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.

1 Anton Paar instruments and measurement systems

NOTICE: The latest instrument software version is necessary for:

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

Type	Minimum software version together with APC Standard Edition**	Minimum 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
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 Beer/Wine Analyzing System with DMA M: • DMA M • Alcolyzer Beer/Wine/Spirits ME and Alcolyzer ME • Xsample 320/520 optional: • pH ME • Option Color 430nm • HazeQC ME	2.95. Build 323	2.98 Build 661*	
Alcolyzer Analyzing System for Spirits and Liqueurs with DMA M: • DMA M • MCP 100/150 • Alcolyzer ME / Alcolyzer Spirits ME • pH ME • Xsample 320/520	2.95. Build 323	2.98 Build 661*	
Alcolyzer M	2.97	2.98 Build 661*	No Alcolyzer adjustments are transferred
Alex 500 via Instrument Adapter for AP Connect	1.001	1.001	Connection via Instrument Adapter for AP Connect, see section 3 Instruments connected via Instrument Adapter for AP Connect.
Beer/Wine/Spirits Measurement System with DMA 4101/4501/5001: • DMA 4101/4501/5001 • Alcolyzer 3001 Beer/Wine/Spirits and Alcolyzer 3001 • Xsample 320/520 optional: • pH 3101 • Option Color 430nm • Haze 3001	5.5.0	5.5.0	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color)

* If you want to deactivate the audit trail of the device, deregister the device from AP Connect beforehand.
   After deactivation of the instruments audit trail, it can be registered again in AP Connect.
** 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.
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Type	Minimum software version together with APC Standard Edition**	Minimum software version using APC Pharma Edition	Restrictions and comments***
CboxQC via Instrument Adapter for AP Connect	V1.004	V1.004	Connection via Instrument Adapter for AP Connect, see section 3 Instruments connected via Instrument Adapter for AP Connect.
CLA 5 via Instrument Adapter for AP Connect	1.31.10	1.31.10	Connection via Instrument Adapter for AP Connect, see section 3 Instruments connected via Instrument Adapter for AP Connect. 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 Instruments connected via Instrument Adapter for AP Connect. 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 Instruments connected via Instrument Adapter for AP Connect. AP Connect tasklist feature is not supported.
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 4100/4500/5000 M	2.95. Build 323	2.98 Build 661*	All adjustments are transferred except Manual Adjustment Data Input [Density] and Filling Warning Adjustment.
DMA 4200 M DMA 4500 M Chemicals	2.98	2.98 Build 661*	
DMA 4101/4501/5001	5.5.0	5.5.0	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
DMA 4501 Diet	5.5.0	5.5.0	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
DSA 5000 M	2.97	2.98 Build 661*	Only adjustments which are performed with administrator rights are transferred
DMA 5001 Sound Velocity	5.5.1	5.5.1	Tasklist: follow the instrument specific recommendations in the AP Connect Software Manual (D96IB001).
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 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.

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Lyza 5000 Wine optional: • Xsample 370/520 • DMA 4100/4500/5000 M • Alcolyzer Wine M/ME • HazeQC ME pH ME	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	1.3.0	1.3.0	Checks and Adjustments are not transferred to AP Connect. 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).
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*	
Multiparameter Measurement System with DMA 4101/4501/5001 • DMA 4101/4501/5001 • MCP 100/150 • Abbemat Series (PL and PPL) • Xsample 530 optional: • SRU for Xsample 530 • Haze 3001 • pH 3101	5.5.0	5.5.0	No module adjustments are transferred
Multiwave 5001	3.0.0.4	3.0.0.4	AP Connect tasklist feature is not supported.
PBA-B and PBA-W with DMA M: • DMA M • Alcolyzer Beer/Wine ME and Alcolyzer ME • CarboQC ME optional: • pH ME • Option Color 430nm • HazeQC ME • Option O_2 (CarboQC)	2.95 Build 323	2.98 Build 661*	

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Type	Minimum software version together with APC Standard Edition**	Minimum software version using APC Pharma Edition	Restrictions and comments***
PBA-S with DMA M • DMA M • CarboQC ME optional: • pH ME • Option O_2 (CarboQC) DietQC ME / DietQC ME with option for uncolored drinks	2.95 Build 323	2.98 Build 661*	
PBA-SI with SDA M: • SDA M • CarboQC ME optional: • pH ME • Option O_2 (CarboQC) DietQC ME/ DietQC ME with option for uncolored drinksUV	2.97	2.98 Build 661*	Only adjustments which are performed with administrator rights are transferred.
Packaged Beer/Wine Measurement System with DMA 4101/4501/5001: • DMA 4101/4501/5001 • Alcolyzer 1001 Beer / 3001 Beer/ 3001 Wine • CarboQC ME optional: • pH 3201 • Option Color 430nm • Haze 3001 • Option O_2 (CarboQC)	5.5.0	5.5.0	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color)
Packaged Soft Drink Measurement System with DMA 4101/4501/5001 • DMA 4101/4501/5001 • CarboQC ME optional: • pH 3201 • Option O_2 (CarboQC)	5.5.0	5.5.0	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color)
Packaged Soft Drink Measurement System with DMA 4501 Diet • DMA 4501 Diet • CarboQC ME optional: • pH 3201 • Option O_2 (CarboQC)	5.5.0	5.5.0	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color)
Packaged Soft Drink Measurement System with DMA 5001 Sound Velocity • DMA 5001 Sound Velocity • CarboQC ME optional: • pH 3201 • Option O_2 (CarboQC)	5.5.1	5.5.1	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color)

