

Academic Packs

Software solutions for academic research in Life Sciences

NOTOCORD offers all-in-one software packages for the analysis of cardiovascular, respiratory, electrophysiology and neurological signals as well as a General pack containing the kernel of the acquisition system and modules for signal processing, analysis and display.



Each academic pack consists of a set of modules designed for a specific research area. Modules included in each pack are described thereafter.

GENERAL SALES CONDITIONS

Academic packs are **solely intended for academic research purposes** and must not be used in profit-studies for any industry. They may be used for basic research, which, if resulting in a publication (poster, article or thesis), must mention the name of the application and the company NOTOCORD Systems.

The packs are **not subject to annual maintenance agreement**. There may however be a timely update for the kernel or some or all modules for a lump sum.

Installation assistance / training is included in the purchase and is delivered via telephone and remote access to customer's PC (up to 4 hours). If additional training is required or desired, please contact your sales representative at NOTOCORD who will issue you the best quote for your needs.

General Pack

ACG10a

Module	Category	Short description
KRN42a	Kernel	KRN42a is the kernel of a software platform dedicated to signal acquisition and analysis. KRN42a includes basic modules such as a universal chart display (CTD60a), an event marker generator (KBD30a), a cycle detector (CYC10a) and a signal generator (NSR10a).
DTS60a	Acquisition server	DTS60a is an acquisition server for DataTranslation card 16-analog channels.
AVG11a	Filter	AVG11a calculates the arithmetic mean & filter options, median and standard deviation.
DRV10a	Filter	DRV10a is a derivation filter.
INT10a	Filter	INT10a is an integration filter.
IRF10a	Filter	IRF10a is a multi-functions filter : low-pass, high-pass, band-pass and band-stop modes.
ITP10a	Filter	ITP10a is a linear interpolation filter.
PDR10a	Filter	PDR10a removes a disturbance frequency (especially 50 or 60Hz).
SGF10a	Filter	SG10a is a Savitsky Golay filter.
DTV10a	Signal processing	DTV10a calculates the delay and amplitude between 2 points.
OPR10a	Signal processing	OPR10a performs simple arithmetic operation between 2 signals (addition, multiplication, division).
SPA10a	Signal processing	SPA10a produces spectral analysis of continuous and discrete signals.
STA10a	Signal processing	STA10a calculates signal statistics within a time window.
DIG10a	Display	DIG10a is a digital display.
SCP10m	Display	SCP10m is a scope display with memory function : the input signal is displayed on a time window following a trigger.
XYD30a	Display	XYD30a is 2D – 3 D XY scope that displays the relationship - and its changes - of a data series against another one.

Recommended related hardware

Acquisition card DT9804 or WPI.

CardioPack

ACC10a

Module	Name	Short description
AFL30a	Arterial flow analyzer	Coupled to a mean arterial pressure signal, AFL30a performs the following calculations: maximum and minimum arterial flow, resistance, stroke rate volume as well as the various ratios.
APR31a	Arterial blood pressure analyzer	APR31a analyses arterial blood pressure signals and calculates for each cycle systolic and diastolic pressures, mean pressure and heart rate.
ECG20a	Electrocardiogram analyzer	ECG20a calculates characteristic points of P, Q, R, S and T waves and time intervals between these points.
LVP30a	Left ventricular pressure analyzer	LVP30a analyzes left ventricular pressure signals and calculates data such as left ventricular telediastolic pressure, dPdt max and dPdt min, relaxation index Tau using 4 different methods: Weiss, half-pressure, asymptotic non-null pressure and Levenberg-Marquardt.
PVL10I	Ventricular pressure-volume loop analyzer	PVL10I analyzes the ventricular Pressure – Volume (PV) relationship in small and large animals.
QTC10a	QT corrections calculator	QTC10a calculates corrected QT durations (QTc), from QT and RR interval durations provided by an ECG analyzer, using 5 different methods: Bazett, Fridericia, Van De Water, ANCOVA and Sarma.
VME10e	Edition and validation of ECG analysis	VME10e is a graphic editing interface designed for manual editing and validation of ECG marks (P, Q, R, S and T) on user-defined zones.

RespiPack

ACR10a

Module	Name	Short description
PLY30m	Whole body plethysmography respiration analyzer with correction	PLY30m is an online analyzer for whole body plethysmography signals. It offers an optional dynamic correction factor for changes in animal temperature, chamber temperature and chamber relative humidity, and calculates the Enhanced pause (PENH) parameter.
RFP10a	Respiration rate from blood pressure for large animals	RFP10a calculates the respiratory rate of large animals during in vivo cardiovascular studies.
RSP30a	Restraint animal respiration analyzer	From a respiratory flow signal and optionally a pressure signal, RSP30a calculates different respiratory parameters such as instantaneous volume, tidal volume, volume at the end of the inspiratory period, volume inhaled and exhaled in one minute, inspiratory and expiratory duration, respiratory frequency, resistance and compliance.

NeuroPack

ACN10a

Module	Name	Short description
DSC10a	Window level detector	One of DSC10a outputs is triggered each time the signal crosses the related threshold (e.g. output 3 is triggered when the signal applied to the input exceeds threshold 3 without reaching threshold 4.)
EEG10a	Spectral analysis of electroencephalogram	EEG10a performs spectral analysis of an EEG signal using Fourier transformation. Users can define rhythms of interest based on their frequency bands as well as an epoch duration on which the analysis is to be performed.
NVC31a	EMG activity analyzer	NVC31a filters nervous signals, providing rectified data in relation to the signal baseline, and integrates rectified signals for activity analysis.
THR10a	Threshold detector	THR10a indicate the moments when the signal crosses a given threshold.

ePhysioPack

ACE10a

Module	Name	Short description
APA31a	Cardiac action potential analyzer with P1A	APA31a detects and analyzes action potentials: reverse potential value, total amplitude between the resting potential and the reverse potential, period between two successive potentials as well as the overlap time (at 10, 20, 30, 40, 50 ... 90 % of the action Potential value).
MAP30a	Monophasic action potential analyzer	MAP30a provides characteristic points for each detected action potential: resting potential, potential beginning, minimum, maximum derivation, maximum, plateau, minimum derivation, recovery time at 20, 30, 40, 60, 90 and 100 % total magnitude. MAP30a also calculates the instantaneous frequency.
PUL30a	Pulsatile tissue contraction analyzer	PUL30a provides characteristic values of pulsatile tissue contractions: start of contraction, minimum, maximum, maximum and minimum derivations, frequency, rise time, recover time and area under the curve.
STT30a	Stimulated tissue contraction analyzer	STT30a quantifies the contractions affecting isolated organs: maximum and minimum contraction levels, magnitude and the area under the contraction curve.