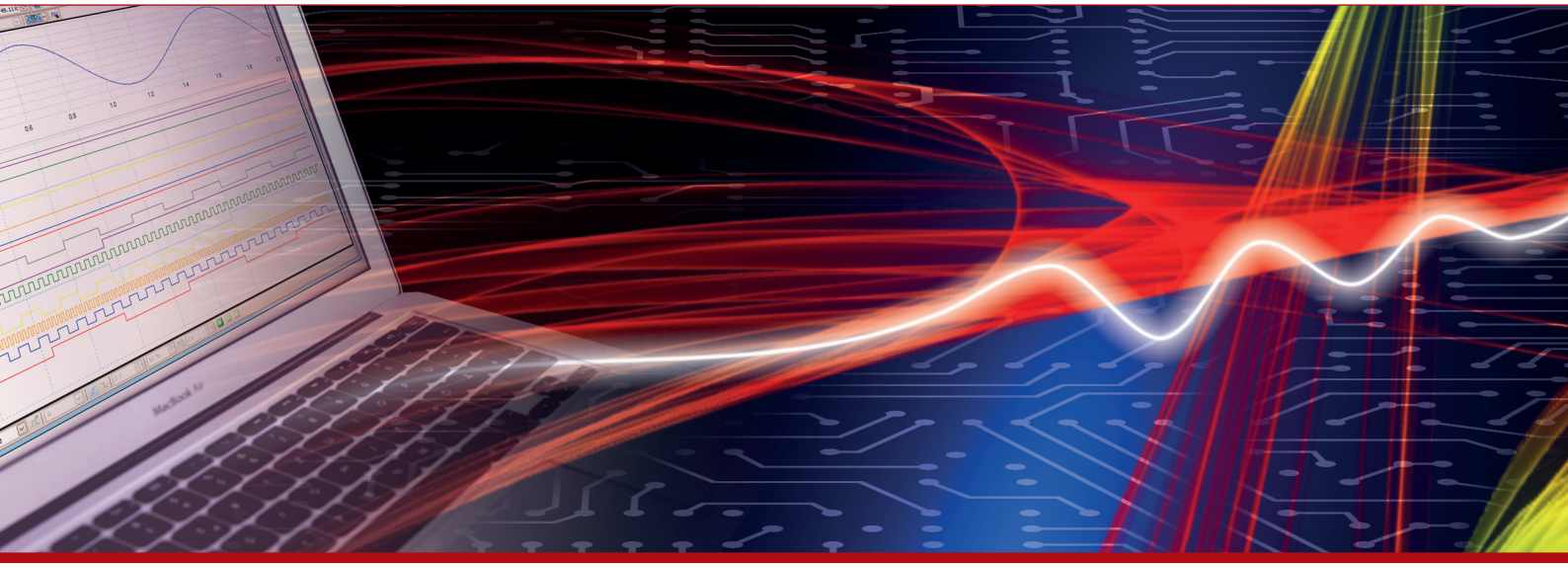
Product Datasheet - Technical Specifications



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ME-1400 TTL Digital-I/O and Counter Board

- PC plug-in board for digital data acquisition and control, counter board.
- Up to 3 or 6 counters. 8254-compatible 16 bit counters. All lines (clock, gate, out) with TTL level, wired to the D-sub connector.
- Counters programmable independently. Counters can be cascaded via software.
- 1 or 10 MHz clock (quartz oscillator), independent from PC clock.
- 24 or 48 digital input/output channels. TTL level.
- PC DAQ board for PCI or 3 U CompactPCI/PXI.

Model	Counters	Digital-I/O	Bus platform
ME-1400 PCI	-	24 (3x 8 bit Port)	StandardPCI
ME-1400 cPCI	-	24 (3x 8 bit Port)	3 HE CompactPCI
ME-1400A PCI	3 (16 bit)	24 (3x 8 bit Port)	StandardPCI
ME-1400A cPCI	3 (16 bit)	24 (3x 8 bit Port)	3 HE CompactPCI
ME-1400B PCI	6 (16 bit)	48 (3x 8 bit Port)	StandardPCI
ME-1400B cPCI	6 (16 bit)	48 (3x 8 bit Port)	3 HE CompactPCI

Specification

PC Interface (ME-1400/A/B/E/EA/EB)

Bus system	Standard PCI (32 bit, 33 MHz, 5 V);
(depends on model)	CompactPCI (32 bit, 33 MHz, 5 V)
Plug&Play functionality	automatic assignment of resources

