

Supported devices for ClarityChrom Version 8.2.2

April 2020

KNAUER devices

All devices distributed by KNAUER that are supported by the KNAUER driver build 6036 in ClarityChrom 8.2.2 are listed in this chapter.

For all other devices supported in ClarityChrom refer to chapter “Other devices”.

In the column for restrictions using RS-232 or LAN interface, “-” means that the interface is not supported (also refer to Interface column), “no” means, that there are no known problems by using this interface, “general” explains a restriction independently from the used communication interface. Note that also if a driver supports a feature, the device functionality also depends on the firmware and hardware version of the device.

For communication via LAN, the devices require an IP address for communication. For communication via RS-232, every device requires an own RS-232 port on the computer. RS-232 115200 baud limits the maximum cable length to 2 m. The maximum data rate for detectors via RS-232 is limited to 10 Hz.

[Links to KNAUER Pumps](#), [Detectors](#), [Assistants](#), [Autosamplers](#), [Analog/Digital Converters](#), [Thermostats/Column Ovens](#), [Electrical Valve Drives](#), [Other Supported Instruments](#), [Fraction Collectors](#)

Pumps	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
AZURA® Pump P 6.1L	Pump P6.1L	LAN	- / no; general: switching SSVs during run from driver 6020
AZURA® Pump P 2.1L	Pump P2.1L	LAN	- / no
AZURA® Pumps P2.1S/P4.1S	Pump P2.1S/P4.1S	RS-232, LAN	no / no
PLATINblue Pump P-1	Pump P-1	RS-232, LAN	no / no
Smartline Pump 1050	Smartline 1050	RS-232, LAN	RS-232 115200 baud only / no
Smartline Pump 1000	Smartline 1000	RS-232	no / -
Smartline Pump 100	Smartline 100	RS-232, LAN	no / no
BlueShadow Pumps 10P/20P	Pump 10P/20P	RS-232, LAN	no / no
BlueShadow Pump 40P	Pump 40P	RS-232, LAN	no / no
BlueShadow Pump 80P	Pump 80P	RS-232, LAN	no / no
Preparative Pump 1800 (also WellChrom K-1800)	Prep pump 1800	RS-232	LPG or HPG from firmware version 2.02 / -
WellChrom Pump K-1001	K-1001	RS-232	from firmware version 5.XX, firmware 4.XX no pressure trace / -
WellChrom Pump K-1000	K-1000	RS-232	no pressure trace / -
WellChrom Pump K-501	K-501	RS-232	from firmware version 1.23 / -
WellChrom Pump K-120	K-120	RS-232	no / -

Detectors [for all PDA or scanning UV detectors the PDA *) license extension is required to acquire and review the scan (3D) data, also for Offline license; up to two PDA devices in a system, one PDA license per computer]	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
AZURA® Detector DAD 6.1L *)	Detector DAD6.1L	LAN	- / no
AZURA® Detector DAD 2.1L *)	Detector DAD2.1L	LAN	- / no
AZURA® Detector MWD 2.1L	Detector MWD2.1L	LAN	- / no
AZURA® Detector UVD 2.1L	Detector UVD2.1L	LAN	- / no
AZURA® Detector UVD2.1S	Detector UVD2.1S	RS-232, LAN	maximum 10 Hz data rate / no
AZURA® Detector RID 2.1L / RID 2.1L Highflow	Detector RID2.1L	LAN	- / no
AZURA® Conductivity Monitor CM 2.1S	Monitor CM2.1S	RS-232, LAN	no / no
AZURA® ECD 2.1	DECADE Elite (Antec)	USB (build-in USB-to-RS-232 converter), LAN	no / no
PLATINblue PDA Detector PDA-1 *)	Detector PDA-1	LAN	- / no
PLATINblue Detector MW-1 *)	Detector MW-1	RS-232, LAN	maximum 10 Hz data rate, RS-232 115200 baud only / no
Smartline UV Detector 2500	S 2500	RS-232	start signal (trigger) on S 2500 Start Input also starts internal wave length program / -
Smartline UV Detector 2520	S 2520	RS-232, LAN	maximum 10 Hz data rate, RS-232 115200 baud only / no
Smartline UV Detector 2550 *)	S 2550	RS-232, LAN	maximum 10 Hz data rate, RS-232 115200 baud only / more than 10 Hz with only one channel
Smartline UV Detector 2600 *)	S 2600	RS-232	no / -
BlueShadow UV Detector 10D	Detector 10D	RS-232, LAN	maximum 10 Hz data rate / no
BlueShadow UV Detector 40D	Detector 40D	RS-232, LAN	maximum 10 Hz data rate, RS-232 115200 baud only / no
BlueShadow UV Detector 50D *)	Detector 50D	RS-232, LAN	maximum 10 Hz data rate, RS-232 115200 baud only / more than 10 Hz with only one channel
Smartline UV Detector 200	S 200	RS-232	no / -
Smartline PDA Detector 2800 *)	S 2800	LAN	- / no
Smartline PDA Detector 2850 *)	S 2850	LAN	- / no
Smartline RI Detector 2300	S 2300	RS-232	no / -
Smartline RI Detector 2400	S 2400	RS-232	no / -
Smartline Conductivity Monitor S2900	S 2900	RS-232	no method setup / -
WellChrom UV Detector K-2000	K-2000, K-2001	RS-232	only data acquisition / -
WellChrom UV Detector K-2001	K-2000, K-2001	RS-232	no / -
WellChrom UV Detector K-2500	K-2500, K-2501	RS-232	only data acquisition / -
WellChrom UV Detector K-2501	K-2500, K-2501	RS-232	start signal (trigger) on device Start Input also starts internal wave length program / -

Detectors continued	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
WellChrom UV Detector K-2600 *)	K-2600	RS-232	no / -
WellChrom PDA Detector K-2700 *)	K-2700	PCI with RS-422 interface card / LAN	PCI card requires special driver, runs only up to Windows 7 32-bit / LAN only via separate adapter A4442
WellChrom PDA Detector K-2800 *)	K-2800	PCI with RS-422 interface card / LAN	PCI card requires special driver, runs only up to Windows 7 32-bit / LAN only via separate adapter A4442
WellChrom RI Detector 2300	K-2300, K-2301	RS-232	no / -
WellChrom RI Detector 2301	K-2300, K-2301	RS-232	no / -
WellChrom RI Detector 2400	K-2400, K-2401	RS-232	no / -
WellChrom RI Detector 2401	K-2400, K-2401	RS-232	no / -
Shimadzu fluorescence detector RF-10Axl / also available via CBM-20A, driver from Data Apex, refer <u>RF-10 Axl</u> in <i>Other devices</i> list below	RF-10Axl	RS-232 (data rates >0.5 Hz only with A/D-converter)	special RS-232 cable required (part number G0743); data rate only 0.5 Hz, A/D converter allows higher data rates; / -
Shimadzu fluorescence detector RF-20A / Axs with special firmware version 0.90 only from Knauer / also available via CBM-20A with LC-10 functionality, driver from Data Apex, refer <u>RF-20 A/Axs</u> in <i>Other devices</i> list below	RF-20A	RS-232	LC-10 functionality: data rate up to 5 Hz, 1 channel, no scan, no flow cell temp. control; special RS-232 cable required (part number G0743); A/D converter allows higher data rates; / -
Virtual Detector	Virtual Detector	-	-
Sedere Sedex ELSD 80LT/85LT/90LT/100LT/LC	Driver developed by Data Apex; refer <u>matching detectors</u> in <i>Other devices</i> list		
ERC RefractoMax 520 series	Driver developed by Data Apex; refer <u>matching detectors</u> in <i>Other devices</i> list		
Antec detectors	Driver developed by Data Apex; refer <u>matching detectors</u> in <i>Other devices</i> list		
Grace/Alltech ELSD 3300	Driver developed by Data Apex; refer <u>matching detectors</u> in <i>Other devices</i> list		
Kontron detectors	Driver developed by Data Apex; refer <u>matching detectors</u> in <i>Other devices</i> list		

