AP Connect Supported Instruments and Instrument Requirements

The following document lists all supported instruments, measurement systems and their required software versions that can be connected to **AP Connect Version 3.2** and higher.

Contents

1 Supported Anton Paar instruments and measurement systems

NOTICE: The latest instrument software version is necessary for:

- AP Connect Pharma Edition
- tasklist feature (only Standard Edition)
- all new features of the current AP Connect version

Instrument	Min. software version using APC Standard Edition*	Min. software version using APC Pharma Edition	Restrictions and comments**
ABA 300/500	1.3.2	1.3.5	AP Connect tasklist feature is not supported.
Abbemat 5X01, 7X01	1.0.0	1.0.0	Tasklist: starting of checks is not supported
Alcolyzer 5001, 7001, 7001 Vinegar	6.0.3	6.0.3	No Alcolyzer adjustments are transferred
Alex 501 via Instrument Adapter for AP Connect	2.000	2.000	Connection via Instrument Adapter for AP Connect, see section 3.
CarboQC (lab & at-line) CarboQC Craft via Instrument Adapter for AP Connect	1.004 1.006	1.004 1.006	Connection via Instrument Adapter for AP Connect, see section 3.
CboxQC (lab & at-line) CboxQC Craft via Instrument Adapter for AP Connect	1.004 1.006	1.004 1.006	Connection via Instrument Adapter for AP Connect, see section 3.
CLA 5 via Instrument Adapter for AP Connect	1.31.10	1.31.10	Connection via Instrument Adapter for AP Connect, see section 3. AP Connect tasklist feature is not supported.
Cora 5001 (via Spectroscopy Suite version 1.1)	1.5	1.5	See Spectroscopy Suite.
Diana 300/700	1.9.4	1.9.4	Diana 300/700 are supported from 1.8.2/1.8.0, but the newest instrument software version includes essential improvements for result representation in AP Connect. The AP Connect tasklist feature is not supported.
DMA 35 (mat. no. 172244, 187111) via Instrument Adapter for AP Connect	1.015	1.015	Connection via Instrument Adapter for AP Connect, see section 3.. AP Connect tasklist feature is not supported.
DMA 35 Ex, Ex Petrol, Ampere (mat. no. 183056, 183057, 226130, 223336, 187110) via Instrument Adapter for AP Connect	1.006	1.006	Connection via Instrument Adapter for AP Connect, see section 3. AP Connect tasklist feature is not supported.

* Not all functions of AP Connect are supported, if the instrument does not use the latest software version. Especially if the tasklist feature is used, we recommend to use the latest software version of the instrument.

** Further restrictions might be documented in the AP Connect Release Notes

*** If you want to deactivate the audit trail of the device, unregister the device from AP Connect beforehand. After deactivation of the instruments audit trail, it can be registered again in AP Connect.

AP Connect Supported Instruments and Instrument Requirements

Instrument	Min. software version using APC Standard Edition*	Min. software version using APC Pharma Edition	Restrictions and comments**
DMA 502/1002	6.5.0	6.5.0	Tasklist: follow the recommendations in the AP Connect Software Manual (D96IB001).
DMA 1002 Petro DMA 1102 Petro	1.3.136 / 1.4.136	1.3.136 / 1.4.136	Certain additional ports are needed: UDP 3948 (AP Connect Server outgoing traffic to AP instruments), TCP 50553 listening and UDP 1234 listening (AP Connect Server incoming traffic to AP instruments). AP Connect tasklist feature is not supported.
DMA 4002/5002/6002/6002 SV and all measurement systems according to instrument's product description list	6.5.1	6.5.1	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001). No module adjustments are transferred (e.g. Alcolyzer3001/CarboQC ME/pH3201/Haze3001 /Color)
DMA 4200 M	2.98	2.98 Build 661***	
Litesizer DLS series with Kalliope (only supported without Software Module 21 CFR Part 11)	Kalliope 4.6.0	(Kalliope 4.6.0)	Instrument can be connected via Kalliope AP Connect if the Kalliope Software Module 21 CFR Part 11 is not activated. AP Connect tasklist feature is not supported.
Lovis 2001	6.5.0	6.5.0	
Lyza 3000 via Spectroscopy Suite	Spectroscopy Suite 1.3	Spectroscopy Suite 1.3	Spectroscopy Suite can be registered as an instrument in AP Connect. AP Connect tasklist feature is not supported.
Lyza 5000 Wine	2.2.0	2.2.0	Data is not removed from instrument although the option can be selected in AP Connect. Details and settings of Xsample are not sent to AP Connect. AP Connect tasklist feature is not supported.
Lyza 7000	1.5.1	1.5.1	AP Connect tasklist feature is not supported. Lyza 7000 is also supported via Spectroscopy Suite.
MCP series (except MCP 100/150)	5.30	6.10***	Set Zero is not transferred (other adjustments are transferred). Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
Multiwave 5001	3.0.0.4	3.0.0.4	AP Connect tasklist feature is not supported.
OxyQC (lab & at-line) via Instrument Adapter for AP Connect	1.001	1.001	Connection via Instrument Adapter for AP Connect, see section 3.
PMA 300/500	1.3.1/1.2.2	1.3.1/1.2.3	AP Connect tasklist feature is not supported.
PNR 12 via Instrument Adapter for AP Connect	04.02.0015	04.02.0015	Connection via Instrument Adapter for AP Connect, see section 3.

