

# The Tanabyte 72x Series of Photometric Ozone Analyzers

Precision instruments for the Measurement and Calibration of Ozone

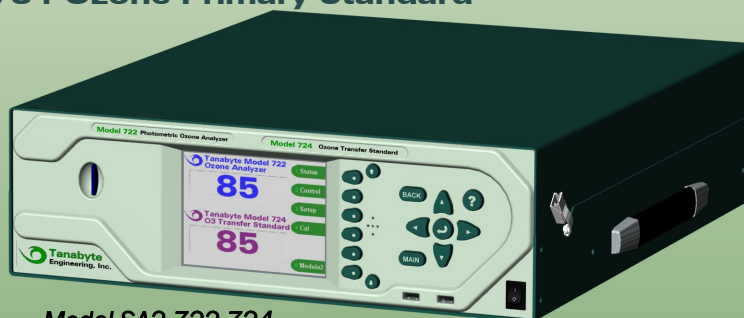
Direct Drop-In Replacements for the Dasibi Model 1008 series

## USEPA APPROVED INSTRUMENTS

**Model SA1-724**  
Ozone Transfer Standard  
(SA1 Enclosure Type)



- 722 Ozone Analyzer
- 722V Ozone Analyzer with C-S Valve
- 723 Transfer Standard with Cal/Sample Valves
- 724 Ozone Transfer Standard
- 725 Ozone Analyzer with Internal Zero/Span
- 734 Ozone Primary Standard



**Model SA2-722-724**  
Ozone Analyzer / Ozone Transfer Standard Combination  
(SA2 Enclosure Type)

Tanabyte line of Easy-To-Operate Photometric Ozone Analyzers and Calibrators are designed as direct replacements for the industry standard Dasibi 1008 Series. The Analyzers and Calibrators exceeds the performance specifications of the Dasibi 1008 series while incorporating modern, advanced features.

All Tanabyte instruments are available as either a portable SA1 type or rack-mountable SA2 type, depending on the application needs. The SA1 Enclosure type supports one module and requires a minimal amount of bench space. In addition, its lightweight and rugged design is ideal for field auditors and traveling service personnel.

The SA2 Enclosure type supports one or two Modules and is rack or bench mountable. Its 5¼" (same as Dasibi) height requires less rack space than similar instruments on the market, which are typically 7" or higher.

The Tanabyte instruments shares many common components with the Dasibi Model 1008 series and inherit the Dasibi type "Dot Commands" protocol from the Dasibi Model 5008. The Audit Analog Input allows the Tanabyte calibrators to automatically generate Ozone Certification Reports.

## Advantages and Features:

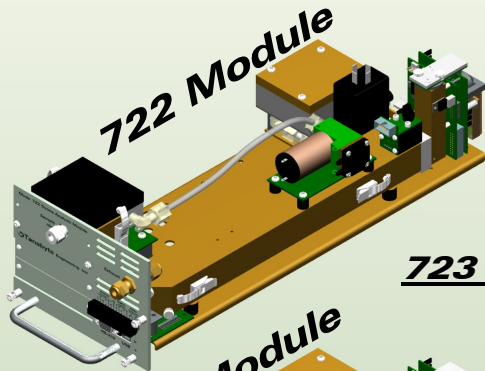
- U.S. E.P.A Equivalent Method Designation EQOA-0407-165
- Direct Replacements for the Dasibi 1008 series of ozone analyzers and ozone calibrators (including same physical dimensions).
- Utilizes the UV Photometric Measurement Technique, temperature and pressure correction.
- Tanabyte invented Dual USEPA Approved instruments combinations, for economical and engineering solutions.
- Superior performing Tanabyte designed Ozone Generator, producing the most accurate-stable-repeatable ozone even at very low concentrations.
- Tanabyte designed Audit Analog Input to certify another ozone analyzer.
- New smaller and light weight design (less than 20 Lbs), ideal for station monitoring, field auditors, QA Lab operators, and mobile air monitoring. Lowest instrument height profile of only 5.25 inches, rack space saving.
- Data storage, diagnostics, alarms, selectable units, RS232, Dasibi Dot Commands, Programmable Calibration Levels and Sequences.
- The modular design simplifies maintenance. By using an extension cable, the module can be decoupled and operated outside the SA1 and SA2 enclosure for easy servicing.