Assistants (up to three devices in one housing)	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware (FW) version
AZURA® Assistant ASM 2.2L	ASM2.2L	LAN	- / ASM2.1L is only supported as a complete device, only one valve as fraction collector - no valve cascading
AZURA® Assistant ASM 2.1L	ASM2.1L	LAN	- / ASM2.1L is only supported as a complete device, included modules cannot be controlled as separate devices; two pumps supported as HPG or independent pumps; only one valve as fraction collector - no valve cascading

Autosamplers (one autosampler in a system)	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware (FW) version
AZURA® Autosampler AS 6.1L	Knauer AS 6.1L	LAN	- / FW 1.19: 100 µl syringe; FW 1.18: 30 vial tray, 2500µl syringe can be selected also if prep mode is not enabled
Smartline Autosampler 3950	AS 3950	RS-232 or LAN (LAN from ~April 2009, before RS-232)	no / no, firmware-dependent features: FW 1.18: 30 vials tray, 2500µl syringe selectable also if prep mode is not activate; FW1.16: 108 vial tray; FW 1.15: 0.1 µl increments, tray thermostating 4-40 °C; FW1.04: 84+3 vials tray;
Autosampler Knauer Optimas *	Knauer Optimas	RS-232	no / -
PLATINblue Autosampler AS-1	AS-1	LAN	no / FW1.02: tray thermostating 4-40 °C
Smartline Autosampler 3900 *	AS 3900	RS-232	no / -
Smartline Autosampler 3800 (also WellChrom K-3800) *	AS 3800	RS-232	no / -
Spark Autosampler Alias, Endurance, Marathon, Midas, Integrity, Triathlon *	Driver developed by Data Apex; refer <u>matching autosamplers</u> in <i>Other devices</i>		
Kontron Autosamplers *	Driver developed by Data Apex; refer <u>matching autosamplers</u> in <i>Other devices</i>		

* Driver was developed by Data Apex

Analog/Digital Converters	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
Interface Box IFU 2.1 LAN	Interface Box IF2 / IFU 2.1	LAN	- / Digital Out cannot be controlled; only last 6 digits of serial number must be entered
Interface Box IFU 2.1	Interface Box IF2 / IFU 2.1	USB (build-in USB-to-RS-232 adapter)	Digital Out cannot be controlled / - ; Driver for USB-to-serial adapter must be installed separately; driver on ClarityChrom CD or webpage; only last 6 digits of serial number must be entered
Interface Box IF2	Interface Box IF2 / IFU 2.1	RS-232	Digital Out cannot be controlled / - ; only last 5 digits of serial number must be entered

Analog/Digital Converters continued	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
Smartline Manager 5000	Manager 5000	RS-232	Digital Out cannot be controlled / - ; only last 5 digits of serial number must be entered
Smartline Manager 5050 and PLATINblue Manager M-1 as Manager 5000	Manager 5000	RS-232	Digital Out cannot be controlled / - ; only last 5 digits of serial number must be entered
Knauer HPLC Box	HPLC Box	RS-232	Revision 2: only data acquisition Revision 3: data acquisition and Analogue Out, Digital Out cannot be controlled / - ; if serial number is >65536, only the last for digits must be entered
BlueShadow Manager 40M	Manager 40M	RS-232	Digital Out cannot be controlled / - ; only last 5 digits of serial number must be entered

Thermostats/Column Ovens	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
Column Thermostat CT 2.1	Thermostat CT2.1	RS-232, LAN	no / no
PLATINblue Column Thermostat T-1	Thermostat T-1	RS-232, LAN	no / no
Smartline Column Oven / Column Thermostat JetStream / PLATINblue Column Thermostat T-1 Basic	JetStream	RS-232	no (JetStream control requires firmware version b1.17 or higher) / -
Smartline Column Oven 4050	S 4000, S 4500	RS-232, LAN	no / only DHCP from firmware version 1.11

Electrical Valve Drives (up to 8 valves can be cascaded in one module and can be programmed in one table)	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
AZURA® Valve Unifier VU 4.1	VU4.1	USB (build-in USB-to-RS-232 converter), LAN	no / no
AZURA® Valve Drive V 2.1S	V2.1S	RS-232, LAN	no / no
BlueShadow Valve drives	V2, V6, V12, V16	RS-232, LAN	no / no
Smartline valve drives S6, S12, S16	K-6, K-12, K-16	RS-232, LAN	no / no (first Smartline valves drives have no LAN connector)
electric valve drives K-6, K-12, K-16	K-6, K-12, K-16	RS-232	no / - (general: devices do not have LAN connector)

Other Supported Instruments	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
Flowmeter Bronkhorst Mini Cori-Flow M12, M13, M14	Mini Cori-Flow	RS-232	no / - (general: correct flowrate needs to be selected in configuration)

Fraction collectors are also supported by DataApex. For those fraction collectors and the corresponding fractionation function no additional license is required. KNAUER additionally supports devices, listed below, and an own fraction collection option; refer to the manual V1670 for the functionality. KNAUER device drivers (Module Info: Developed by Knauer) and FRC functionality are only available with the Knauer FRC control module for ClarityChrom.

Fraction collectors (one fraction collector in a system, only drivers „Developed by Knauer“, requires Knauer FRC control module)	Module-Name in ClarityChrom	Interface	Restrictions using RS-232 / LAN, if necessary firmware version
KNAUER MultiValve fraction collector - all KNAUER electric valve drives with all supported valves (not 8/4 valve); up to 32 valves in a cascade (not with valves in ASM 2.2L / ASM 2.1L)	MultiValve FC	RS-232, LAN (depends on used valve drive)	no / no
AZURA® ASM 2.2L - fraction valve, build-in KNAUER valve	Valve - ASM2.2L:FRC (only as Assistant module)	LAN	- / only one valve as fraction collector - no valve cascading
AZURA® ASM 2.1L - fraction valve, build-in KNAUER or VICI valve	Valve - ASM2.1L:FRC (only as Assistant module)	LAN	- / only one valve as fraction collector - no valve cascading
Smartline Fraction Collector 3050	S 3050	RS-232, LAN	No peak recycling supported / no peak recycling supported
Büchi Fraction Collector C-660	C-660	RS-232	no / -
ISCO Fraction Collector Foxy Jr.	Foxy Jr.	RS-232	no / -
ISCO Fraction Collector Foxy R1	Foxy R1	RS-232, LAN	no / no (general: touch panel is not blocked during remote control)
ISCO Fraction Collector Foxy R2	Foxy R2	RS-232, LAN	no / no (general: touch panel is not blocked during remote control)
Labocol Vario 4000 / 4000 Plus Fraction Collector	Labocol VARIO-4000	RS-232, LAN	no / no ; [general: touch panel is not blocked during remote control; only trays with 20, 24, 39, 80 and 125 vials are supported; free tray definition is not supported; all racks must have same type (no mixed rack configuration supported); no USB control support]
Virtual Fraction Collector	Virtual FC	-	-

<p>A fractionation option, developed by Data Apex, is available without Knauer FRC control module; requires fraction collector driver developed by Data Apex</p>	<p>Drivers developed by Data Apex; refer <u>matching fraction collectors</u> in <i>Other devices</i></p>
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Other devices (this list may not be complete; for KNAUER devices, refer to chapter “KNAUER devices”)

Links to [GCs](#), [HPLC Systems](#), [HPLC Pumps](#), [HPLC Detectors](#), [PDA Detectors](#), [LC-MS Detectors](#), [GC-MS TOF Detectors](#), [Other HPLC components](#), [GC Accessories](#), [Autosamplers](#), [HPLC Autosampler Accessories](#), [HPLC Column Ovens](#), [Fraction Collectors](#), [Valves](#), [Amino Acid Analyzers](#),

Some of the following devices may only available in special Clarity OEM version (e.g. Hitachi Chromaster and Primaide), not available from KNAUER or require drivers, only available directly from the device manufacturer. Note the superscript markers for the devices, explained at the [end of this list](#).