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*** If you want to deactivate the audit trail of the device, unregister the device from AP Connect beforehand. After deactivation of the instruments audit trail, it can be registered again in AP Connect.

AP Connect Supported Instruments and Instrument Requirements

Instrument	Min. software version using APC Standard Edition*	Min. software version using APC Pharma Edition	Restrictions and comments**
PSA via Kalliope and via Instrument Adapter for AP Connect	3.4.4	3.4.4	Connection via Instrument Adapter for AP Connect, see section 3. AP Connect tasklist feature is not supported.
RapidOxy 100 via Instrument Adapter for AP Connect	1.06	1.06	Connection via Instrument Adapter for AP Connect, see section 3. AP Connect tasklist feature is not supported.
Snap 51 via Instrument Adapter for AP Connect	1.003	1.003	Connection via Instrument Adapter for AP Connect, see section 3. AP Connect tasklist feature is not supported.
Spectroscopy Suite	1.1	1.1	Spectroscopy Suite can be registered as an instrument in AP Connect. AP Connect tasklist feature is not supported. No system suitability test and adjustments reports are transferred.
SVM 1001, SVM 1001 Simple Fill and SVM 1101 Simple Fill	SVM 1001, SVM 1001 Simple Fill: 1.1.129 SVM 1101 Simple Fill: 1.2.129	SVM 1001, SVM 1001 Simple Fill: 1.1.129 SVM 1101 Simple Fill: 1.2.129	For SVM 1X01 series certain ports are needed: UDP 3948 (AP Connect Server outgoing traffic to AP instruments), TCP 50553 listening and UDP 1234 listening (AP Connect Server incoming traffic to AP instruments). AP Connect tasklist feature is not supported.
SVM 2001/3001/4001	SVM 2001/3001: 2.96 SVM 4001/3001 Cold Properties: 2.97 build 39	2.98 Build 661***	No calibrations or adjustments are transferred, except the atmospheric pressure sensor adjustment (DCB). Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
TAG 300/500	1.3.4	1.3.5	AP Connect tasklist feature is not supported.
TPO 5000	2.4.0	2.4.0	No zero check data and adjustment data are transferred to AP Connect
Ultrapyc 3000/5000 series	1.002.020	1.002.020	For Ultrapyc series certain ports are needed: UDP 3948 (AP Connect Server outgoing traffic to AP instruments), TCP 50553 listening and UDP 1234 listening (AP Connect Server incoming traffic to AP instruments). AP Connect tasklist feature is not supported.
ViscoQC 300	1.60	1.80	A maximum of 100 measuring points can be transferred to AP Connect. For mode "ASTM D2983/D8210 (LTV)" and „Temperature Ramp (TR)" 500 measuring points. AP Connect tasklist feature is not supported.

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** Further restrictions might be documented in the AP Connect Release Notes

*** If you want to deactivate the audit trail of the device, unregister the device from AP Connect beforehand. After deactivation of the instruments audit trail, it can be registered again in AP Connect.

