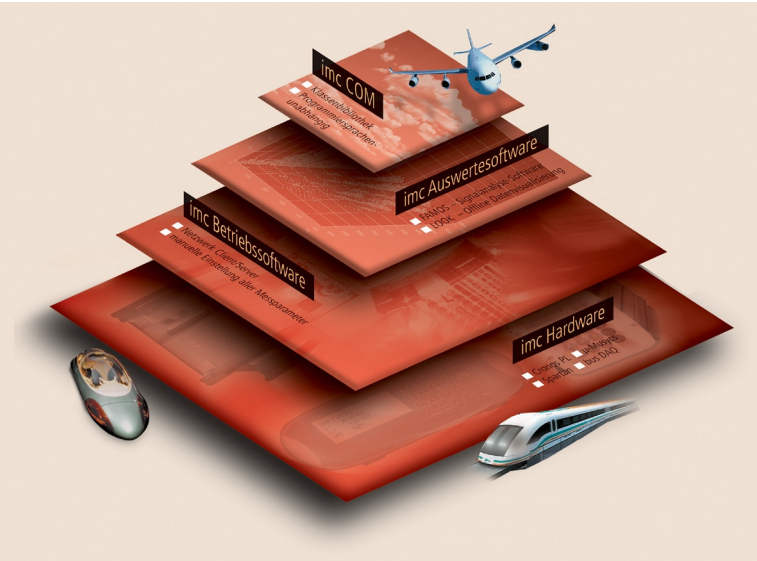
Platform and Shared Component Concept

What is it good for and how does it work?



Integrated Measurement Engineering's great advantage is derived from its platform and shared component concept.

Just as the automotive industry now produces a limited number of platforms on which a much larger number of large and small-series models are based, thus avoiding the expense of designing each vehicle from scratch, "Integrated Measurement Engineering" takes the same approach.

The imc Technology Platform

There is a technological platform consisting of 4 functional units.
Each functional unit is implemented by a module having appropriate software.

Function Unit 1

Various modules for analog signal conditioning for all common sensors and signals,
AD-conversion and digital signal processing.

All signal conditioning modules are designed according to the principle that digitalization is performed immediately after extensive processing of the analog signal.
All of these different analog signal conditioners thus incorporate the A/D-conversion and per-channel computing power in the form of digital signal processors.

Function Unit 2

Internal data management, data saving and networking.

Consisting of a central unit with a number of adapted processors, a mass storage unit and an integrated Gate Array.

Function Unit 3

Personal Analyzer

A powerful Floating Point processor module which directly accesses measurement data, and creates virtual channel by subjecting different data jointly to processing operations.
Direct access to output modules enables ideal control of test objects.

Function Unit 4

Inclusion of digital bus systems

This interface allows integration of digital bus systems such as CAN-Bus. In this way, analog and digital Bus-data can be captured and processed together.
Setting parameters is accomplished by direct entry by means of the operating software, requiring no programming.

Scalable DSP-power is the key to the shared component concept

The modules used, with their various processors and particular firmware, total 15, and from these are derived 6 product lines with an average of 5 device models. *(In the conventional case, at least the same number of functional units and modules would be necessary for each of the 6 product lines. This means that under a conventional scheme, about 120 different modules would need to be developed and manufactured.)*

The various modules form each functional unit each have their own separate, but standardized, internal interface which communicates with a common master software (operating software).

There is only one operating program with which all combinations of modules belonging to the technology platform can be operated by the user.
The user can choose from among the various applications and the software automatically adapts to the hardware configuration present.

The capabilities provided by the respective configuration, as a whole, are completely accessible via the recognized COM-standards and the imc COM class libraries.

This technique offers clear advantages.

- The number of modules can be reduced correspondingly > Factor 6.
- Higher return on R&D costs, resulting in faster implementation of innovative ideas.
- Reduction of overall development costs, with savings passed on to the buyer.
- Larger production orders, leading to higher quality and lower unit cost.
- Reduced costs of assembly and testing, especially for configurable systems, since fewer different test and calibration stands are required.
- The total production time is reduced, yielding savings and shorter delivery times.
- Repair and calibration of customers' devices become quicker and cheaper.

What does "Integrated Measurement Engineering" mean for the user?
The inclusion of the same module in different product lines increases the module's production volume, thus also increasing its reliability the. And along with the increased product maturity comes more efficient production, the advantage of which is passed on directly to the customer.

"Integrated Measurement Engineering" thus offers the user low hardware prices, uniform operating software and open system architecture.
The operating software offers network-wide Client/Server operation of all imc product families via an integrated user interface. The operating software is intuitive and reliable to use, and allows complete manual setting and storage of all measurement parameters. The operating software also allows the automation of all real-time analysis and system response applications, as well as display, documentation and data storage.

Costs in system familiarization, training, software maintenance and updating are drastically reduced, while operating reliability is increased. Measurement tasks are easier and cheaper to perform. A substantial reduction in the “cost of ownership” is achieved.

To summarize, “Integrated Measurement Engineering” is less expensive, more reliable, and more flexible.

imc is the first firm to persistently pursue this concept and has now put it into practice.
To illustrate the point, it can be remarked that all products built since 1995 (approx. 3000 units) are now elements of “Integrated Measurement Engineering”.
IMC/ADDITIVE offer software updates for a flat fee of Euro 400 (!!!).
All units at large can be equipped with the new operating software for affordable updating prices and naturally can also be networked with each other or with the CRONOS-PL to work within a centralized or decentralized network.

The company name "imc", standing for “Integrated Measurement and Control”, now not only reflects an objective but solid reality.