The following devices and systems also can be controlled with ClarityChrom 8.2.2. Drivers for these device or systems are not developed by KNAUER. Note, that there may be restrictions as that only one system per computer is allowed or a required additional license option (control module or extension, as GC, PDA, ...). For other devices or systems a special interface or a separate instrument license may be required which is not available from KNAUER. Detailed information for each device can be found in the respective control manuals, available on the KNAUER webpage.

GCs			
Manufacturer	Name	Interface	Status
Agilent	4890D	RS-232	Ready
Agilent	5890 II	RS-232	Ready
Agilent	5890A	RS-232	Ready
Agilent	6820	RS-232, LAN	Ready
Agilent	6850	RS-232, LAN	Ready
Agilent	6850 II	RS-232, LAN	Ready
Agilent	6890	RS-232	Ready
Agilent	6890 Plus	RS-232, LAN	Ready
Agilent	6890N	RS-232, LAN	Ready
Agilent	7820	LAN - ICF	Testing
Agilent	7890A	LAN	Ready
Agilent	7890A	LAN - ICF	Testing
Agilent	7890B	LAN	Ready
Agilent	7890B	LAN - ICF	Testing
Ample Technology Center	ATC-6900	LAN	Ready
Apix ^{1,2}	ChromPix	LAN	Testing
Apix ^{1,2}	ChromPix2	LAN	Testing
Apix ^{1,2}	TwinPix	LAN	Testing
Dani	GC1000	RS-232 + A/D converter	Ready
Dani ^{1,2}	Master GC	RS-232, LAN	Ready
Ellutia ^{1,3}	200 Series	RS-232 + A/D converter	Ready
Ellutia ^{1,2}	300 Series	RS-232 + A/D converter	Ready
Fuli ¹	GC 9720 Plus	LAN	Testing
GOW-MAC	Series 816	LAN	Ready
Netel	Analyte 2900A	RS-232	Testing
Netel	Chrom Lite 3000A	RS-232	Testing
Shimadzu	GC14C	RS-232, OPT-USB + A/D converter	Ready
Shimadzu	GC17A	RS-232, OPT-USB + A/D converter	Ready
Shimadzu	GC2010	RS-232	Ready
Shimadzu	GC2010 Plus	RS-232	Ready

Shimadzu	GC2014	RS-232	Ready
Shimadzu	GC2014C	RS-232	Ready
Shimadzu	GC2014C APC/AFC	RS-232	Ready
Snir ^{/1,2}	Sion 4210	LAN	Testing
YL Instrument ^{/1}	YL6100	RS-232	Ready
YL Instrument ^{/1}	YL6500	LAN	Ready

HPLC Systems			
Manufacturer	Name	Interface	Status
Agilent	1100 LC (see list of particular components)	LAN - ICF	Ready
Agilent	1100 system	GPIB, LAN	Ready
Agilent	1120 LC (G4286A, G4287A, G4288A, G4289A, G4290A)	LAN - ICF	Ready
Agilent	1200 LC (see list of particular components)	LAN - ICF	Ready
Agilent	1200 system (selected modules only)	LAN	Ready
Agilent	1220 LC (G4286B, G4286C, G4287B, G4287C, G4288B, G4289B, G4290B, G4291B, G4291C, G4292B, G4292C, G4293B), 1220 VL (G4288C, G4289C, G4290C, G4293C, G4294B) (see list of particular components)	LAN - ICF	Ready
Agilent	1260 Infinity (see list of particular components)	LAN - ICF	Ready
Agilent	1260 Infinity II (see list of particular components)	LAN - ICF	Testing
Agilent	1290 Infinity II (see list of particular components)	LAN - ICF	Ready
Alltesta ^{/1}	Analyzer	RS-232	Testing
Analytical Technologies Limited ^{/4}	iUHPLC Series 3000Plus	RS-232	Testing
Antec	ALEXYS	RS-232	Ready
Antec	ROXY	RS-232	Ready
CoruiTech ^{/1}	Rainbow	LAN	Testing
CoruiTech ^{/1}	RainbowC	LAN	Testing
CVC Technologies ^{/4}	Atima	LAN	Testing
CVC Technologies ^{/4,5}	Laevitas	USB	Ready
Dalian Elite ^{/1,3}	EClassical 3100	LAN	Testing
Dalian Elite ^{/1,3}	iChrom 5100	LAN	Ready
Dalian Elite ^{/1,3}	SOPTOP 1620A Plus	LAN	Ready
GL Science ^{/4,5}	LC800	USB	removed
Hanon Instruments ^{/4}	LC7000	LAN/RS-232	Ready
Hanon Instruments ^{/4}	LC7300	LAN/RS-232	Ready
Hitachi ^{/6,7}	Chromaster	USB	Ready
Hitachi ^{/5,7}	LaChrom Elite	USB	Ready
Hitachi ^{/5,6,7}	Primaide	USB	Ready
Ingos ^{/1}	LC 5000	LAN	Testing
Interlab ^{/3,7}	MAESTRO	USB	Ready
PerkinElmer ^{/1}	Flexar	RS-232 + LAN	Testing
PerkinElmer ^{/1}	NexSAR	RS-232	Testing
RIGOL ^{/1}	L-3000	RS-232	Testing
Shimadzu ^{/5}	LC-10	RS-232 or LAN + corresp. controller (see HPLC Other)	Ready
Shimadzu ^{/5}	LC-20 Prominence	RS-232 or LAN + corresp. controller (see	Ready

		HPLC Other)	
SSI	B2300	RS-232 + LC UNI	Ready
SSI	VersaGrad, VersaGrad UHP	RS-232 + LC UNI	Ready
Sykam ^{/1}	S500	RS-232	Ready
Sykam ^{/1}	S600	RS-232	Ready
YL Instrument ^{/1}	ChroZen	LAN	Ready
YL Instrument ^{/1}	YL9100	LAN/RS-232	Ready
YL Instrument ^{/1}	YL9300	LAN/RS-232	Ready
YL Instrument ^{/4}	YL9800	USB	Ready

HPLC Pumps			
Manufacturer	Name	Interface	Status
	Any pump with flow controlled by voltage or frequency	CB20 or Zebrick	Ready
	Any pump with on-line flow controlled by text (ASCII) comm. protocol	RS-232 - LC UNI	Ready
Agilent	1100 Binary	GPIB, LAN	Ready
Agilent	1100 Isocratic	GPIB, LAN	Ready
Agilent	1100 Quaternary	GPIB, LAN	Ready
Agilent	1200 Binary	LAN	Ready
Agilent	1200 Isocratic	LAN	Ready
Agilent	1200 Quaternary	LAN	Ready
Agilent	Binary (G1312A, G1312B, G1312C) (all including selected pump valve clusters)	LAN - ICF	Ready
Agilent	Binary (G1376A, G2226A, G4220A, G4220B, G4302A, G7112B, G7120A) (all including selected pump valve clusters) (see list of particular components)	LAN - ICF	Testing
Agilent	Isocratic (G1310A, G1310B) (all including selected pump valve clusters) (see list of particular components)	LAN - ICF	Ready
Agilent	Isocratic (G1361A, G7110B) (all including selected pump valve clusters) (see list of particular components)	LAN - ICF	Testing
Agilent	Quaternary (G1311A, G1311B, G1311C, G4204A) (all including selected pump valve clusters) (see list of particular components)	LAN - ICF	Ready
Agilent	Quaternary (G5611A, G5654A, G7104A, G7111A, G7111B) (all including selected pump valve clusters) (see list of particular components)	LAN - ICF	Testing
Alltech/Grace	301	RS-232 - LC UNI	Ready
Alltech/Grace	426	RS-232 - LC UNI	Ready
Alltech/Grace	626	RS-232 - LC UNI	Ready
Alltech/Grace	726	RS-232 - LC UNI	Ready
Analytical Technologies Limited	ALC2010	RS-232 - LC UNI	Ready
Analytical Technologies Limited	ALC2100	RS-232 - LC UNI	Ready
Analytical Technologies Limited	COLUMN-WASH	RS-232 - LC UNI	Ready
Analytical Technologies Limited	P-3210U	RS-232	Testing

