

Calcmeter 4030 Analysis Software (STD & PRO)

Ch	Component	Concentration	Unit	Ch(A)	Ch(M)	Compensation	Range	Resid..
1	Water vapor H2O	-0.00	vol-%	1		wet	40	0.0001
2	Carbon dioxide CO2	0.00	vol-%	2		wet	20	0.0005
3	Carbon monoxide CO	0.00	mg/N...	3		wet	2000	0.0001
4	Nitrogen monoxide NO	0.13	mg/N...	4		wet	500	0.0001
5	Nitrogen dioxide NO2	0.00	mg/N...	5		wet	100	0.0001
6	Nitrous oxide N2O	0.00	mg/N...	6		wet	200	0.0001
7	Sulfur dioxide SO2	0.01	mg/N...	7		wet	500	0.0001
8	Ammonia NH3	33.19	mg/N...	8		wet	100	0.0005
9	Hydrogen chloride HCl	0.00	mg/N...	9		wet	100	0.0001
10	Hydrogen fluoride HF	0.00	mg/N...	10		wet	15	0.0002
11	Methane CH4	0.00	mg/N...			wet	50	0.0004
12	Ethane C2H6	0.00	mg/N...			wet	50	0.0004
13	Propane C3H8	0.00	mg/N...			wet	50	0.0004
14	Ethylene C2H4	0.12	mg/N...			wet	50	0.0005
15	Hexane C6H14	0.00	mg/N...			wet	50	0.0004
16	Formaldehyde CHOH	0.03	mg/N...			wet	50	0.0001
201	NOx as NO2	0.19	mg/N...	11		wet	1000	0.0001
202	TOC as C	0.12	mg/N...	12		wet	100	0.0001

Analysis and Control Software for Dx-4030 FTIR Gas Analyzers

Calcmeter provides an easy to use interface to the FTIR gas analyser, stores and visualises the sample spectra and performs the multicomponent analysis using Gasmeter Technologies' patented modified Classical Least Squares algorithm.

Calcmeter 4030 comes in two versions, CALCMET 4030 Standard and CALCMET 4030 Professional. Both versions are installed into external computer. CALCMET 4030 STD version is used to analyse the sample spectra measured by Calcmeter Lite PDA software. CALCMET 4030 PRO version is connected to GASMET Dx-4030 Gas Analyzer with RS-232 port and it can be used to measure and analyse sample spectra on-line with Dx-4030 models. Both versions can also be used to reconfigure on-board analysis programming of twin DSP

General parameters

Operating system:	Windows Xp operating system
Hardware requirements:	512 MB Memory, > 40 GB hard disk, > 2.4 GHz Intel Pentium IV Processor, DVD-RW, Modem, Network card, RS-232 and USB ports.
Analysis principle:	Modified Classical Least Squares
Performance:	Simultaneous analysis of up to 50 gas compounds. Data Acquisition, analysis of 20 gases and output in < 1000 ms
Data Storage:	Automatic saving of sample spectra with options for saving only when a specific condition is met (concentration / residual). Spectrum file size 4.3 kb in Calcmeter spectrum file format

Input/Output Options

Analyzer control:	RS-232 COM port (Pro),
Expansion cards:	AdLink PCI expansion cards (up to a total of eight cards) <ul style="list-style-type: none"> - PCI-6208 analog output - PCI-7230 digital input /output - PCI-7250/51 relay output - PCI-9112 analog input AdLink ISA expansion cards (up to a total of three cards) <ul style="list-style-type: none"> - ACL-7225 relay output Advantech DA&C unit via Ethernet (up to eight modules) Beckhoff TwinCAT (up to 255 modules)
Serial output:	MODBUS (other FieldBus formats as an option) COMLI ASCII (proprietary format)
Remote control:	PC Anywhere (Telephone Modem or Internet connection)

Analytical performance

Data acquisition time:	1 – 500 seconds, time weighted average of individual scans lasting 100 ms each. In Calcmet Pro acquisition time may be shortened to below one second. Data acquisition may be configured for any interval or for sampling from multiple sample streams
Detection limit:	< 3 x spectral baseline noise
Linearity deviation:	< 2 % of reference concentration
Linearity correction:	Automatic, multi-point fitting of calibration curve
Cross-Interference:	< 4 % of reference concentration, cross-interfering components are included in multicomponent analysis
Quality Assurance:	Residual absorbance from analysis is monitored and results invalidated if residual is too high
Supported file formats:	Gasmeter sample spectra (.spe) Gasmeter reference spectra (.ref) Gasmeter background spectra (.bkg) Gasmeter Interferogram file (.ifg) ASCII x-y table (.txt) JCAMP-DX (.dx)

Comparison of Calcmet Lite versions

Calcmet 4030 Standard and Professional versions are only used with Gasmeter Dx-4030 models

	4030 Std	4030 Pro
Analyzer specific software (Serial number identification)	X	X
Reconfiguration of on-board analysis programming of twin DSP via RS-232	X	X
Measurement with FTIR	-	X
50 gas multicomponent analysis	X	X
Support for inputs and outputs	-	X
Identification of gas components using Library Search routine	X	X
250 component spectra library CWA not included	X	X
English language	X	X

End User Licence

Standard version:	Single user licence, protected with a HASP USB key. Analyzer specific software according to analyser serial number and protection code
Pro version:	Single user licence, protected with a HASP USB key. Analyzer specific software according to analyser serial number and protection code. Calcmet 4030 Pro features are contained in standard version distribution package, but are hidden when Calcmet Pro licence key is not present.