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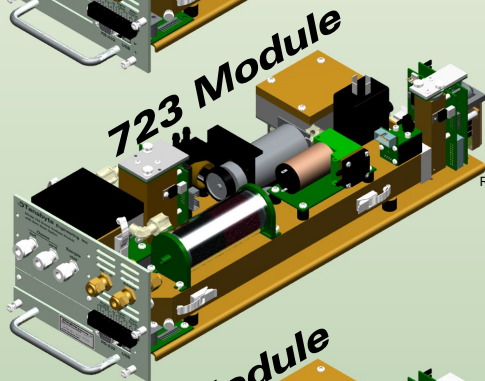
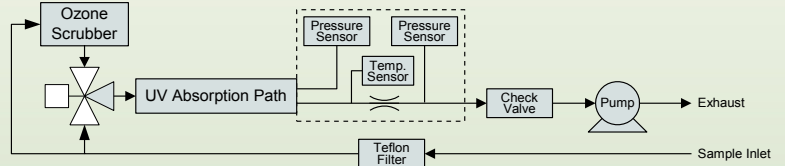
 **Tanabyte**  
Engineering, Inc.

# Ozone Analyzer and Ozone Calibrator

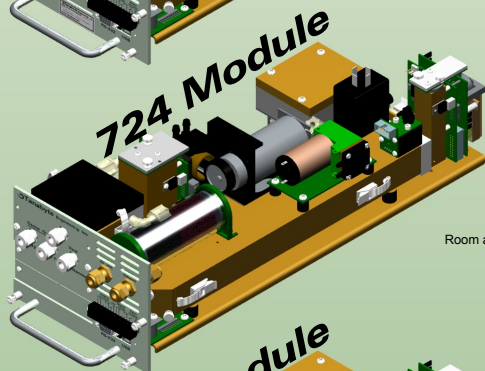
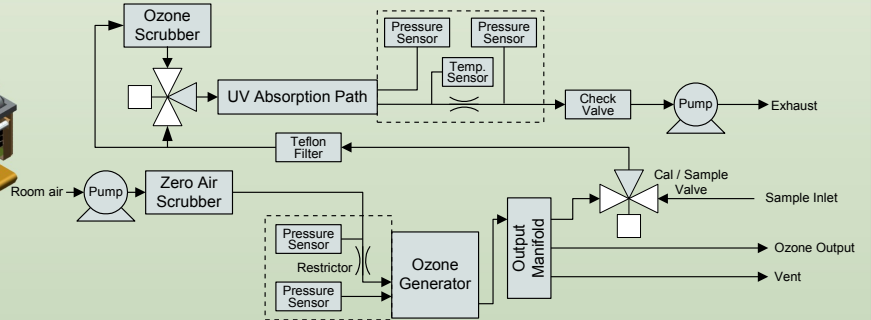
All Tanabyte Ozone Analyzers and Ozone Calibrators incorporate a module with a precision USEPA Approved ozone photometer employing State-of-the Art Ultraviolet Absorption Technique. In addition, the calibrator modules include ozone generators for photometer feedback, to facilitate the calibration of the internal photometer, and to calibrate external ozone analyzers. With the Audit Analog Input feature the calibrating of external analyzers can be automated thus requiring minimal operator supervision.



