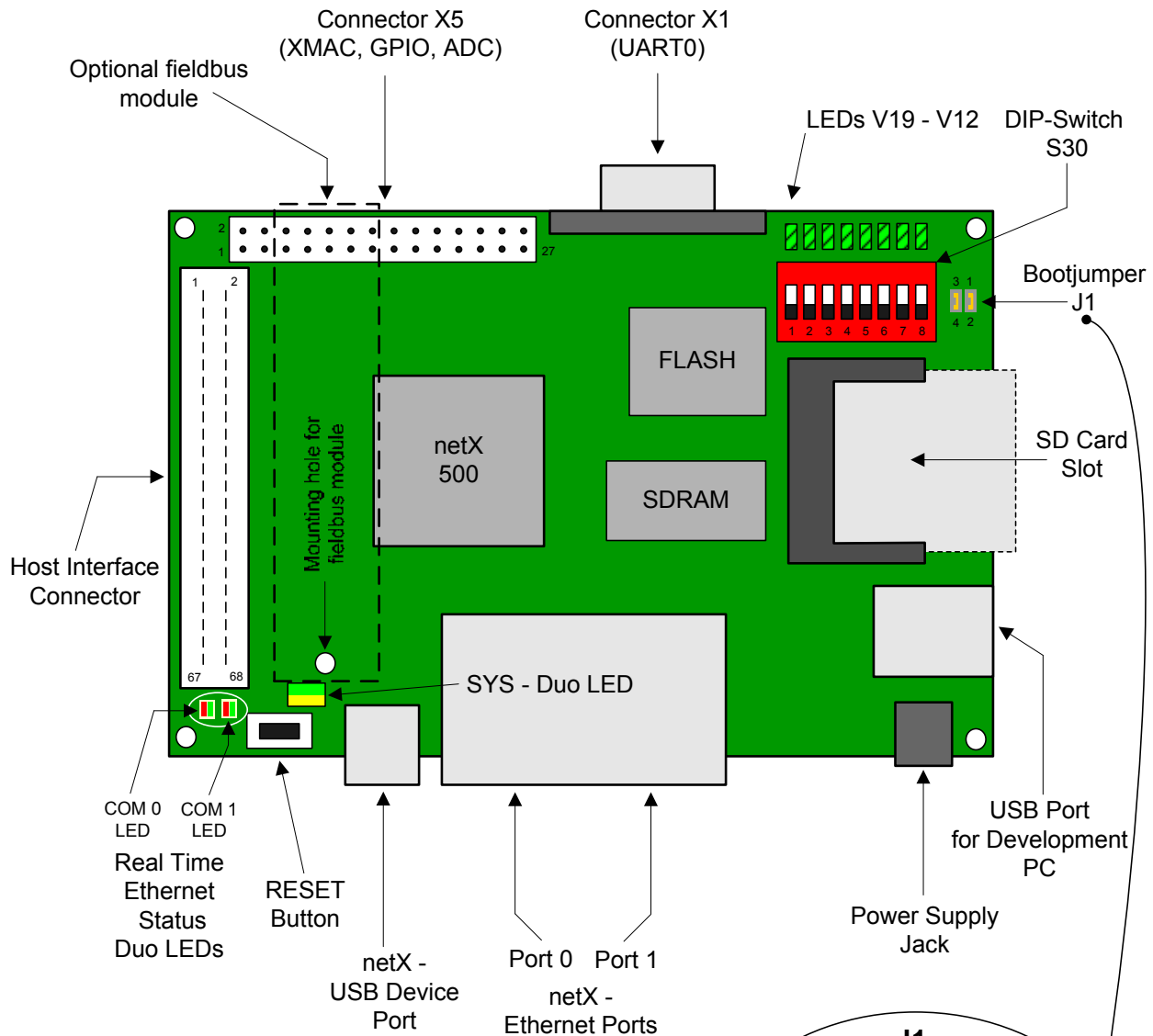
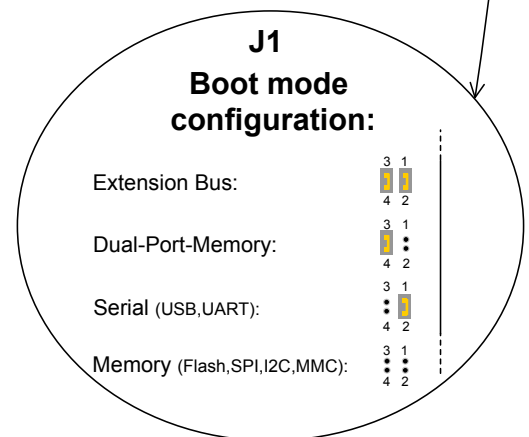
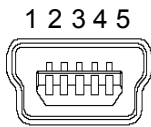