Analytical Technologies Limited	PB-3220U	RS-232	Testing
Analytical Technologies Limited	PQ-3245U	RS-232	Testing
Antec	LC100	RS-232	Ready
Antec ^{/4}	LC100S	RS-232	Ready
Antec ^{/4}	LC110	RS-232	Ready
ASI	500, 501	RS-232 - UNI Ruby	Ready
ASI	520	RS-232 - UNI Ruby	Ready
Beckman/Altex	110A, 110B, 114	CB20 or Zebrick	Ready
Bio-Rad	1350	CB20 or Zebrick	Ready
Bischoff	2250	RS-232	Ready
Chrom Tech	ISO-100	RS-232	Ready
Chrom Tech	ISO-1000	RS-232	Ready
Chrom Tech	ISO-1500	RS-232	Ready
Chrom Tech	ISO-2000	RS-232	Ready
Chromophor	Chromopeak 2010	RS-232 - UNI Ruby	Ready
Chromsystems	CLC 300	CB20 or Zebrick	Ready
Chromsystems	CLC 330	RS-232	Ready
Ecom ^{/1}	Alpha 05	RS-232	Ready
Ecom ^{/1}	Alpha 10	RS-232	Ready
Ecom	Alpha 10	RS-232 - LC UNI	Ready
Ecom ^{/1}	Alpha 100	RS-232	Ready
Ecom	Alpha 100	RS-232 - LC UNI	Ready
Ecom ^{/1}	Alpha 250	RS-232	Ready
Ecom ^{/1}	Alpha 50	RS-232	Ready
Ecom	Alpha 50	RS-232 - LC UNI	Ready
Ecom ^{/1}	Beta 10	RS-232	Ready
Ecom	Beta 10	RS-232 - LC UNI	Ready
Ecom ^{/1}	Beta 50	RS-232	Ready
Ecom	Beta 50	RS-232 - LC UNI	Ready
Ecom ^{/1}	ECP2002, ECP2010, ECP2050, ECP2100, ECP2300	RS-232 or LAN	Ready
Ecom ^{/1}	IOTA-S-10, IOTA-S-50, IOTA-S-100, IOTA-S-300	RS-232	Ready
Ecom	KAPPA10	RS-232 - LC UNI	Ready
Ecom ^{/1}	KAPPA10PP	RS-232	Ready
Ecom	LCP 4000	CB20 or Zebrick	Ready
Ecom	LCP 4020	CB20 or Zebrick	Ready
Ecom ^{/1}	LCP 4050	RS-232	Ready
Ecom ^{/1}	LCP 4100	RS-232	Ready
Ecom	LCP 4100	RS-232 - LC UNI	Ready
Flom	301M	RS-232 - UNI Ruby	Ready
Flom	AI-12 series	RS-232 - UNI Ruby	Ready
Flom	UI-22 (UI series)	RS-232	Testing
Flux - Thermo ^{/1}	Allegro	RS-232	Ready
Flux - Thermo ^{/1}	Rheos 2000	RS-232	Ready
Flux - Thermo ^{/1}	Rheos 2200	RS-232	Ready
Gilson	302, 303	GSIOC	Ready
Gilson	305, 306, 307	GSIOC	Ready
Gynkotek	M300CS	CB20 or Zebrick	Ready
Gynkotek	M480	CB20 or Zebrick	Ready
Hanon Instruments ^{/4}	LC7010, LC7011, LC7012	LAN	Ready
Hitachi ^{/6,7}	Chromaster 5110, 5160	USB	Ready

Hitachi ^{/7}	L-2100	USB	Ready
Hitachi ^{/7}	L-2130	USB	Ready
Hitachi	L-6000	via L-6200	Ready
Hitachi	L-6200, L-6210	RS-232	Ready
Hitachi ^{/5,6,7}	Primaide 1110	USB	Ready
JASCO	PU-880	CB20 or Zebrick	Ready
Kontron	320, 322, 325	RS-232 - LC UNI	Testing
Kontron	420	RS-232 - LC UNI	Ready
Kontron	422	RS-232 - LC UNI	Ready
Kontron	525	RS-232 - LC UNI	Ready
LKB - Amersham	LKB 3500	CB20 or Zebrick	Ready
LKB - Amersham	P-50	CB20 or Zebrick	Ready
LKB - Amersham	P-500	CB20 or Zebrick	Ready
PerkinElmer ^{/1}	Flexar Binary LC Pump	RS-232	Testing
PerkinElmer ^{/1}	Flexar Quaternary LC Pump	RS-232	Testing
Postnova Analytics	PN1130	CB20 or Zebrick	Ready
Recipe	GP3000	RS-232	Ready
Recipe	IP3000	RS-232	Ready
RIGOL ^{/1}	L-3200	RS-232	Testing
Schambeck	9404	CB20 or Zebrick	Ready
Schambeck ^{/4}	S 9425	RS-232	Ready
Schambeck	SDS 9414 I	CB20 or Zebrick	Ready
Schambeck	SFD 2100	RS-232	Ready
Shimadzu	LC-10AD	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-10ADvp	OPT-USB	Ready
Shimadzu	LC-10ADvp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-10Ai	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-10AS	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-10AT	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-10ATvp	OPT-USB	Ready
Shimadzu	LC-10ATvp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-20AB	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-20AB (in LC-10 emulation mode only)	OPT-USB	Ready
Shimadzu	LC-20AD	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-20AD (in LC-10 emulation mode only)	OPT-USB	Ready
Shimadzu	LC-20ADXR	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-20ADXR (in LC-10 emulation mode only)	OPT-USB	Ready
Shimadzu	LC-20AS	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-20AS (in LC-10 emulation mode only)	OPT-USB	Ready
Shimadzu	LC-20AT	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LC-20AT (in LC-10 emulation mode only)	OPT-USB	Ready
Shimadzu	LC-6A	CB20 or Zebrick	Ready

Shimadzu	LC-6AD	Shimadzu controller (see <u>HPLC Others</u>)	Ready
Shimadzu	LC-8A	Shimadzu controller (see <u>HPLC Others</u>)	Ready
Spark	SPH1240	RS-232, USB or LAN	Ready
Spark	SPH1299	RS-232, USB or LAN	Testing
SSI	150	RS-232 - UNI Ruby	Ready
SSI	1500	RS-232 - UNI Ruby	Ready
SSI	222D	CB20 or Zebrick	Ready
SSI	HF 300	RS-232 - UNI Ruby	Ready
SSI	LD-Class	RS-232	Ready
SSI	LS-Class	RS-232	Ready
SSI	LU-Class	RS-232	Ready
SSI	M1-Class	RS-232	Ready
SSI	Mighty-Mini	RS-232 - UNI Ruby	Testing
SSI	MX-Class	RS-232	Ready
SSI	PR-Class	RS-232	Ready
SSI	Prep 100	RS-232 - UNI Ruby	Ready
SSI	Prep 300	RS-232 - UNI Ruby	Ready
SSI	Q-Grad	RS-232 - UNI Ruby	Ready
SSI	Series I, Series II	RS-232 - UNI Ruby	Ready
SSI	Series III	RS-232 - UNI Ruby	Ready
SSI	UHP	RS-232 - UNI Ruby	Ready
SSI	VersaGrad UHP	RS-232 - UNI Ruby	Ready
Sykam	S1021, S1521	CB20 or Zebrick	Ready
Sykam	S1122	CB20 or Zebrick	Ready
Sykam ^{/1}	S1125	RS-232	Ready
Sykam ^{/1}	S1130	RS-232	Ready
Sykam ^{/1}	S1132	RS-232	Ready
Sykam	S2100	RS-232	Ready
Techlab	Minipump1	RS-232 - UNI Ruby	Ready
Teledyne ISCO	2300	CB20 or Zebrick	Ready
TSP	Constametric III	CB20 or Zebrick	Ready
Unicam	PU 4015	CB20 or Zebrick	Ready
Varian	212-LC	RS-232 - UNI Ruby	Ready
Waters	6000A	CB20 or Zebrick	Ready
Waters	M 45, 501, 510, 515	CB20 or Zebrick	Ready
Watrex	DeltaChrom P200	RS-232 - LC UNI	Ready
Watrex	DeltaChrom SDS20	RS-232 - LC UNI	Ready
Watrex	DeltaChrom SDS30	RS-232 - LC UNI	Ready
Watrex	Mighty-Mini	RS-232 - UNI Ruby	Testing
YL Instrument	ChroZen UHPLC Pump	LAN	Testing
YL Instrument ^{/1}	YL9110, YL9111, YL9112	LAN	Ready