Digital I/O

Number	ME-1400/A/E/EA: 24, TTL-compatible ME-1400B/EB: 48, TTL-compatible
Input voltage	low: -0,5 V... +0,8 V (I_{IL}max = ±10 µA) high: +2,0 V... +5,5 V (I_{IHmax} = ±10 µA
Output voltage	low: max. +0,45 V (I_{OL} = +2.5 mA) high: min. +2,4 V (I_{OH} = -2.5 mA)

Counter

Number	ME-1400A/EA: 3 independent ME-1400B/EB: 6 independent
Type	82(C) 54
Resolution	16 bit
Input voltage	low: -0.5 V... +0,8 V (I_{ILmax} = ±10 µA) high: +2.2 V... +6 V (I_{IHmax} = ±10 µA
Output voltage	low: max. +0.45 V (I_{OL} = +2.5 mA) high: min. +2.4 V (I_{OH} = -2.5 mA)

Quartzoscillator

Frequency	1 MHz or 10 MHz selectable (by software)
Accuracy	±100 ppm (±0.01 %)
Output level	LS-TTL

General Information

PCI/cPCI-models: Power consumption at +5 V	ME-1400: typ. 200 mA ME-1400A typ. 220 mA

(without load)	ME-1400B: typ. 400 mA ME-1400E: typ. 200 mA ME-1400EA: typ. 220 mA ME-1400EB: typ. 400 mA
Physical size (without mounting bracket and connector)	ME-1400/A/B: 132 x 99 mm ME-1400E/EA/EB: 175 x 99 mm cPCI-Modelle: 100 x 160 mm
Connectors	**ME-1400E/EA/EB:** 37-pin D-Sub female connectors at the mounting bracket of the board **additional for ME-1400EB:** 40-pin connector for adapter on 37-pin D-Sub connecter mounted on additional mounting bracket (pinout as connector on mounting bracket of card). **ME-1400/A/B/C/D:** 78-pin D-Sub female connector at the mounting bracket of the board

Common Data

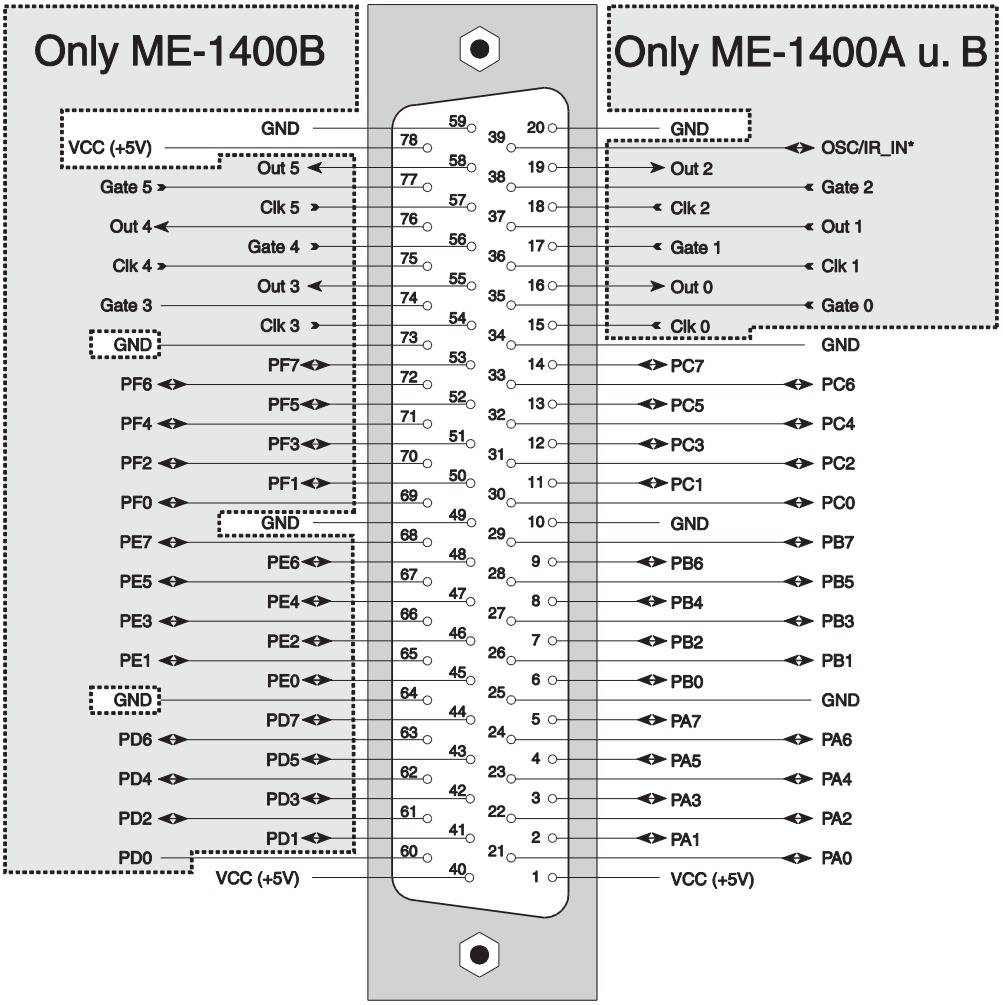
VCC loading at the D-Sub connector: 200 mA	
Operating temperature	0…70 °C
Storage temperature	-40…100 °C
Relative humidity	20…55 % (non-condensing)