Figure 2: Overview NXHX500-RE, Rev.2



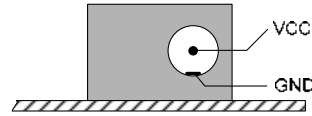
The NXHX500-RE can either be powered by an external power supply (5-30 V DC), like the included NXAC-Power or through the USB port, connected to the development PC. USB powered operation is however only possible, when the netX Ethernet ports are not used! **When running Ethernet applications, the NXHX500-RE must be powered by the external power supply in order to provide stable operation of the board!**

### 3 Connectors



netX-USB  
device port

Pin	Description
1	Vusb
2	D-
3	D+
4	Not connected
5	GND



External power  
supply jack

Host interface connector, X3:

Pin	DPM	Ext. Bus	Prog. I/O	Pin	DPM	Ext. Bus	Prog. I/O
1	+3.3V	+3.3V	+3.3V	35	DPM A14	EXT A14	PIO54
2	GND	GND	GND	36	DPM A13	EXT A13	PIO48
3	CLKOUT	CLKOUT	CLKOUT	37	DPM A12	EXT A12	PIO49
4	TCLK	TCLK	TCLK	38	DPM A11	EXT A11	PIO50
5	GND	GND	GND	39	DPM A10	EXT A10	PIO53
6	RSTOUTn	RSTOUTn	RSTOUTn	40	DPM A9	EXT A9	PIO56
7	RSTINn	RSTINn	RSTINn	41	DPM A8	EXT A8	PIO57
8	GND	GND	GND	42	DPM A7	EXT A7	PIO60
9	PIO40	PIO40	PIO40	43	DPM A6	EXT A6	PIO61
10	PIO36	PIO36	PIO36	44	DPM A5	EXT A5	PIO64
11	DPM INT	EXT IRQ	PIO47	45	DPM A4	EXT A4	PIO65
12	DPM RDY	EXT RDY	PIO46	46	DPM A3	EXT A3	PIO66
13	GND	GND	GND	47	DPM A2	EXT A2	PIO69
14	DPM RDn	EXT RDn	PIO52	48	DPM A1	EXT A1	PIO70
15	DPM WRHn	EXT WRHn	PIO44	49	DPM A0	EXT A0	PIO73
16	DPM WRLn	EXT WRLn	PIO45	50	GND	GND	GND
17	GND	GND	GND	51	DPM D15	EXT D15	PIO41
18	DPM WIE n	EXT ALE	PIO35	52	DPM D14	EXT D14	PIO42
19	DPM BHE n	EXT BHE n	PIO43	53	DPM D13	EXT D13	PIO37
20	GND	GND	GND	54	DPM D12	EXT D12	PIO38
21	SELA A18	EXT CS3n	PIO84	55	DPM D11	EXT D11	PIO39
22	SELA A16	EXT CS2n	PIO79	56	DPM D10	EXT D10	PIO33
23	SELA A17	EXT CS1n	PIO80	57	DPM D9	EXT D9	PIO34
24	DPM CSn	EXT CS0n	PIO51	58	DPM D8	EXT D8	PIO32
25	GND	GND	GND	59	DPM D7	EXT D7	PIO74
26	SELA A15	EXT A23	PIO72	60	DPM D6	EXT D6	PIO75
27	SELA A14	EXT A22	PIO71	61	DPM D5	EXT D5	PIO76
28	SELA A13	EXT A21	PIO68	62	DPM D4	EXT D4	PIO77
29	SELA A12	EXT A20	PIO67	63	DPM D3	EXT D3	PIO78
30	(DPM A19)	EXT A19	PIO63	64	DPM D2	EXT D2	PIO81
31	(DPM A18)	EXT A18	PIO62	65	DPM D1	EXT D1	PIO82
32	(DPM A17)	EXT A17	PIO59	66	DPM D0	EXT D0	PIO83
33	GND	GND	GND	67	+3.3V	+3.3V	+3.3V
34	DPM A15	EXT A15	PIO55	68	(DPM A16)	EXT A16	PIO58

XMAC / GPIO / ADC connector, X5:

