

The QUADRA-CHEK 2000 and ND 1200 QUADRA-CHEK: A comparison of characteristics and functionalities



		QUADRA-CHEK 2000 Series	ND 1200 QUADRA-CHEK series	Comment on QUADRA-CHEK 2000
General information	Application	Evaluation electronics for metrology applications		
	Product name	QUADRA-CHEK 20x3	ND 120x QUADRA-CHEK	
	Implementation	2-D		
	Versions	Manual system (optional: optical edge detection)	Depends on device variant (manual, optical edge detection)	SW options can be enabled via license key
Product				
	Design	Embedded		
	Housing	Aluminum milled housing	Die-cast metal housing	
	Mounting type, mounting dimensions	Mounting hole pattern, 50 mm x 50 mm	HEIDENHAIN (proprietary)	
	Mounting options	HEIDENHAIN stand/holder, mounting systems compatible with 50 mm x 50 mm hole pattern	HEIDENHAIN stand/holder	
Display				
Hardware	Screen	LCD widescreen (15:9), Color screen, 17.8 cm (7"), 800 x 480 pixels (WVGA)	LCD screen, Monochrome, 14.4 cm (5.7"), 320 x 240 pixels	Service life: 50 000 hours (at half brightness)
	Display step	Adjustable, min. 0.00001 mm, max. 8 decimal places	Adjustable, min. 0.00001 mm, max. 7 decimal places	
	User interface	Multi-touch display	Keys	
Electrical data				
	Number of encoder inputs	2 (XY)	2 (XY), 3 (XYQ or XYZ), 4 (XYZQ)	
	Number of optional encoder inputs	1 (Z or Q)	N/A	Enabled with HEIDENHAIN License Key Request (LKR)



Electrical data			
Encoder interfaces	Standard: 1 V _{PP} , 11 μA, EnDat or TTL	Standard: 1 V _{PP} 11 μA or TTL	SW support for EnDat is planned
	Others: Adapters for conversion of pin layout and signal	Others: Depends on device variant	See "Accessories"
Interpolation with 1 V _{PP}	4096-fold	10-fold	
Touch probe connection	Universal HEIDENHAIN interface	No	SW support is planned
Camera interface	No		
Camera manufacturer, model	N/A		
Optical edge detector interface	2 detector inputs (1x shield, 1x reference)		
Data interface	1x Ethernet, 1 Gbit (RJ45), 1x USB 2.0, Hi-Speed (Type A, maximum current: 500 mA)	1x V.24/RS232-C, 1x USB 1.1, Hi-Speed (Type A)	Adapter support USB to RS232 ²⁾
Printer port, printer model	USB or Ethernet, Post Script printer (CUPS - Common Unix Printing System)	USB, HP printer (limited model support)	Peer-to-peer Ethernet possible, no DHCP Server
Foot switch interface	15-pin D-sub	RJ45	
Switching inputs	4x TTL	No	
Switching outputs	1x TTL	No	
Speaker	Yes		
Speaker jack	No	3.5 mm	
Ambient conditions			
Operating temperature	0 °C to +45 °C		
General information			
Protection	IP65, back panel: IP40	IP00, front panel: IP40	
Mass	Unit alone: ≈ 1.3 kg Multi-Pos stand: ≈ 1.6 kg Duo-Pos stand: ≈ 0.2 kg Multi-Pos holder: ≈ 0.3 kg	Unit alone: ≈ 1.6 kg Stand: ≈ 3.2 kg Holder: ≈ 0.3 kg	
Firmware	General information		
	Operating system	GNU/Linux	HEIDENHAIN (proprietary)
	Firmware update	Free of charge, provided over HEIDENHAIN HiF	
SW options	Enabled with HEIDENHAIN license key	None, device variants	



General information			
2-D geometries	Yes (measuring, constructing, defining)		
3-D geometries	No		
Measuring point acquisition	Crosshairs, optional: OED	Depends on device variant (crosshairs or OED)	See SW options
Multi-sensor support	No	No	
Measuring programs	Creation through teach-in process, program editor		
Graphical depiction of measurement results and geometries	Feature detail view, Functional features view	Feature detail view	
Entry of tolerance	Yes (incl. ISO 2768, decimal place tolerance and ISO 286)	Yes	
Error compensation	Linear (LEC), segmented (SLEC), nonlinear (NLEC), Squareness calibration		
Integrated documentation	Installation instructions, operating instructions, OEM documentation	No	Documentation can be managed on device
User management	Configurable, users can be added	No	
Conversational languages	de, en, fr, it, nl, es, cs, ja, pl, pt, ru, zh, zh-tw, ko, tr	de, en, fr, it, es, cs, ja, pl, pt, ru, zh, sv, nl, tr	
Password	Default, configurable depending on user	Default, cannot be changed	
File management	Yes, graphical browser	Yes, limited	
Network integration	Yes	No	
External data medium	USB flash drive ¹⁾ (FAT16/32), up to 128 GB	USB flash drive (FAT32), recommended ≤ 2 GB	NTFS is not supported
Mouse and keyboard supported	Yes (USB)	No	
Measurement report			
Template designer	Yes	No	Creation using PC demo version
Report generator	Yes, incl. visual depiction	Yes	
Output format	PDF oder CSV file, printer	ASCII via RS232, printer	
SW options			
AEI1	One additional encoder input	No	
OED	Optical edge detection	No	

Firmware



Miscellaneous	Documentation	Installation instructions (multilingual), operating instructions (in each dialogue language), user's manual demo (in each dialogue language)	User's guide (multilingual), User's manual (en)	
	Items supplied	Device, 2-D demo part, installation instructions (printed), user's manual (PDF on storage medium)	Device, 2-D demo part, user's guide (printed), stand or holder, power cable (EU or US)	Stands, holder, and power cable available as accessories
	Accessories	Measuring standard, 2-D demo part, fiber-optic cable, Multi-Pos/Duo-Pos stands, Multi-Pos holder, power cable, adapter connector, foot switch	Measuring standard, 2-D demo part, fiber optic cable, stand, holder, protective cover, foot switch, keypad	

1) USB flash drive successfully tested; tests planned for further drives

2) Manufacturer: DIGITUS, Type USB 2.0 successfully tested, other manufacturers upon request