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Type	Minimum software version together with APC Standard Edition**	Minimum software version using APC Pharma Edition	Restrictions and comments***
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 Anton Paar instruments and measurement systems.
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 Instruments connected via Instrument Adapter for AP Connect. 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 Instruments connected via Instrument Adapter for AP Connect. 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 Instruments connected via Instrument Adapter for AP Connect. AP Connect tasklist feature is not supported.
Soft Drink Analyzer M (SDA M)	2.97	2.98 Build 661*	Only adjustments which are performed with administrator rights are transferred.
Soft Drink Measurement System 3001 with DMA 4101/4501/5001 • DMA 4101/4501/5001 • Xsample 320/520 optional: pH 3101	5.5.0	5.5.0	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color)
Soft Drink Measurement System 3001 • With DMA 4501 Diet • Xsample 320/520 optional: pH 3101	5.5.0	5.5.0	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color).
Soft Drink Measurement System • With DMA 5001 Sound Velocity • Xsample 320/520 Optional: pH 3101	5.5.1	5.5.1	No module adjustments are transferred (Alcolyzer3001/CarboQC ME/ pH3201/Haze3001/Color).
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.

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After deactivation of the instruments audit trail, it can be registered again in AP Connect.

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Type	Minimum software version together with APC Standard Edition**	Minimum software version using APC Pharma Edition	Restrictions and comments***
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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2 Sample changer and additional modules

Type	Minimum software version together with APC Standard Edition*	Minimum software version together with APC Pharma Edition	Restrictions and comments**
Alcolyzer Beer ME	DMA 2.95 Build 323	2.98	
Abbemat 300/500	DMA 2.95 Build 323	2.98	Only supported as module
CarboQC ME	DMA 2.95 Build 323	2.98	
HazeQC ME	DMA 2.95 Build 323	2.98	
pH ME	DMA 2.95 Build 323	2.98	
DietQC ME	DMA 2.95 Build 323	2.98	
Lovis ME	DMA 2.95 Build 323	2.98	AP Connect tasklist feature is not supported.
Alcolyzer 3001 Beer/Wine/Sake/Spirits	Master 5.5.0	Master 5.5.0	No module adjustments are transferred
Haze 3001	Master 5.5.0	Master 5.5.0	No module adjustments are transferred
pH 3101/3201	Master 5.5.0	Master 5.5.0	No module adjustments are transferred
Xsample 200, 320, 330, 340, 370, 520, 530, 610, 630, 631			
PMU, MPT, SRU with Xsample 530			

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3   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	Adapter type
AccuSizer (Entegris)	Generic JSON/XML
Alex 500 (Anton Paar)	Generic serial
CboxQC (Anton Paar)	Generic serial
Chromeleon (Thermo Fischer): standard report generator	Generic report
CLA 5 (Anton Paar)	Generic report
Colorflex EZ colorimeter (Hunterlab)	Generic table
CUBIS II balance (Sartorius)	Sartorius
DMA 35 (mat.no. 172244, 187111, 226130, 223336, 187110, 183056, 183057) (Anton Paar)	Generic table
DTA 100 - Oil breakdown voltage tester (Baur)	Generic report
DTL C - Oil tan delta and resistivity tester (Baur)	Generic report
Entris II balance (Sartorius)	Generic serial
Evolution One photometer (Thermo Scientific)	Generic table
HX204 Moisture Analyzer (Mettler Toledo)	Generic report
Iron Polarograph 884 Professional VA (Metrohm)	Generic table
Ion Chromatograph (Metrohm)	Generic table
Lovibond PFX880 series (Lovibond)	Generic serial
Mastersizer 2000 (Malvern Panalytical)	Generic table
Mastersizer 3000 (Malvern Panalytical)	Generic table
Morphologi 3 and 4 (Malvern Panalytical)	Generic table
NIR Infratec (Foss)	Generic table
Nirvis FT-NIR Spectrometer (Bühler)	Generic JSON/XML
OMNIS (Metrohm)	Generic table
Orion Star™ A321 pH Portable Meter (Thermo Fisher)	Generic serial
OsmoTECH Pro (Advanced Instruments)	Generic table
PharmSpec 3 (Beckman Coulter)	PharmSpec
pH-meter 780/781 (Metrohm)	Generic serial
pH-meter F7x (Horiba)	Generic report
Pixel Proof (Gradient)	Generic table
PNR 12 Penetrometer (Anton Paar)	Generic table
PSA with Kalliope (Anton Paar)	Generic table
RapidOxy100 (Anton Paar)	Generic report
REA Vericube (REA VERIFIER)	Generic report and Generic table
Sartorius MA160-1 Moisture Analyzer (Sartorius)	Generic serial

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Tested instruments - Instrument Adapter Version 2.1	Adapter type
SevenExcellence Multiparameter (Mettler Toledo)	Generic table
Smart 6 (CEM)	Generic table
Snap 51 (mat.no. 183055) (Anton Paar)	Generic table
SVM 3000 (Anton Paar)	Generic serial
Syngistix (PerkinElmer)	Generic table
Testo 440 (Testo)	Generic report
Tiamo: Karl Fischer 774 + 855 Robotic Titrosampler (Metrohm)	Generic table
Titrator 31 / 310 (Nittoseiko)	Generic report
TOC-Control V Software (Shimadzu)	Generic report
TU5200 Turbidity meter (Hach)	Generic report
UV WinLab (Perkin Elmer): UV-Vis Lambda 35	Generic report
WTW Multimeter 3410 (WTW)	Generic serial
XS series, XPE series, XPR series balances (Mettler Toledo)	Generic serial
Zetium RFA-spectrometer via SuperQ 6.5E (Malvern Panalytical)	Generic report
ZwickiLine - TestXpert II (ZwickRoell)	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.