CE Certification

EMC-Directive	89/336/EMC
Emission	EN55022
Immunity	EN50082-2

Pinout

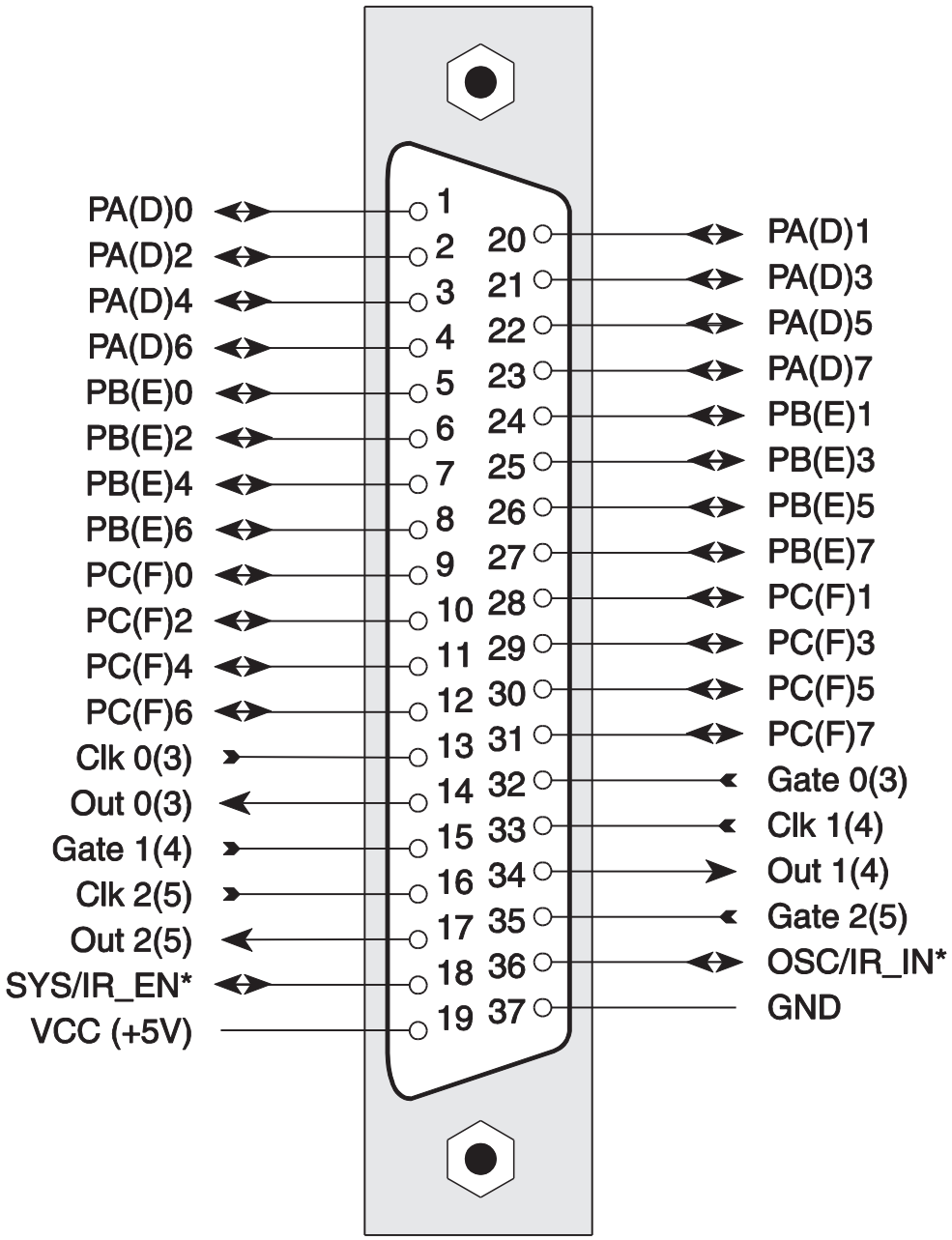
ME-1400/A/B



Picture 8: 78-pin female D-Sub connector ME-1400/A/B

*Only in operation on ME-1400/A/B. When programming with the ME-iDS this pin is always an interrupt input.

ME-1400E/EA/EB