HPLC Detectors (PDA detectors are listed in a separate section "PDA Detectors")			
Producer	Name	Interface	Status
Agilent	1100 MWD	GPIB, LAN	Ready
Agilent	1100 RID	GPIB, LAN	Ready
Agilent	1100 VWD	GPIB, LAN	Ready
Agilent ^{/8}	1200 MWD	LAN	Ready
Agilent	1200 VWD	LAN	Ready
Agilent	1200: ELSD	RS-232	Ready
Agilent	ELSD (G4218A, G4260A, G4260B, G4261A, G4261B, G7102A)	LAN - ICF	Testing
Agilent	FLD (G1321A, G1321B)	LAN - ICF	Ready
Agilent	FLD (G1321C, G7121A, G7121B)	LAN - ICF	Testing
Agilent	MWD (G1365A, G1365B, G1365C, G1365D)	LAN - ICF	Ready
Agilent	MWD (G7165A)	LAN - ICF	Testing
Agilent	RID (G1362A)	LAN - ICF	Ready
Agilent	RID (G7162A, G7162B)	LAN - ICF	Testing
Agilent	VWD (G1314A, G1314B, G1314C, G1314D)	LAN - ICF	Ready
Agilent	VWD (G1314E, G1314F, G7114A, G7114B)	LAN - ICF	Testing
Alltech/Grace	3300 ELSD	LAN	Ready
Analytical Technologies Limited ^{/4}	ASPD2600	RS-232	Ready
Analytical Technologies Limited ^{/4}	UVD-3500U	RS-232	Testing
ANALYTIK Jena ^{/1}	PlasmaQuant MS	LAN	Testing
Antec	DECADE Elite	USB, LAN	Ready
Antec	DECADE II	RS-232	Ready
Antec	DECADE II MD	RS-232	Ready
Antec	DECADE II SDC	RS-232	Ready
Antec	DECADE Lite	USB, LAN	Ready
Antec	ROXY Potentiostat	RS-232	Ready
CoruiTech ^{/1}	Rainbow detector	USB	Testing
Ecom ^{/1}	Apatite	RS-232	Ready
Ecom ^{/1}	ECD2600, ECD2800	RS-232 or LAN	Ready
Ecom ^{/1}	Flash 06 DAD	RS-232	Ready
Ecom ^{/1}	Flash 06 Single	RS-232	Ready
Ecom ^{/1}	Flash 10 DAD	RS-232	Ready
Ecom ^{/1}	Malachite	RS-232	Ready
Ecom ^{/1}	Opal	RS-232	Ready
Ecom	RI2012	RS-232 - UNI Ruby	Ready
Ecom ^{/1}	Sapphire	RS-232	Ready
Ecom	Topaz	RS-232	Ready
Ecom	TOYFIX	RS-232	Testing
Elysia-raytest ^{/1,9}	Gabi Nova	USB or LAN	Testing
Elysia-raytest ^{/1,9}	Gabi Star Radiodetector	RS-232	Ready
Elysia-raytest ^{/1,9}	POMO Radiodetector	USB - UNI Ruby	Ready
Elysia-raytest ^{/1,9}	Ramona Star	RS-232	Testing
ERC	RefractoMax 520 Series	RS-232 - UNI Ruby	Ready
ESA	Coulochem III	USB	Ready
Gilson	PrepELSTM II	RS-232	Ready

Hanon Instruments ^{/4}	LC7020	LAN	Ready
Hanon Instruments ^{/4}	LC7070	RS-232	Ready
Hanon Instruments ^{/4}	LC7081	RS-232	Ready
Hi Corporation	RI2012	RS-232 - UNI Ruby	Ready
Hitachi ^{/6,7}	Chromaster 5410, 5420, 5440, 5450	USB	Ready
Hitachi ^{/7}	L-2400	USB	Ready
Hitachi ^{/5,6,7}	Primaide 1410	USB	Ready
Interlab ^{/3}	MAESTRO ELSD	RS-232	Testing
Interlab	Omega FLD	USB	Testing
Interlab	Omega UV-VIS	USB	Testing
JAI ^{/1}	RI-700II	RS-232	Ready
Kontron	432	A/D converter + RS-232 - UNI Ruby	Ready
PerkinElmer ^{/1}	Flexar FX-UV/Vis	RS-232	Testing
PerkinElmer ^{/1}	Flexar UV/Vis	RS-232	Testing
PerkinElmer ^{/1}	NexION 1000	LAN	Testing
PerkinElmer ^{/1}	NexION 2000	LAN	Testing
Recipe	EC6000	RS-232 - UNI Ruby	Testing
Recipe ^{/4}	FW3000	RS-232	Ready
Recipe ^{/4}	UV3000	RS-232	Ready
RIGOL ^{/1}	L-3500	RS-232	Testing
RIGOL	L-3530	RS-232	Ready
Schambeck	RI 2000	RS-232 - UNI Ruby	Ready
Schambeck	RI 2012	RS-232 - UNI Ruby	Ready
Schambeck	S 2020	RS-232 - UNI Ruby	Ready
Schambeck	S 2030	RS-232 - UNI Ruby	Ready
Schambeck ^{/4}	S 4245	RS-232	Ready
Schambeck	S3210	RS-232	Testing
Schambeck	S3240	RS-232	Testing
Schambeck ^{/4}	ZAM 3000	RS-232	Ready
Schambeck ^{/4}	ZAM 4000	RS-232	Ready
Sedere	Sedex 100LT	RS-232 or USB	Ready
Sedere	Sedex 80LT	RS-232	Ready
Sedere	Sedex 85LT	RS-232	Ready
Sedere	Sedex 90LT	RS-232 or USB	Ready
Sedere	Sedex FP	RS-232 or USB	Ready
Sedere	Sedex LC	RS-232 or USB	Ready
Semba Biosciences ^{/4}	Octave 4X	RS-232	Ready
Semba Biosciences ^{/4}	Octave 4XE	RS-232	Ready
Shimadzu	ELSD-LTII	RS-232	Ready
Shimadzu	RF-10A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	RF-10Axl	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	RF-20A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	RF-20Axs	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	RID-10A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-10A	Shimadzu controller (see HPLC Others)	Ready

Shimadzu	SPD-10Ai	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-10AV	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-10AVi	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-10Avp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-10AVvp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-20A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-20AV	Shimadzu controller (see HPLC Others)	Ready
Shodex	RI-101	RS-232 - UNI Ruby	Ready
Shodex	RI-102	RS-232 - UNI Ruby	Ready
Shodex	RI-104	RS-232 - UNI Ruby	Ready
Shodex	RI-501	LAN - UNI Ruby	Testing
Shodex	RI-501EX	LAN - UNI Ruby	Testing
Shodex	RI-502	LAN - UNI Ruby	Testing
Shodex	RI-504	LAN - UNI Ruby	Testing
Softa	1300	RS-232	Ready
Softa	1400	RS-232	Ready
Softa	200S	RS-232	Ready
Softa	300S	RS-232	Ready
Softa	400	RS-232	Ready
Sykam	RI2000	RS-232 - UNI Ruby	Ready
Sykam ^{/1}	S3245	RS-232	Ready
Sykam ^{/1}	S3250	RS-232	Ready
Sykam	S3585	RS-232 - UNI Ruby	Ready
Sykam	S3590	RS-232 - UNI Ruby	Ready
Unimicro	UNIEX-7700 ELSD	RS-232	Testing
YL Instrument ^{/1}	ChroZen HPLC-A UVD	LAN	Ready
YL Instrument ^{/1}	ChroZen UHPLC UVD	LAN	Ready
YL Instrument ^{/1}	YL9120	LAN	Ready
YL Instrument ^{/1}	YL9170	RS-232	Ready
YL Instrument ^{/1}	YL9180	RS-232	Ready
YL Instrument	YL9181	RS-232	Ready