Pin	Signal	Pin	Signal
1	XM3_TX	15	UART2_TXD / GPIO9
2	XM3_RX	16	UART2_CTS / GPIO10
3	XM3_IO0	17	UART2_RTS / GPIO11
4	XM3_IO1	18	GPIO12
5	XM2_TX	19	GPIO13
6	XM2_RX	20	GPIO14
7	XM2_IO0	21	AD0_IN0
8	XM2_IO1	22	AD0_IN1
9	GND	23	AD0_VREFP
10	+3V3	24	AD1_IN0
11	PIO4	25	AD1_IN1
12	PIO5	26	AD1_VREFP
13	RSTOUT	27	+3V3 analog
14	UART2_RXD / GPIO8	28	GND

DIP switch / LED assignment:

Switch	assigned PIO	LED	assigned PIO
S30 - 1	PIO8	V19	PIO16
S30 - 2	PIO9	V18	PIO17
S30 - 3	PIO10	V17	PIO18
S30 - 4	PIO11	V16	PIO19
S30 - 5	PIO12	V15	PIO20
S30 - 6	PIO13	V14	PIO21
S30 - 7	PIO14	V13	PIO22
S30 - 8	PIO15	V12	PIO23

Note: - LEDs are active low (setting the PIO to '0' will turn on LED)  
 - DIP switches are active high (switch in 'ON' position -> PIO reads '1')

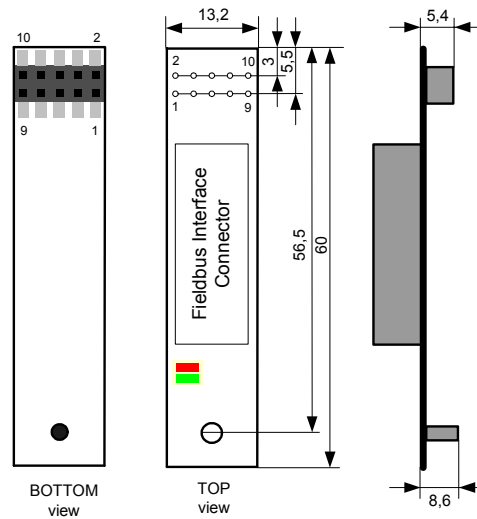
## 4 Accessories

### 4.1 Fieldbus Adapters

Fieldbus Interface with Duo Status LED (Ready / Error) for NXHX Boards.

Pin	Signal	Pin	Signal
1	XMAC TX	6	+3,3V
2	XMAC RX	7	PIO 4
3	XMAC IO 0	8	PIO 5
4	XMAC IO 1	9	RSTOUT
5	GND	10	n.c.

Connector to NXHX Board.



#### 4.1.1 NXHX-DP

Fieldbus Interface Profibus (RS485)

Connector: D-Sub DE-9 female

Interface not isolated

**Order Number: 7923.410**

Pin	Signal	Pin	Signal
1	n.c.	6	n.c.
2	n.c.	7	n.c.
3	TXD/RXD-P	8	TXD/RXD-N
4	n.c.	9	n.c.
5	GND		

#### 4.1.2 NXHX-CO

Fieldbus Interface CAN

Connector: D-Sub DE-9 male

Interface not isolated

**Order Number: 7923.500**

Pin	Signal	Pin	Signal
1	n.c.	6	n.c.
2	CAN-L	7	CAN-H
3	DGND	8	nc.
4	n.c.	9	n.c.
5	n.c.		

#### 4.1.3 NXHX-DN

Fieldbus Interface DeviceNet

Connector: Combicon MSTBA 2,5

Interface not isolated

**Order Number: 7923.510**

Pin	Signal
1	DGND
2	CAN-L
3	n.c.
4	CAN-H
5	DN V+

### 4.1.4 NXHX-RS

Interface RS232

Connector: D-Sub DE-9 male

Interface not isolated

**Order Number: 7923.010**

Pin	Signal	Pin	Signal
1	n.c.	6	n.c.
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	n.c.
5	GND		

### 4.1.5 NXHX-CC

Fieldbus Interface CC-Link:

Connector: Combicon MSTBA 2,5

Interface not isolated

**Order Number: 7923.740**

Pin	Signal
1	DA
2	DB
3	DG
4	SLD
5	FG

## 4.2 NXAC-Power

Power Supply for NXHX Boards

(included with NXHX500-RE)

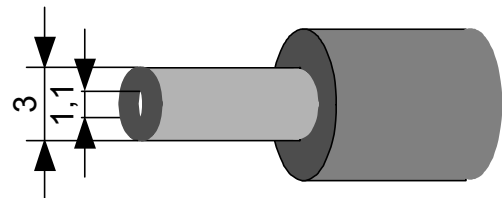
Technical Data:

Input: 100-240V ~0,4A (47-63Hz)

Output: 24V / 0,625mA

Cable: 1,8 m

**Order Number: 7930.000**



## 5 Contact

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