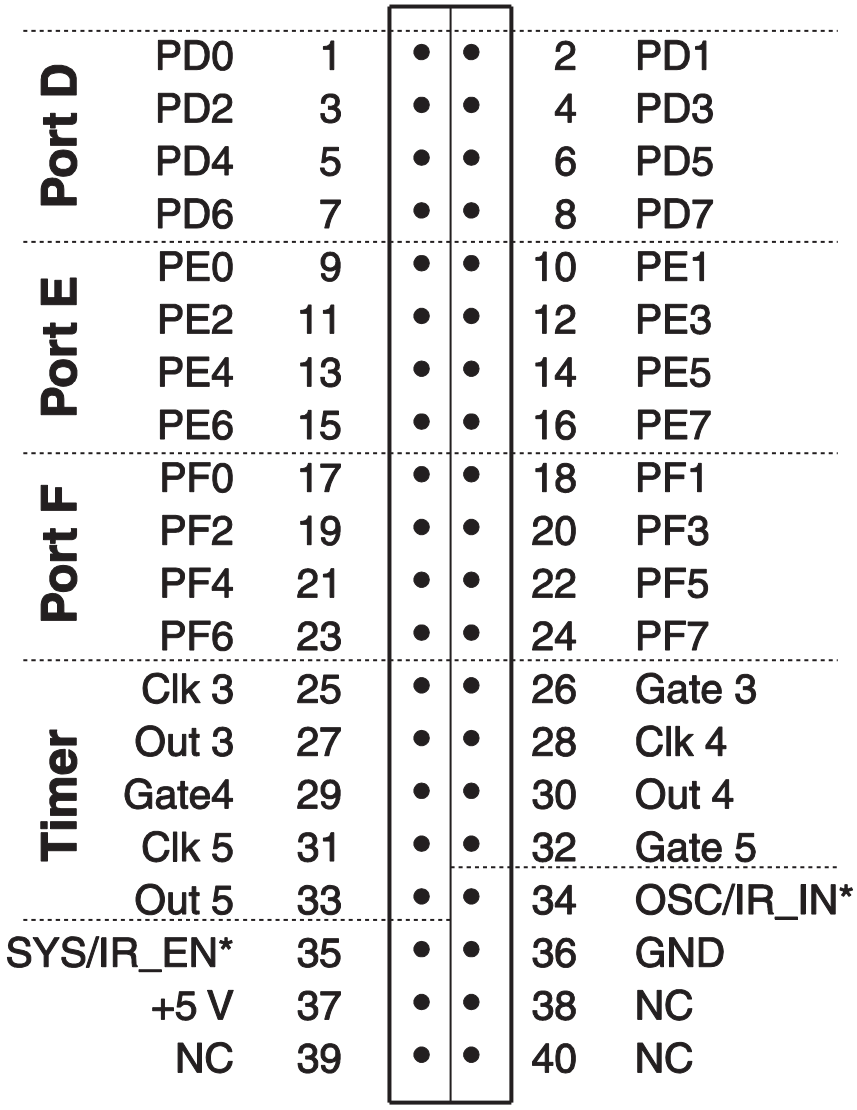
Picture 9: Pinout of the 37-pin female D-Sub

Note:

Ports D, E and F (in brackets are only available on B-versions in combination with an additional mounting bracket (included with the package), see also B5 and B6.

*Functional overview see table on the next page.