PDA Detectors

Manufacturer	Name	Interface	Status
Agilent	1100: DAD, FLD	GPIB, LAN	Ready
Agilent	1200: DAD (G1315C, G1315D only)	LAN	Testing
Agilent ^{/8}	1200: DAD, FLD	LAN	Ready
Agilent	G1315A	LAN - ICF	Ready
Agilent	G1315B	LAN - ICF	Ready
Agilent	G1315C	LAN - ICF	Ready
Agilent	G1315D	LAN - ICF	Ready
Agilent	G4212A	LAN - ICF	Ready
Agilent	G4212B	LAN - ICF	Ready
Agilent	G7115A	LAN - ICF	Testing
Agilent	G7117A	LAN - ICF	Testing

Agilent	G7117B	LAN - ICF	Testing
Agilent	G7117C	LAN - ICF	Testing
Analytical Technologies Limited ^{/4}	DAD-3520U	RS-232	Testing
Dalian Elite ^{/1,12}	iChrom 5100 PDA	LAN	Testing
Duratec ^{/13}	DDT-3200 PDA	USB	Ready
Ecom ^{/1}	ECDA2000, ECDA2800	USB or LAN	Testing
Ecom ^{/1}	Flash 12 DAD	RS-232	Ready
Ecom ^{/1}	FLASH 14 DAD	RS-232	Ready
Ecom	TOYDAD 400	RS-232	Testing
ECOM	TOYDAD 400 L	RS-232	Testing
ECOM	TOYDAD 600	RS-232	Testing
ECOM	TOYDAD 600 L	RS-232	Testing
ECOM	TOYDAD 800	RS-232	Testing
ECOM	TOYDAD 800 L	RS-232	Testing
ECOM	Toy18DAD	RS-232 or LAN	Testing
ECOM	Baby18DAD	RS-232 or LAN	Testing
Hanon Instruments ^{/4}	LC7060	LAN	Ready
Hitachi ^{/6,7}	Chromaster 5430	USB	Ready
Hitachi ^{/5,6,7}	Primaide 1430	USB	Ready
PerkinElmer ^{/1}	Flexar Plus PDA	LAN	Testing
RIGOL ^{/1}	L-3520	USB or LAN	Testing
Shimadzu	SPD-M10Avp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SPD-M20A	Shimadzu controller (see HPLC Others)	Ready
Sykam	S3210, S3240	RS-232	Testing
YL Instrument ^{/1}	ChroZen HPLC-A PDA	LAN	Ready
YL Instrument ^{/1}	ChroZen UHPLC PDA	LAN	Ready
YL Instrument ^{/1}	YL9160	LAN	Ready

LC-MS Detectors

Manufacturer	Name	Interface	Status
Advion	Expression CMS	USB	Ready
Microsaic	4000 MiD	LAN	Ready
Microsaic	4500 MiD	LAN	Ready
YL Instrument	YL9900	USB	Ready

GC-MS Detectors

Manufacturer	Name	Interface	Status
YL Instrument	YL6900	LAN	Testing

GC-MS TOF Detectors

Manufacturer	Name	Interface	Status
Dani ^{/1}	MasterTOF	USB	Ready
Markes International	BenchTOF	LAN	Ready

HPLC Others

Manufacturer	Name	Interface	Status
Shimadzu	CBM-20A	RS-232 or LAN	Ready

Shimadzu	CBM-20Alite	RS-232 or LAN	Ready
Shimadzu	SCL-10Avp	RS-232 or LAN	Ready
SISw	SSI pumps USB interface	USB - UNI Ruby	Ready
SISw / ¹	Systec Degasser Watchdog	USB - UNI Ruby	Ready
SISw / ¹	USB pH monitor	USB - UNI Ruby	Ready
Unimicro	HVPS	RS-232	Testing

GC Accessories			
Manufacturer	Name	Interface	Status
Faculty of Science, Charles University in Prague	GCxGC Modulator	RS-232	Ready

Autosamplers			
Manufacturer	Name	Interface	Status
	Any autosampler with the Ready input and Inject output (Inject marker)	I/O device	Ready
Agilent	1100 ALS	GPIB, LAN	Ready
Agilent	1100 TAS	GPIB, LAN	Ready
Agilent	1200 ALS, 1200 TAS	LAN	Ready
Agilent	6850 ALS	through GC6850	Ready
Agilent	7673	RS-232	Ready
Agilent	7673 II	RS-232	Ready
Agilent	7683	through GC6890	Ready
Agilent	7683, 7693	through GC7890	Ready
Agilent	G1313A (all including thermostat (G1330A, G1330B))	LAN - ICF	Ready
Agilent	G1327A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1329A (all including thermostat (G1330A, G1330B))	LAN - ICF	Ready
Agilent	G1329B (all including thermostat (G1330A, G1330B))	LAN - ICF	Ready
Agilent	G1367A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1367B (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1367C (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1367D (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1367E (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1368A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1377A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1378A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G1389A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G2258A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G2260A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G4226A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G4227A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G4303A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G5667A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G5668A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G7129A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G7129B (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G7129C (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G7157A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G7167A (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Agilent	G7167B (all including thermostat (G1330A, G1330B))	LAN - ICF	Testing
Alltech/Grace	570	RS-232	Ready

Alltech/Grace	580	RS-232	Ready
Ample Technology Center	ATC3000A	LAN	Ready
Ample Technology Center	ATC3100A	LAN	Ready
Ample Technology Center	ATC3200A	LAN	Ready
Analytical Technologies Limited ^{/4}	AS3320	RS-232	Testing
Analytical Technologies Limited ^{/4}	AS2000	RS-232	Ready
Antec	AS 100	RS-232	Ready
Antec ^{/4}	AS 110	RS-232	Ready
Antec ^{/4}	AS 110 Micro	RS-232	Ready
Cetac	ASX-8000	USB	Ready
Chromsystems	CLC 200	RS-232	Ready
CTC Analytics	A200S	RS-232	Ready
CTC Analytics	PAL (GC, LC, Combi)	RS-232 or LAN	Ready
CTC Analytics	PAL LSI	LAN	Testing
CTC Analytics	PAL RSI	LAN	Testing
CTC Analytics	PAL RTC	LAN	Testing
CTC Analytics	PAL-xt (LC-xt, HTC-xt, HTS-xt, HTX-xt, GC-xt, Combi-xt, Combi-xt extended)	RS-232 or LAN	Ready
CTC Analytics	PAL3 System	LAN	Testing
Dani	ALS1000	RS-232	Ready
Dani ^{/1,2}	Master AS	RS-232	Ready
Dani ^{/1,2}	Master DHS	RS-232	Ready
Dani ^{/1,2}	Master SHS	RS-232, USB or LAN	Ready
Eicom ^{/3}	AS-700	RS-232, USB or LAN	Ready
ESA	542	RS-232	Ready
Hanon Instruments ^{/4}	LC7050	RS-232	Ready
Hitachi ^{/6,7}	Chromaster 5210	USB	Ready
Hitachi ^{/6,7}	Chromaster 5260	USB	Ready
Hitachi ^{/6,7}	Chromaster 5280	USB	Ready
Hitachi ^{/7}	L-2200	USB	Ready
Hitachi ^{/5,6,7}	Primaide 1210	USB	Ready
HTA ^{/1}	HT1500L	USB	Ready
HTA	HT2000H, HT2000HT	LAN	Ready
HTA	HT200H	RS-232	Ready
HTA	HT2100H	LAN	Ready
HTA	HT250D	RS-232	Ready
HTA	HT2800T	LAN	Ready
HTA	HT280T (without SPME)	RS-232	Ready
HTA	HT3000A	LAN	Ready
HTA	HT300A, HT310A, HT300LV, HT310LV	RS-232	Ready
HTA	HT300L	RS-232	Ready
HTA	HT3100A	LAN	Ready
HTA	HT310L	RS-232	Ready
HTA	HT3200A	LAN	Ready

