



Clarity Hardware - CB20 card

D/A and D/f converter for PCI

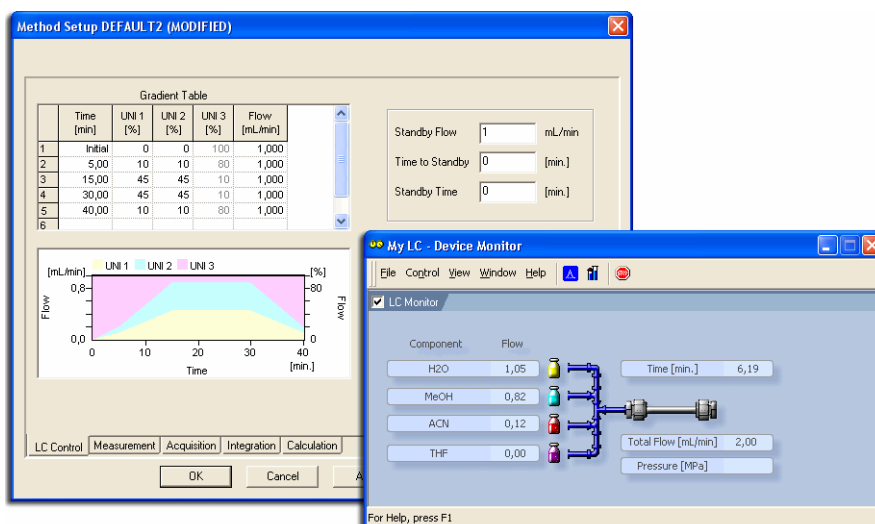
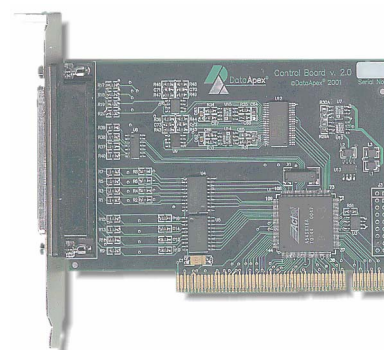
CB 20 is a control card that enables direct gradient control of HPLC Pumps

The CB20 card is designed for controlling LC pumps (that can be controlled by frequency or voltage) using the Clarity Chromatography Software.

It contains four 16-bit D/A converters and four 28-bit frequency (D/F) converters as well as eight auxiliary logical inputs and outputs. The board has been especially designed for control of analog-operated pumps.

Clarity Chromatography Station allows a direct gradient control using the LC Control module (p/n A27). The CB20 converter enables to extend the range of controlled devices to any pump driven by voltage or frequency.

The LC Control is available as an option to the Clarity software. The gradient control is then accomplished using the Method Setup – LC Control and Device Monitor dialogs accessible from the Instrument window to which the controlled instrument is connected. The user can easily create a gradient method from the LC control window and set a percentage of each gradient component and an overall flow rate in the gradient table. These parameters including parameters controlling pump behavior in the *Idle* state are a part of the method. Therefore it is possible to create various gradient profiles and choose - only by loading - the corresponding method.



Gradient control and online monitoring within the Clarity Software

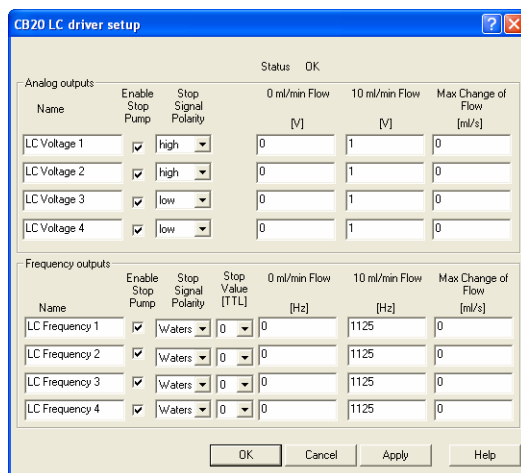
Clarity Chromatography Station is designed to acquire and evaluate data from up to four chromatographs at a time (multi detectors measurement supported).

Clarity enables direct gradient control. The high pressure gradient is created from up to four individual gradient components where each component is delivered by individual pump. Desired flow rates of each gradient component and their overall sum can be monitored in the independent Device Monitor.

Any analog LC Pump that uses frequency or voltage as an input defining the flow can be controlled using the CB20 card. The following table lists the most common models

Pumps driven by frequency:	Pumps driven by voltage:
<ul style="list-style-type: none"> • UNICAM – PU 4015 • Waters – M-45, 501, 510, 515, 6000 • LabAlliance – Series III, 1500 • Ecom – LCP 4000 <p>and others</p>	<ul style="list-style-type: none"> • Beckmann – Altex 110,114 • Bio-Rad 1350 • LabAlliance – Series III, 1500 • Knauer – M64, K-500, M64 • Shimadzu – LC6A • Ecom – LCP 4020 • Sykam – S 1021, S1122 <p>and others</p>

In case of doubt whether a specific type of LC pump is compatible with the CB20 control board, please refer to the www.dataapex.com/products/controls.php or download datasheet **D004 - List of controlled** or contact our technical support at clarity@dataapex.com.



The configuration of CB20 voltage and frequency channels

Technical Data

- Analog (voltage) outputs:** 4 channels equipped by 16 bit D/A converters
- Voltage range:** -10 V, +10 V
- Frequency outputs:** 4 channels equipped by 28bit D/f converters
- Frequency range:** 0.03 Hz - 100 kHz
- Digital inputs:** 8 TTL (5 V)
- Digital outputs:** 8 TTL (5 V, maximum current load 20 mA)
- PC interface:** standard PCI slot (PCI Express cannot be used)

Details:

- Part No.:** A27
- Warranty:** 3 years
- Related Products:** Clarity Software - Part No. C50 (required)
LC Control - Part No. A24 (required)