2 Supported legacy Anton Paar instruments

Instrument	Min. software version using APC Standard Edition*	Min. software version using APC Pharma Edition	Restrictions and comments**
Abbemat Performance Plus (350, 550), Abbemat Heavy Duty line (450, 650)	5.30	5.30***	Tasklist: Follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001)
Alcolyzer M	2.97	2.98 Build 661***	No Alcolyzer adjustments are transferred
DMA 501/1001 (supported: mat. no. 186376 and 180173 not supported: mat. no. 229962 and 229961 models with type approval)	5.5.0	5.5.0	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
DMA 4101/4501/5001 and all measurement systems according to instrument's product description list	5.5.0	5.5.0	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
DMA 4501 Diet and all measurement systems according to instrument's product description list	5.5.0	5.5.0	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
DMA 5001 Sound Velocity and all measurement systems according to instrument's product description list	5.5.1	5.5.1	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
DMA 4100/4500/5000 M and all measurement systems according to instrument's product description list	2.95. Build 323	2.98 Build 661***	All adjustments are transferred except Manual Adjustment Data Input [Density] and Filling Warning Adjustment. No module adjustments are transferred
DSA 5000 M and all measurement systems according to instrument's product description list	2.97	2.98 Build 661***	Only adjustments which are performed with administrator rights are transferred. No module adjustments are transferred
Lovis 2000 M	2.98_425	2.98 Build 661***	For instrument-software-version < 2.98_529 adjustments are not transferred. AP Connect tasklist feature is not supported.
Modulyzer with DMA M • DMA M • MCP 100/150 • Abbemat Series (PL and PPL) • Xsample 530 optional: • SRU for Xsample 530 • Lovis ME • HazeQC ME • pH ME	2.95 Build 323	2.98 Build 661***	No module adjustments are transferred
Soft Drink Analyzer M (SDA M) and all measurement systems according to instrument's product description list	2.97	2.98 Build 661***	Only adjustments which are performed with administrator rights are transferred.

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** Further restrictions might be documented in the AP Connect Release Notes

*** If you want to deactivate the audit trail of the device, unregister the device from AP Connect beforehand.
After deactivation of the instruments audit trail, it can be registered again in AP Connect.

3 Supported instruments connected via Instrument Adapter for AP Connect

With an additional license (see D96IE002 Product Description List), the Instrument Adapter can be used together with AP Connect. Each additional instrument needs an extra AP Connect license (Standard or Pharma).
The instruments are tested with the configurations stated in the I70IB001 – Software Manual "Instrument Adapter for AP Connect": If the required instrument or software is not listed, please fill in "Instrument Integration Request" (I70IR001) and send it to support-apc@anton-paar.com.

Tested instruments - Instrument Adapter Version 2.1.3	Instrument type	Adapter type
AccuSizer (Entegris)	Particle analysis	Generic JSON/XML
Alex 501 (Anton Paar)	Alcohol and ER meter	Generic serial
CarboQC lab & at-line (Anton Paar)	Dissolved CO_2 meter	Generic serial
CarboQC CRAFT (Anton Paar)	Dissolved CO_2 meter	Generic serial
CboxQC lab & at-line (Anton Paar)	Combined CO_2 and DO meter:	Generic serial
CboxQC CRAFT (Anton Paar)	Combined CO_2 and DO meter:	Generic serial
Chromeleon (Thermo Fischer): standard report generator	HPLC & GC software	Generic report
CLA 5 (Anton Paar)	Flash & fire point tester	Generic report
Colorflex EZ colorimeter (Hunterlab)	Colorimeter	Generic table
CM-5 (Konica Minolta)	Colorimeter	Generic serial
CUBIS II balance (Sartorius)	Balance	Sartorius
DMA 35 (mat.no. 172244, 187111, 226130, 223336, 187110, 183056, 183057)	Density meter	Generic table
DTA 100 (Baur)	Oil breakdown voltage tester	Generic report
DTL C (Baur)	Oil tan delta and resistivity tester	Generic report
Entris II balance (Sartorius)	Balance	Generic serial
Evolution One photometer (Thermo Scientific)	Photometer	Generic table
HX204 (Mettler Toledo)	Moisture Analyzer	Generic report
Iron Polarograph 884 Professional VA (Metrohm)	Polarography	Generic table
Ion Chromatograph (Metrohm)	Ion Chromatograph	Generic table
Lovibond PFX880 series (Lovibond)	Colorimeter	Generic serial
Mastersizer 2000 (Malvern Panalytical)	Particle analysis	Generic table
Mastersizer 3000 (Malvern Panalytical)	Particle analysis	Generic table
Morphologi 3 and 4 (Malvern Panalytical)	Particle analysis	Generic table
NIR Infratec (Foss)	Spectrometer	Generic table
Nirvis FT-NIR Spectrometer (Bühler)	Spectrometer	Generic JSON/XML
OxyQC lab & at-line (Anton Paar)	Dissolved Oxygen meter	Generic serial
OMNIS (Metrohm)	Software	Generic table
Orion Star™ A321 pH Portable Meter (Thermo Fisher)	pH-meter	Generic serial
OsmoTECH Pro (Advanced Instruments)	Osmometer	Generic table
PharmSpec 3 (Beckman Coulter)	Particle counter	PharmSpec
pH-meter 780/781 (Metrohm)	pH meter	Generic serial