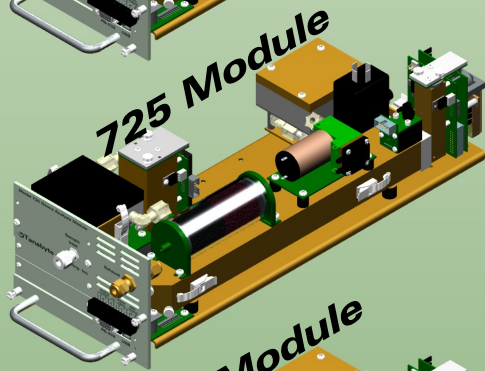
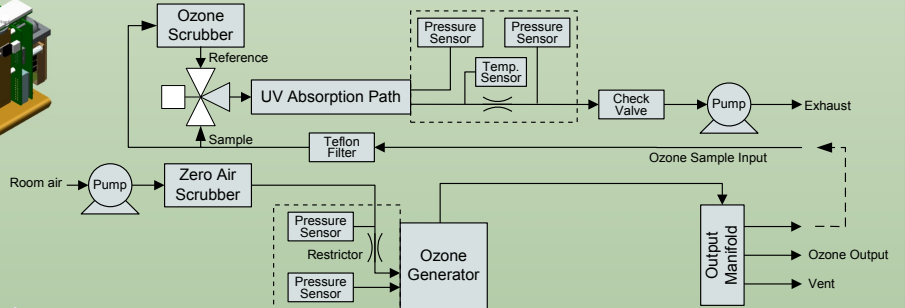
## 722 Ozone Module



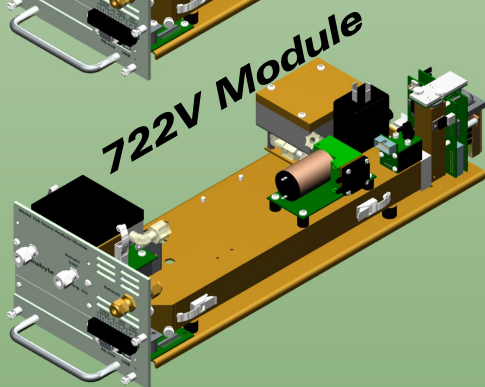
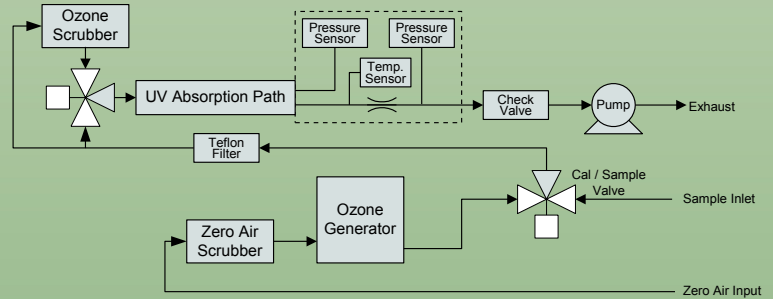
## 723 O3 Transfer Standard w/ Cal-Sample Valves Module



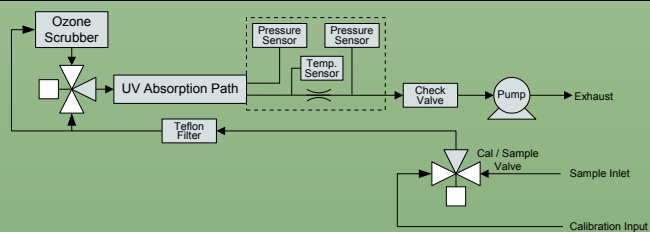
## 724 Ozone Transfer Standard Module



## 725 Ozone Analyzer with Internal Zero-Span Module



## 722V Ozone Analyzer with C-S Valves Module



## Configurations

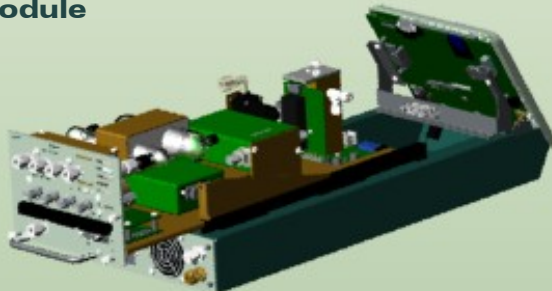
Tanabyte Ozone Analyzers and Calibrators comprise of two main sections, the analyzer or calibrator modules and the SA1 or SA2 enclosures. When one enclosure and one or two modules are coupled together they become one Analyzer or Calibrator.

