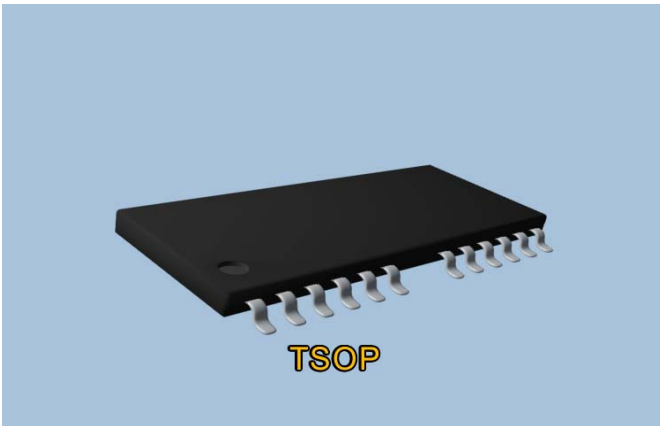


DENSE-PAC MICROSYSTEMS ANIMATION SCRIPT

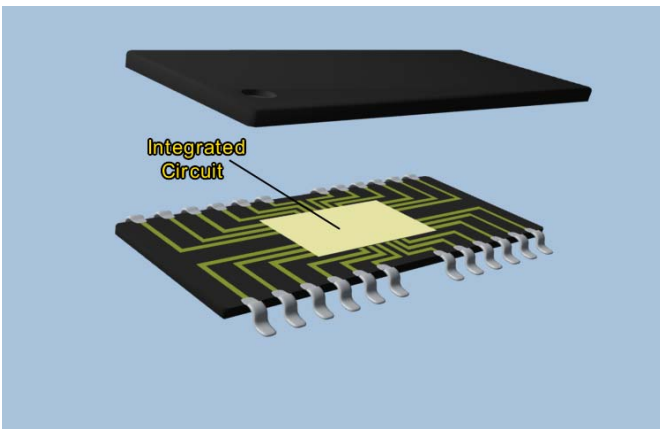
The storyboard below is the blueprint for an animation presentation. Storyboards can be created fairly quickly and be used to show attorneys and experts what to expect in the final presentation. Storyboards can be easily edited, go through many revisions, and finally, be finalized before the much more time-consuming animation and video editing begins.



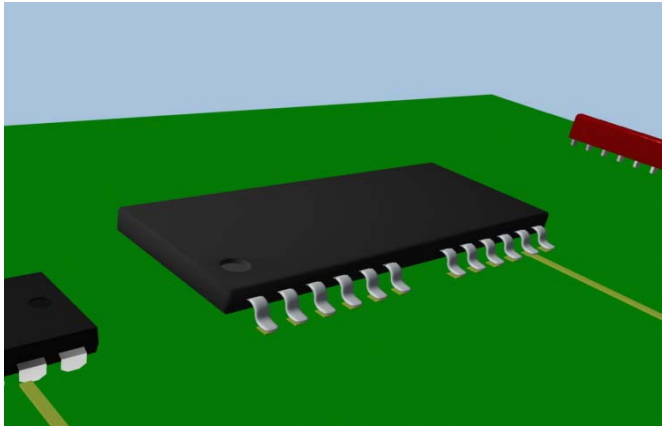
In recent times, our reliance on computer and electronic systems has grown tremendously. As part of this growth, computer manufacturers endeavor to make their systems faster and more reliable, while finding ways to make them smaller, portable and easy to use. To meet this challenge, computer manufacturers rely on state-of-the-art packaging of electronic components, such as processors and memory chips.