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Tested instruments - Instrument Adapter Version 2.1.3	Instrument type	Adapter type
pH-meter F7x (Horiba)	pH meter / multimeter	Generic serial
Pixel Proof (Gradient)	Optical comparison	Generic table
PNR 12 Penetrometer (Anton Paar)	Penetrometer	Generic table
PSA with Kalliope (Anton Paar)	Particle analysis	Generic table
RapidOxy100 (Anton Paar)	Oxidation Stability Tester	Generic report
REA Vericube (REA VERIFIER)	Optical comparison	Generic report and Generic table
Sartorius MA160-1 Moisture Analyzer (Sartorius)	Moisture analyser	Generic serial
SevenExcellence Multiparameter (Mettler Toledo)	pH-meter / multimeter	Generic table
Smart 6 (CEM)	Microwave moisture analyzer	Generic table
Snap 51 (mat.no. 183055) (Anton Paar)	Alcohol meter	Generic table
SVM 3000 (Anton Paar)	Viscosimeter	Generic serial
Syngistix (PerkinElmer)	AAS & ICP software	Generic table
Secura II (Sartorius)	Balance	Generic serial
Testo 440 (Testo)	Multimeter	Generic report
Tiamo: Karl Fischer 774 + 855 Robotic Titrosampler	Titrator	Generic table
Titrator 31 / 310 (Nittoseiko)	Titrator	Generic report
TOC-Control V Software (Shimadzu)	Total Organic Carbon	Generic report
TU5200 (Hach)	Turbidity meter	Generic report
UV WinLab (Perkin Elmer): UV-Vis Lambda 35	UV Vis Spectrometer	Generic report
WTW Multimeter 3410 (WTW)	Multimeter	Generic serial
XS series, XPE series, XPR series balances (Mettler Toledo)	Balances	Generic serial
Zetium RFA-spectrometer via SuperQ 6.5E (Malvern Panalytical)	Spectroscopy	Generic report
ZwickiLine - TestXpert II (ZwickRoell)	Syringe pressure	Generic table

Further reports/instruments are supported if they have the same structure as the tested reports/instruments.

If the required instrument or software is not listed, please fill in "Instrument Integration Request" (I70IR001) and send it to support-apc@anton-paar.com.

General description of adapter types –Instrument Adapter Version 2.1
Generic table: - supports a simple structured table - file based communication (*.csv and *.txt) with plain text content - transmission of results and meta data to AP Connect
Generic report: - supports complex reports structure with different sections (key value pairs, tables) - file based communication with plain text content: *.txt, *.csv (no pdf) - transmission of results and meta data to AP Connect
Generic JSON/XML: - supports structured reports based on nodes of JSON or XML files (key value pairs, arrays) - file-based communication: *.xml, *.json or - interface-based communication via API - transmission of results and meta data to AP Connect
PharmSpec: - supports CSV-file based communication with PharmSpec 3 (Beckman Coulter) - transmission of results and meta data to AP Connect - the supported report configuration can be found in I70IB001 - Software Manual "Instrument Adapter for AP Connect"
Sartorius: - supports balance's internal web services communication via Ethernet for CUBIS II balance (Sartorius) - transmission of results and meta data to AP Connect - the required hardware, software and instrument settings can be found in I70IB001 - Software Manual "Instrument Adapter for AP Connect"
Generic serial: - Customizable interface for configuring communication with instruments connected via serial interfaces (RS232 or USB). - Ability to define multiple report templates for a single serial instrument, allowing multiple reports to be addressed for data analysis and mapping. - Interactive configuration of parsing and mapping of reports coming from serial instruments.