HTA	HT4000L	LAN	Ready
HTA ^{/1}	HT800L	RS-232	Ready
Kontron	360	RS-232 - UNI Ruby	Ready
Kontron	460	RS-232 - UNI Ruby	Ready
Kontron	465	RS-232 - UNI Ruby	Ready
Kontron	560	RS-232 - UNI Ruby	Ready
PerkinElmer ^{/1}	Flexar AS	RS-232, USB, LAN	Testing
PerkinElmer	NexSAR Inert HPLC Autosampler	RS-232, USB or LAN	Ready
Postnova Analytics	PN5300	RS-232	Ready
Recipe	AS3000	RS-232	Ready
Recipe	AS5000	RS-232	Ready
RIGOL ^{/1}	L-3320	RS-232, USB or LAN	Testing
Schambeck ^{/4}	S 6250	RS-232	Ready
Schambeck ^{/4}	S 6300	RS-232	Ready
Schambeck	S5200	RS-232	Ready
Shimadzu	AOC-20i, AOC-20s, AOC-20d	RS-232	Ready
Shimadzu	SIL-10ADvp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-10AF	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-10AXL	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-20A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-20AC	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-20ACHT	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-20ACXR	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-20AHT	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-20AXR	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-HTA	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	SIL-HTC	Shimadzu controller (see HPLC Others)	Ready
Snir ^{/1, 2}	Sion 120	RS-232	Testing
Spark ^{/4}	Alias	RS-232	Ready
Spark	Alias (including User Program)	RS-232, USB or LAN	Ready
Spark	Basic Marathon (Plus, XT)	RS-232	Ready
Spark	Endurance	RS-232	Ready
Spark	Integrity	RS-232, USB or LAN	Ready
Spark	Midas	RS-232	Ready
Spark	Triathlon	RS-232	Ready
Sykam	S5200	RS-232	Ready
Sykam ^{/1}	S5250	RS-232	Ready
Sykam ^{/1}	S5300	RS-232	Ready
Vici-VALCO	Multi-position valve used as AS	RS-232 - UNI Ruby	Ready
YL Instrument	ChroZen UHPLC ALS	LAN	Ready
YL Instrument	YL2000H, YL2000HT	LAN	Ready

YL Instrument	YL2100H	LAN	Ready
YL Instrument	YL3000A	LAN	Ready
YL Instrument	YL3100A	LAN	Ready
YL Instrument	YL3200A	LAN	Ready
YL Instrument ^{/4}	YL9150	RS-232	Ready
YL Instrument ^{/4}	YL9150 Plus	LAN	Testing
YL Instrument	YL9151	RS-232	Ready

HPLC Autosampler Accessories			
Manufacturer	Name	Interface	Status
R-Biopharm	RIDACREST	RS-232, USB or LAN	Ready
Spark	ACE	RS-232, USB or LAN	Ready
Spark	HPD	RS-232, USB or LAN	Ready
Spark	Symbiosis	RS-232, USB or LAN	Ready

HPLC Column Ovens			
Manufacturer	Name	Interface	Status
Agilent	1100 TCC	GPIB, LAN	Ready
Agilent	1200 TCC	LAN	Ready
Agilent	G1316A	LAN - ICF	Ready
Agilent	G1316B	LAN - ICF	Ready
Agilent	G1316C	LAN - ICF	Ready
Agilent	G7116A	LAN - ICF	Testing
Agilent	G7116B	LAN - ICF	Testing
Agilent	G7130A	LAN - ICF	Testing
Analytical Technologies Limited ^{/4}	CO-3400U	RS-232	Testing
Cluzeau Info-Labo	Croco-CIL	RS-232 - UNI Ruby	Ready
Cluzeau Info-Labo	Gecko-2000	RS-232 - UNI Ruby	Ready
Cluzeau Info-Labo	Igloo-CIL	RS-232 - UNI Ruby	Ready
Ecom ^{/1}	ECO2080, ECO2099	RS-232, LAN	Ready
Ecom	LCO 102	RS-232 - UNI Ruby	Ready
Hanon Instruments ^{/4}	LC7030	LAN	Ready
Hitachi ^{/6,7}	Chromaster 5310	USB	Ready
Hitachi ^{/6,7}	Chromaster 6310	USB	Ready
Hitachi ^{/7}	L-2300	USB	Ready
Hitachi ^{/5,6,7}	Primaide 1310	USB	Ready
PerkinElmer ^{/1}	Flexar LC Column Oven	RS-232	Testing
PerkinElmer	NexSAR Column Oven	RS-232	Ready
R-Biopharm	RIDACREST Column Oven	RS-232	Ready
Recipe	CH3000	RS-232 - UNI Ruby	Ready
Recipe	HT4000	RS-232, LAN	Ready
RIGOL ^{/1}	L-3400	RS-232	Testing
Shimadzu	CTO-10A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	CTO-10AC	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	CTO-10ACvp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	CTO-10ASvp	Shimadzu controller (see HPLC Others)	Ready

Shimadzu	CTO-10Avp	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	CTO-20A	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	CTO-20AC	Shimadzu controller (see HPLC Others)	Ready
Spark	Mistral	RS-232	Ready
SSI	605 COC	RS-232 - UNI Ruby	Ready
Techlab	K-7	RS-232 - UNI Ruby	Ready
Thermotechnic Products ^{/4}	JetStream	RS-232	Ready
Unimicro	Unimicro Thermostat	RS-232	Testing
Vici-VALCO	Fast Temperature Programmer	RS-232	Ready
Watrex	CTC 100	RS-232 - UNI Ruby	Ready
YL Instrument ^{/1}	ChroZen HPLC-A CC	LAN	Ready
YL Instrument ^{/1}	ChroZen UHPLC CC	LAN	Ready
YL Instrument ^{/1}	YL9130	LAN	Ready

Fraction Collectors (for fraction collectors for using KNAUER FRC function refer “[Fraction collectors](#)”)

Manufacturer	Name	Interface	Status
	Any fraction collector using the Next and Collect/Waste events	Clarity-controlled device with 2 TTL outputs (INT7, etc.) + FC GP	Ready
Advantec	CHF122SC	RS-232 - UNI Ruby	Ready
Agilent	G1364A	LAN - ICF	Testing
Agilent	G1364B	LAN - ICF	Testing
Agilent	G1364C	LAN - ICF	Testing
Agilent	G1364D	LAN - ICF	Testing
Agilent	G1364E	LAN - ICF	Testing
Agilent	G1364F	LAN - ICF	Testing
Agilent	G5664A	LAN - ICF	Testing
Agilent	G5664A	LAN - ICF	Testing
Agilent	G7159B	LAN - ICF	Testing
Agilent	G7166A	LAN - ICF	Testing
Bio-Rad	BioFrac	FC GP	Ready
Ecom ^{/1}	ECF2096	RS-232, LAN	Testing
Gilson	203B	RS-232 - UNI Ruby	Ready
Gilson	204	RS-232 - UNI Ruby	Ready
Japan Analytical Industry C., LTD ^{/1}	FC-7000	RS-232	Testing
LKB Amersham	Frac100	FC GP	Testing
Rheodyne	MX Series II valves used as FC	USB	Ready
Teledyne ISCO	FOXY 200	RS-232 - UNI Ruby	Ready
Teledyne ISCO	FOXY Jr.	RS-232 - UNI Ruby	Ready
Teledyne ISCO	FOXY R1	RS-232 - UNI Ruby, LAN	Ready
Teledyne ISCO	FOXY R2	RS-232 - UNI Ruby, LAN	Ready
Vici-VALCO	Multi-position valve used as FC	RS-232 - UNI Ruby	Ready
Waters	Fraction Collector II	RS-232 - UNI Ruby	Ready
YL Instrument	YL FC1	RS-232 - UNI Ruby	Ready
YL Instrument	YL FC2	RS-232 - UNI Ruby	Ready

