ASC500 Basic Version

1013326

Technical Specifications

Size and Dimensions	
chassis	19" rack, 2 rack units, 9 x 45 x 40 cm^3
weight	10 kg
Controller Hardware	
power supply	100/115/230V, 50 .. 60 Hz
power consumption [W]	max. 80
connector	IEC inlet
Interfaces	
xy scan voltage output	2 x -10 .. +10 , 16 (+16) bit, 5 MHz with programmable tilt correction uni-/bipolar, output limiter, slewrate control
analog ADC inputs	6 x -10 .. +10 V, 18 bit, 400 kS/s ADC with programmable offset and gain compensation
analog DAC outputs	4 x -10 .. +10 V, 16 bit, 200 kS/s DAC switchable 2nd order low pass 3 kHz / 100 kHz noise: 16 µVrms (10 Hz..100 kHz)
analog modulation inputs	-10 .. 10 V, DC .. 50 kHz for DAC 1, DAC 2, and Z-Out
general purpose digital interface	8 bit LVTTL trigger input, 8 bit LVTTL trigger output, e.g. pixel-, line-, frame-clock, for optional programmable in / out sync, counter
digital serial interface (RS232)	connection to ANC300 for coarse movement
digital serial interface (NSL)	connection to ANC350 for closed loop coarse movement
host computer interface	USB 2.0 high speed, LAN 100 Mbit
auxiliary power outlet	+/-5 V (0.2 A) and +/-15 V (0.1 A)
Resolution	
frame view display modes	2 frame views, 2 line views, easy generation of additional frames possible
frame view options	oversampling, autosave (png, ASCII, bcrf), line subtraction line view with up to 16 subsequent lines
frame view selection tools	frame alignment, frame centering, zoom function, path mode, grid mode
Scan Generation	
pixel clock [kHz]	312.5
resolution	20 bit (16 bit, 16x oversampling)
features (scan)	slope compensation, switchable uni-/bipolar
	software rotation and zoom, slew-rate controlled movement
scan speed	1 pm/s .. 2 mm/s
frame rate	max. 20 Hz @ 100 x 100 pixel
Spectral Performance	
spectroscopy modes	point/line/grid spectroscopy (up to 1024 x 1024 pixel)
spectroscopy type	bias spectroscopy, soft spectroscopy (all GUI parameters), dI/dV with internal Lock-In
averaging	25 µs up to 160 ms per data point
spectroscopy parameters	control loop off, signal limiter
Optical Data	
oscilloscope	arbitrary channel vs. time; time base 2.5 µs .. 150 ms, 32000 pixel max. trigger: amp/edge/auto/single
FFTs	for every channel, 0 .. 200 kHz range, 1 .. 128 x averaging, windowing options, scaling: magnitude/power density/power spectrum
Path Mode	
path mode working principle	action executed along user defined path
path mode functionality	user definable, spectroscopies, manual handshake, TTL handshake
Options and Upgrades	
features (transfer function)	ADC/DAC offset adjustment, linear transfer function programming, preamp for each ADC channel (1 .. 64 x gain)