Tanabyte offers two types of enclosures, the SA1 enclosure which support one module and the SA2 enclosure which can supports one or two modules.

The SA1 is very versatile, durable, and light weight with a small foot print of only 8" wide and is classified as our portable-bench mounting version.

The SA2 has the conventional width of 17" wide to fit instrument racks and can be configured for bench mounting or rack mounting and has a height of only 5.25 " (same as Dasibi Model 1008 series) to economize space in instrument racks.

**The SA1 enclosure supports one module**



### Ozone Analyzer and Ozone Calibrator Model Numbers

<b>SA1-722:</b>	<b>Ozone Analyzer</b>
<b>SA1-722V:</b>	<b>Ozone Analyzer w/ C-S Valve</b>
<b>SA1-723:</b>	<b>Ozone Transfer Standard with Cal-Sample Valves</b>
<b>SA1-724:</b>	<b>Ozone Transfer Standard</b>
<b>SA1-725:</b>	<b>Ozone Analyzer with Internal Zero-Span</b>
<b>SA1-726:</b>	<b>Ozone Analyzer with Cal-Sample Valves</b>
<b>SA1-734:</b>	<b>Ozone Primary Standard</b>
<b>SA2-722:</b>	<b>Ozone Analyzer</b>
<b>SA2-722V:</b>	<b>Ozone Analyzer w/ C-S Valve</b>
<b>SA2-723:</b>	<b>Ozone Transfer Standard with Cal-Sample Valves</b>
<b>SA2-724:</b>	<b>Ozone Transfer Standard</b>
<b>SA2-725:</b>	<b>Ozone Analyzer with Internal Zero-Span</b>
<b>SA2-726:</b>	<b>Ozone Analyzer with Cal-Sample Valves</b>
<b>SA2-734:</b>	<b>Ozone Primary Standard</b>
<b>SA2-722-722:</b>	<b>Ozone Analyzer and Ozone Analyzer Combination</b>
<b>SA2-722-724:</b>	<b>Ozone Analyzer and Ozone Transfer Standard Combination</b>
<b>SA2-722V-724:</b>	<b>Ozone Analyzer with Cal/ Sample Valve and Ozone Transfer Standard Combination</b>

*Other Instrument Combinations are available upon request.*

### Physical Specifications

**SA1 Dimensions:** 8.1" W x 9" H x 23.4" L

<b>Weight:</b> SA1-722	=	19 Lbs
SA1-723	=	26 Lbs
SA1-724	=	24 Lbs
SA1-725	=	22 Lbs
SA1-726	=	20 Lbs
SA1-734	=	23 Lbs

**SA2 Dimensions:** 17" W x 5.25" H x 21" L

<b>Weight:</b> SA2-722	=	22 Lbs
SA2-723	=	29 Lbs
SA2-724	=	27 Lbs
SA2-725	=	25 Lbs
SA2-726	=	23 Lbs
SA2-734	=	26 Lbs
SA2-722-722	=	32 Lbs
SA2-722-724	=	36 Lbs

### Environmental Specifications:

<b>Operating Temperature:</b>	5° to 45°C
<b>Humidity:</b>	0 to 90%, non-condensing

**The SA2 enclosure with one module**



**SA2 enclosure with two modules**



## Ozone Analyzer and Ozone Calibrator Specifications:

### Ozone Photometer:

Measurement Range:	0-500 PPB, 0-1000 PPB, 0-10 PPM, or auto-ranging Adjustable 0.5 to 2.0 LPM
Sample Flow Range:	Adjustable 0.5 to 2.0 LPM
Zero Noise:	< 0.3 PPB
Span Noise:	< 0.5% of reading (above 100 PPB)
Lower Detectable Limit (LDL):	<0.5 PPB
Precision:	< 0.5% of reading
Linearity:	< 1% of full scale
Zero Drift:	< .001 PPM per month
Span Drift:	< 1% of reading per 24 hrs
Lag/ Rise/ Fall:	10/ 20/ 20 Secs (Fast Cycle)
Resolution:	0.1 PPB

