



Can you think of anything else you need in a quality control computer?

Whatever your specific gaging application calls for, we can develop a CAG^{QCM} solution for you. It can be modified to accommodate a range of hardware and software options to suit your exact gage monitoring needs. Some of these might include network capability, upload/download programming and graphical representation of parts. Call us. We welcome your questions. We thrive on engineering solutions for your measurement challenges. It's who we are and what we do. We are completely accountable to you.

Circuitry shows com, LPT, I/O, and ethernet ports, plus 16 signal conditioning inputs. Capacity is expandable up to 64 total inputs.

CAG^{QCM} Hardware Features

- Channel selectable input type from Edmunds probe selection
- 16 position keypad for entering operating parameters
- 2 serial ports available as RS-232 or RS-422
- 10" active matrix color display
- 48 bi-directional optically isolated digital inputs/outputs
- 64 total input capacity from Edmunds transducer types
- Accommodates up to 4 gages
- "Accept" and "Reject" status lights
- Ethernet TCP IP or NET BEUI protocol output
- 1 LPT port
- IDE interface for expandable options
- 10.9"H x 16"W x 9.12"D unit (276.8mm x 406.4mm x 231.6mm)
- 28 lbs. (12.70 K)
- Feedback for machine tool compensation

CAG^{QCM} Software Features

- User programmable part tolerance and master sizes
- Inch or millimeter units of measure
- Results displayed as deviations from nominal size or absolute values
- Part classification from 2 to 10 classes
- Built in diagnostics
- Programmable to monitor from 1 to 64 part features.
- SPC charts from data stored in parts buffer including X-bar and range, scatter chart, histograms with selectable time window
- Annotation logging for SPC
- Long and short term histograms and statistical charts
- Parts counters and event log
- Password security of programs and features
- Gage verification
- Automatic mastering from max and min masters
- Gage reliability and repeatability studies
- Static or dynamic gaging application
- Resolutions to .000001"
- Program storage for multiple applications and simple part changes



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Computer Aided Gaging – Quality Control Manager

CAG^{QCM}



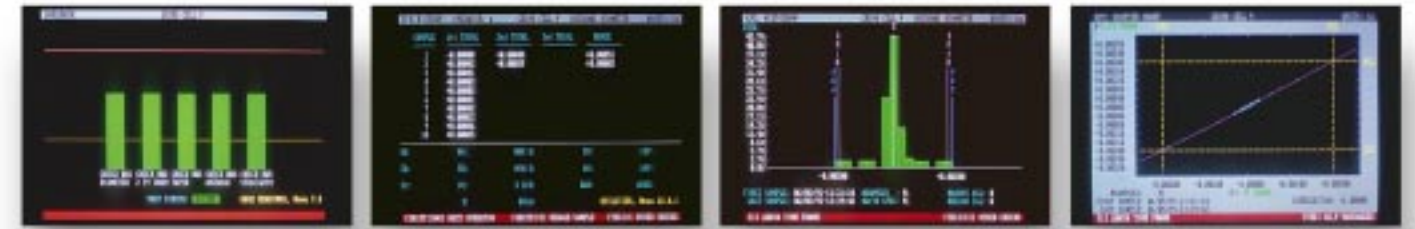


Index Menu — Gives you quick and easy access to any of CAG^{QCM} system functions.

Gage Data File — Lists date and time of measurement in addition to digital values for each part checked.

Input Channel Bar Graph—Provides simple view of each individual channel for diagnostics and set-up.

SPC \bar{X} and R Chart — Graphically illustrates averages and ranges of measurements taken during a specified production time frame. Provides time and results of each sampling.



Bar Graph — Depicts each check and clearly denotes accept/reject status.

R & R Study — Computes and reports numerical data for each part and feature checked to monitor gaging repeatability and reproducibility. Based on AIAG form.

SPC Histogram — Provides short and long-term histograms simultaneously. Divides total part range into cells with largest distribution at full screen height and others relatively proportioned.

Scatter Chart — Presents the correlation of two features in a simple two-axis format.

Introducing the CAG^{QCM} Amplifier

One unit. Every function.

A one track mind. Measurement.

The CAG^{QCM} quality control computer has everything you need for monitoring your multi-dimensional measurement applications. It provides signal conditioning, display, and data gathering in one, all-inclusive unit. There is no need for separate columns, data collectors, and the ubiquitous spaghetti soup of wires and cables. Further, there are no PC-based system problems such as incompatibilities with boards, drivers, monitors and different SPC software programs. To put it simply, the CAG^{QCM} does what you need it to do, headache-free.



Small but mighty. The space-saving CAG^{QCM} is only about 11" x 16" x 9" for easy mounting and portability. It's large on capabilities with the ability to handle multiple gages, store setup data for many parts, and post results in a variety of ways.

Field-tested, proven, and resoundingly successful.

The CAG^{QCM} is the progeny of 50 years experience in the dimensional measurement field. Our CAG systems are at work in thousands of custom gaging applications crunching data day in and day out. Our latest generation, the CAG^{QCM} follows our tradition of providing real world measurement solutions.

Shop tough. Expandable, universal board.

The compact CAG^{QCM} is made for the factory floor. Its NEMA-rated cabinet is sealed to protect components from contaminants. It even uses a "flash" plug-in memory card to drive the program and store the collected data instead of conventional rotating disk drives which can be unreliable in manufacturing environments.

A new generation, 10" flat panel active matrix display provides a clear view of your measurement results. The flat display's low heat emissions allow for cooler operation. It can accommodate up to 4 different gages and up to 16 inputs. A separate, stackable unit of the same compact size expands the input capacity to 48 inputs or more.

Further helping you save money, our universal 4-channel signal conditioning board can accommodate LVDTs and air-to-electronic inputs with full range choices from a selection of our transducers.

Its soft side gives you a reality check.

Our software is menu driven, prompting you step-by-step through simple programming and operating procedures. An added plus, CAG^{QCM} provides real time control charting. What good is a history lesson when it comes to part production? You need to know the quality of your parts now, with the information updated after every measurement cycle. The CAG^{QCM} is your answer. It accumulates, displays, and analyzes measurement data in a variety of numerical and graphical formats from simple status lights to sophisticated control charts. It also stores setup data for many parts, saving you repetitive programming time. Plus, detailed SPC information can be gleaned about part conformance, including range, mean, and deviation from nominal. Further, it can off load the stored data to your network through the ethernet port. Of paramount importance, passwords may be used to protect against inadvertent program changes. In sum, your wants in one small box with a great mind.

It can even talk back. The ultimate in quality control.

A major trend in automatic gaging is the ability to communicate measurement data to production machines. They, in turn, make any necessary compensations automatically, without operator involvement, before making scrap parts. Edmunds Gages is one of the best known companies in the world for providing these closed-loop feedback gaging systems. At front and center is our CAG^{QCM} computer, fluent in CNC machine compensation and post process gaging.



One board does it all. Edmunds universal 4-channel signal conditioning board can accommodate Edmunds LVDTs and air-to-electronic inputs with full range choices.

CAG^{QCM} is suitable for any of your multi-dimensional measurement applications — from manual gaging setups with operator involvement to fully automatic, closed loop systems that only require an occasional glance.