IDC-Connector for B-Versions (ST2)

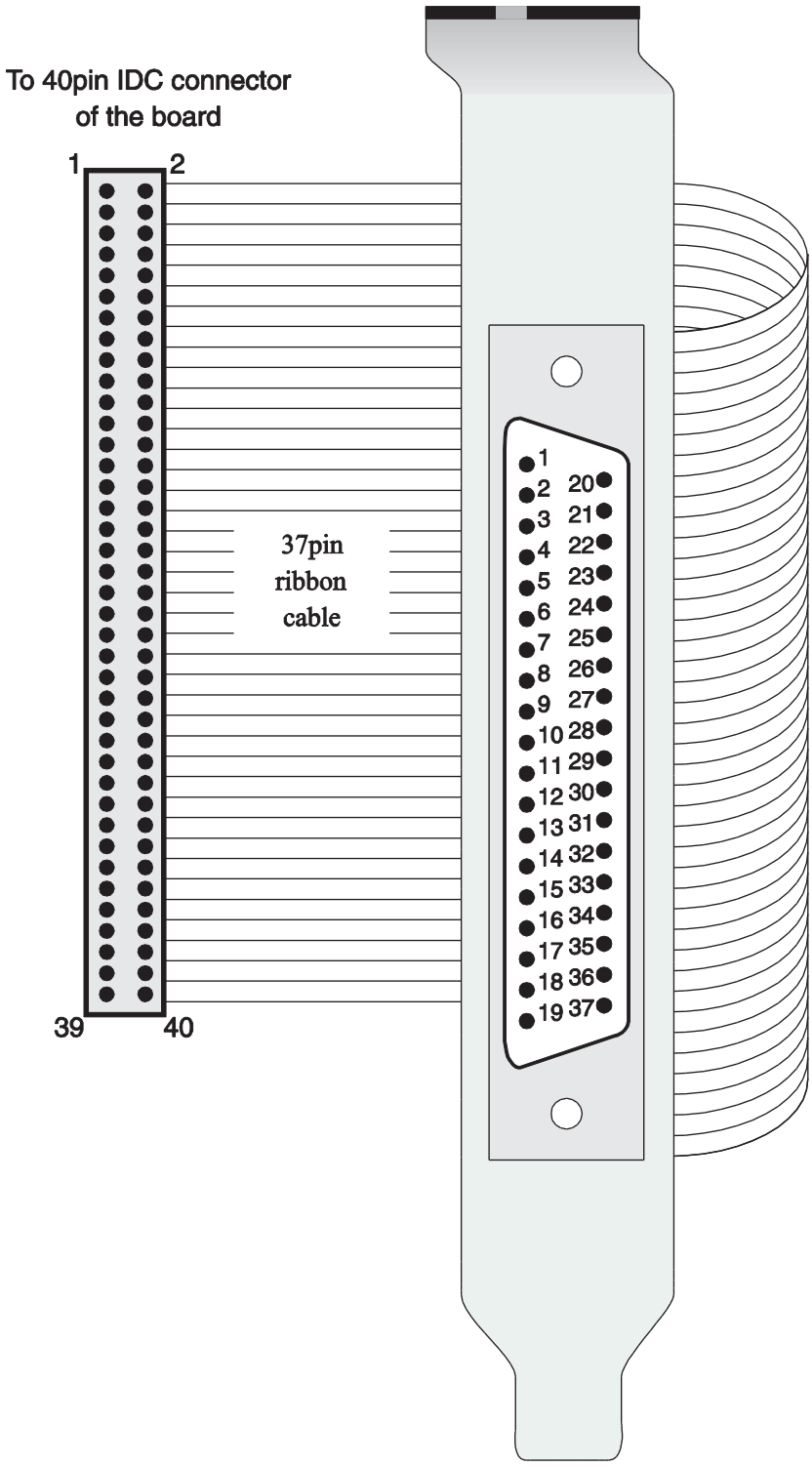


Picture 10: Pinout of the 40-pin IDC-connector

	37-pin D-Sub		**40-pin IDC connector (ST2)**	
	SYS/IR_EN (Pin 18)	OSC/IR_IN (Pin 36)	SYS/IR_EN (Pin 35)	OSC/IR_IN (Pin 34)
ME-1400E	n.c.	–	–	–
ME-1400EA	n.c.	–/✓	–	–
ME-1400EB	n.c.	–/✓	n.c.	n.c.

*When programming with the ME-iDS the “OSC”-function is only supported by Linux at the moment.

Additional Mounting Bracket



Picture 11: Mounting bracket with female D-Sub for ME-14B and ME-1400EB