### Ozone Generator:

Ozone Generator Range:	0 - 1500 PPB
Minimum Non-Zero Ozone Output:	1 PPB
Ozone Output Resolution:	0.5 PPB
Ozone Output Linearity:	+/- 1% of range
Zero Air Flow Rate:	5 to 7 LPM
Zero Air Pollutant Concentrations:	< 1 PPB O <sub>3</sub> , NO, NO <sub>2</sub> , H <sub>2</sub> S, SO <sub>2</sub> , Hydrocarbons

### Analog Outputs:

Number of Analog Outputs:	3
Analog Output Full Scale Ranges:	100 mV to 10 V (Independently Selectable)
Analog Output Resolution:	16 Bits

### Digital IOs:

Number of Digital IO:	4
Status Input Voltage Range:	0 - 5 VDC TTL
Control Output Voltage Range:	0 - 5 VDC
Number of Isolated Relay Output:	2 (722, 724)
Relay Contact Voltage Range:	24VDC

### Digital Ports:

RS232 Ports	2 (9 Db)
Ethernet (Optional):	1 (RJ45)

### Analog Input:

Number of Analog Inputs:	1
Analog Input Range:	0 - 1 VDC

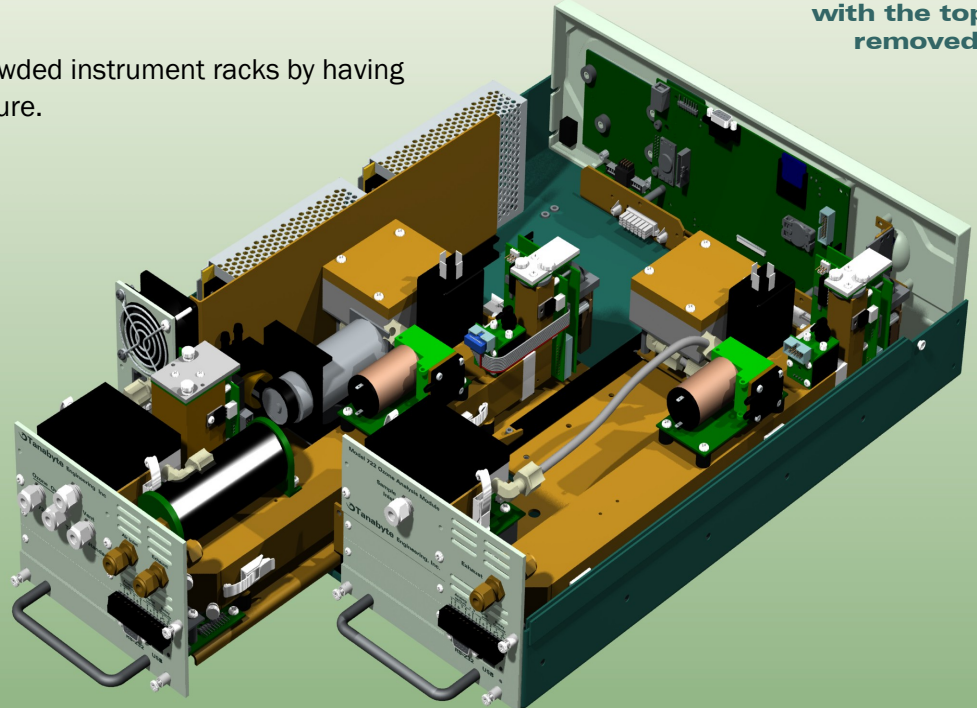
### Power:

AC Input Power:	90 to 264 VAC, 50 or 60 Hz
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## *Instrument Combinations:*

- Cost effective solution
- Space saving solution to crowded instrument racks by having 2 instruments in one enclosure.
- Split screen display

The Model SA2-722-724 Ozone Analyzer and Ozone Transfer Standard shown in a SA2 enclosure with the top removed.



Analysis Modules  
are easily removed  
for calibration & service