MEMS device manufacturers have to choose between shrinking their products, or adding functionality. This leads to certain categories of components slowing down packaging integration and evolution.

To complement Yole Développement’s MEMS Packaging 2017 Market report, System Plus Consulting has conducted a comparative technology review to provide insights into the packaging structure and technology of around 80 consumer and 20 automotive MEMS products from leading suppliers, including Bosch, Texas Instruments, Broadcom, STMicroelectronics, Knowles...

Several types of device are compared: Environmental sensors, including pressure, humidity, gas and combo sensors; Inertial devices including accelerometers, gyroscopes, magnetometers and sensor hubs; Optical MEMS including microbolometers and micromirrors; Microphones; and Radio frequency (RF) MEMS including antenna tuners, RF filters and oscillators. We look at their package dimensions and internal structures, substrate types, die numbers and dimensions and package cross-sections to answer key questions about MEMS packaging, including:

- What are the main encapsulation processes used by manufacturers, single-chip wafer level packages or multi-chip molded packages?
- What is the preferred interconnection method, wire bonding, flip chip, or through-silicon vias (TSVs)?
- Which innovations can we observe for each manufacturer, and what differences are there between the main competitors?
- Which manufacturers offer the best component integration and which one offers the maximum functionality inside one component?

This 300 page report includes multiple comparisons based on physical analyses of over 100 MEMS components. It offers buyers the unique possibility of seeing MEMS package technology evolution, tracked by manufacturer.
EXAMPLES OF MANUFACTURERS COVERED

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<td>World's first ‘7-Axis’ motion tracking device targeting drone applications.</td>
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