Valves			
Manufacturer	Name	Interface	Status
Agilent	G1156A	LAN - ICF	Testing
Agilent	G1157A	LAN - ICF	Testing
Agilent	G1158A	LAN - ICF	Testing
Agilent	G1158B	LAN - ICF	Testing
Agilent	G1159A	LAN - ICF	Testing
Agilent	G1160A	LAN - ICF	Testing
Agilent	G1162A	LAN - ICF	Testing
Agilent	G1163A	LAN - ICF	Testing
Agilent	G1170A	LAN - ICF	Testing
Agilent	G4243A	LAN - ICF	Testing
Agilent	G7170BA	LAN - ICF	Testing
PerkinElmer	NexSAR Switching valve	RS-232	Ready
Rheodyne	LabPro Series valves	RS-232 - UNI Ruby	Ready
Rheodyne	MX Series II valves	USB	Ready
Rheodyne	Titan Series valves	RS-232	Ready
Shimadzu	FCV-10AL (all through selected LC-10/20 pumps only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	FCV-10ALvp (all through selected LC-10/20 pumps only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	FCV-11AL (all through selected LC-10/20 pumps only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	FCV-11ALS (all through selected LC-10/20 pumps only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	FCV-12AH (all through selected LC-10/20 column ovens only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	FCV-14AH (all through selected LC-10/20 columns ovens only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	FCV-15AL (all through selected LC-10/20 pumps only)	Shimadzu controller (see HPLC Others)	Ready
Shimadzu	LPGE Unit (all through selected LC-10/20 pumps only)	Shimadzu controller (see HPLC Others)	Ready
Upchurch	V-2500	RS-232	Ready
Vici-VALCO	Any valve mounted on two-position microelectric actuator, multiposition microelectric actuator or universal actuator.	RS-232	Ready

Amino Acid Analyzers			
Manufacturer	Name	Interface	Status
Ingos ^{/1}	AAA 500	LAN	Testing
Sykam ^{/3}	S4300 Amino Acid Reaction Module System	RS-232	Ready

Testing status: Some controls in the list are marked with **Testing** status. These are controls, developed by Data Apex, which are already functional and its development is in stage of external testing. Such controls are not part of the installation, but it is possible to get these controls and help Data Apex with

fine tuning the drivers for your configuration. Contact us if you are interested in such a control and if you would like to help to increase the priority of the corresponding driver and speed up its development.

Interface types:

RS-232 = Serial communication. Specify the type of the cable or instrument.

LAN = Network communication. Specify the type of the cable or instrument.

USB = USB communication. Specify the type of the cable or instrument.

PIB = hardware: Interface card for older Agilent 1100 system

GSIOC = hardware: Converter for Gilson serial communication

CB20 = hardware: Internal (PCI) LC Control card (4x D/A & 4x D/F converter)

OPT-USB = hardware: Optical to USB converter

A/D converter = hardware: A/D converter is needed to gather data because the instrument does not support digital acquisition.

I/O device = hardware: Device capable of sending and receiving TTL signals governed by Clarity, for example any DataApex A/D converter

LC UNI = software: Universal LC control module for online pumps

FC GP = software: General Purpose Fraction Collector control module developed for Clarity; does not support KNAUER preparative functionality

UNI RUBY = software: Universal control module for various instruments

ICF = software: Agilent ICF control Libraries embedded in ClarityChrom, ClarityChrom station license is required, for PDA also PDA extension is required

Notes:

¹ Developed by instrument's manufacturer.

² Exclusively available from the instrument's manufacturer - needs a release code.

³ Exclusively available from the instrument's manufacturer in the particular OEM version.

⁴ Developed by third party.

⁵ Only limited number of these systems on one ClarityChrom station is possible - see appropriate manual or product page.

⁶ Exclusively available in selected territories through companies approved by Hitachi company.

⁷ One module in the system must have Interface Card installed.

⁸ The G1315A, G1315B, G1365A, G1365B sub-types only.

⁹ Selected models only - Check with Elysia-raytest company.

¹⁰ Available from Knauer company only (requires Knauer FRC option).

¹¹ Only the detectors sold by Knauer company.

¹² Available from Dalian Elite company only (in the Chromsoft OEM version).

¹³ Exclusively available from the instrument's manufacturer - only sold by instrument's manufacturer.

Agilent ICF HPLC Control

Direct control of Agilent 1100, 1120, 1200, 1220, 1260 Infinity, 1260 Infinity II and 1290 Infinity II HPLC components using the Agilent ICF (Instrument Control Framework) tools developed by the Agilent company. The ClarityChrom Station allows for direct control of selected Agilent components, enabling ClarityChrom to provide integrated instrument control and to ensure complete automation for laboratories. The control module includes parameters for the HPLC pumps, column ovens, detectors (including PDA), autosamplers, etc. A dedicated PDA Extension enables the evaluation of data from PDA systems.

The separate Agilent ICF HPLC Control manual is available on the ClarityChrom installation DVD and the KNAUER webpage.

Specification: Agilent HPLC Control

Controlled devices: The Agilent ICF HPLC control module is compatible with selected components of Agilent 1100, 1120, 1200, 1220, 1260 and 1290 HPLC systems, supported by the Agilent ICF. Complete list of controlled components is shown below.

Communication interface: LAN

Data acquisition interface: Digital Data Acquisition

Licenses: Devices require a ClarityChrom station license A1670, PDA detectors the PDA extension A1676.

List of controlled subdevices of the Agilent ICF control module

Note that the portfolio of components widens with further releases of newer Agilent ICF versions. Refer the Agilent website for an up-to-date list.

Agilent 1120 systems G4286A, G4287A, G4288A, G4289A, G4290A

Agilent 1220 systems 1220 LC (G4286B, G4287B, G4288B, G4289B, G4290B, G4291B, G4292B, G4293B), 1220 VL (G4286C, G4287C, G4288C, G4289C, G4290C, G4291C, G4292C, G4293C, G4294B)

Pumps/Isocratic (G1310A, G1310B, G1361A, G7110B), Binary (G1312A, G1312B, G1312C, G1376A, G2226A, G4220A, G4220B, G4302A, G7112B, G7120A, G7161A, G7161B), Quaternary (G1311A, G1311B, G1311C, G4204A, G5611A, G5654A, G7104A, G7104C, G7111A, G7111B), all including selected pump valve clusters

Detectors ELSD (G4218A, G4260A, G4260B, G4261A, G4261B, G7102A), FLD (G1321A, G1321B, G1321C, G7121A, G7121B), MWD (G1365A, G1365B, G1365C, G1365D, G7165A), RID (G1362A, G7162A, G7162B), VWD (G1314A, G1314B, G1314C, G1314D, G1314E, G1314F, G7114A, G7114B)

PDA Detectors DAD (G1315A, G1315B, G1315C, G1315D, G4212A, G4212B, G7115A, G7117A, G7117B, G7117C), FLD (G1321A, G1321B, G1321C, G7121A, G7121B)

Autosamplers G1313A, G1327A, G1329A, G1329B, G1367A, G1367B, G1367C, G1367D, G1367E, G1368A, G1377A, G1378A, G1389A, G2258A, G2260A, G4226A, G4227A, G4303A, G4767A, G5667A, G5668A, G7129A, G7129B, G7129C, G7157A, G7167A, G7167B, all including thermostat (G1330A, G1330B)

Column Ovens G1316A, G1316B, G1316C, G7116A, G7116B, G7130A

Fraction Controllers G1364A, G1364B, G1364C, G1364D, G1364E, G1364F, G5664A, G5664B, G7159B, G7166A

Valves G1156A, G1157A, G1158A, G1158B, G1159A, G1160A, G1162A, G1163A, G1170A, G4243A, G7170B

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