

IMB APPLICATIONS

Imbera Electronics' IMB technology can be utilized across a broad range of electronics packaging and manufacturing, from simple products containing only a few passives or one active component to advanced modules containing several passive and active components. The main focus is in consumer electronics, especially mobile devices.

Single IC packages

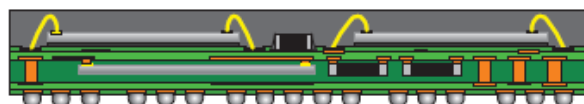
The single IC package family consists of two package types – iQFN and iBGA. Characteristic of these packages are one embedded component (from low to medium I/O count) and conductor layers on only one side of the component.



iBGA

System-in-Package modules

Many types of package fall within the IMB SiP module category. The embedding might be applied to only one component, which provides an advanced substrate for other components on top of it (e.g. the bottom package in PoP structure), or several active and/or passives can be embedded in single or multiple layers.



Mid-range IMB module; one embedded die and few passives. Wirebonded components on top.

System-in-Board

Discrete passive components, IPDs and low to medium I/O count active components can be embedded in a motherboard to achieve e.g. miniaturization or improved electrical performance.



Mother board with embedded die and passive components. SMA components on top.

	System in Board (SIB)	System in Package (SiP)	Single IC Package
Features	<ul style="list-style-type: none"> • Cost driven process; component placement with chip shooter • Motherboard PCB process 	<ul style="list-style-type: none"> • Accuracy driven process; component placement with high accuracy assembly machine • Substrate PCB process 	<ul style="list-style-type: none"> • Accuracy driven process; component placement with high accuracy assembly machine • Substrate PCB process
Embedded components	<ul style="list-style-type: none"> • Low to medium I/O count Si, GaAs • Discrete passives and IPDs; capacitors, resistors, inductors 	<ul style="list-style-type: none"> • Low to medium I/O count Si, GaAs • IPDs 	<ul style="list-style-type: none"> • Low to medium I/O count Si, GaAs
Benefits	<ul style="list-style-type: none"> • Miniaturization • Free utilization of surface area • Lower profile 	<ul style="list-style-type: none"> • Full array solder lands on the back side • Miniaturization • Free utilization of surface area • Excellent electrical and thermal performance • Embedded EMI shield 	<ul style="list-style-type: none"> • Embedded EMI shield • Excellent electrical and thermal performance
Applications	<ul style="list-style-type: none"> • Embedded discrete passives, digital ICs 	<ul style="list-style-type: none"> • High frequency, high heat producing analog devices, digital component 	<ul style="list-style-type: none"> • iQFN, iBGA, High frequency, high heat producing analog devices, digital component

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