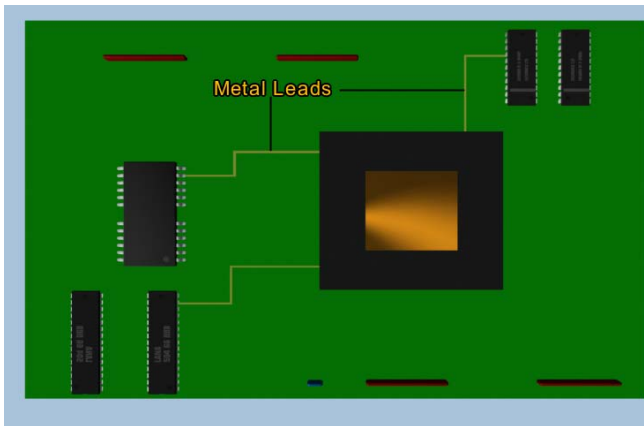
A memory chip is an integrated circuit device where data can be stored and retrieved.



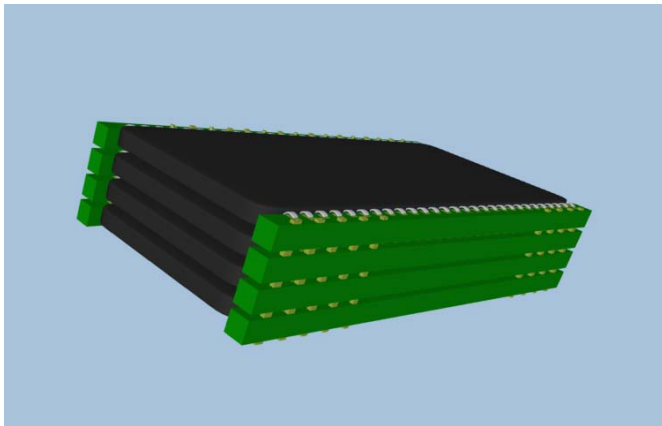
A memory chip typically includes an integrated circuit formed on a semiconductor material. The integrated circuit and semiconductor material assembly may be housed in plastic, forming a thin, small, outline package known as a “TSOP” (pronounced Tee-sop). Metal leads connected to the integrated circuit extend through the TSOP housing and are exposed on each side.



Memory chips may be mounted on both sides of a printed circuit board using surface mount technology. With surface mount technology, prior art through-holes are replaced with conductive pads and long pins on the memory chips are replaced with smaller surface mount leads.

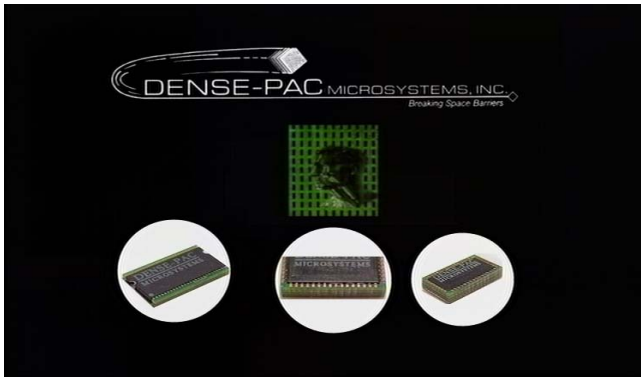


Metal leads are used to electrically connect and secure the memory chip (such as a TSOP) to a printed circuit board by surface mounting. Other components of a computer system may also be electrically connected to the same printed circuit board. The printed circuit board is designed to permit communication between the components that are connected to it. For example, a processor can send data to the memory chip through electrical channels imprinted on the printed circuit board.

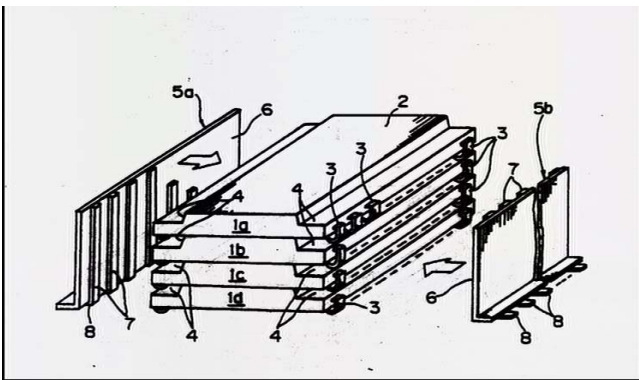


In order to increase the performance of computers while maintaining or reducing their overall size, computer manufacturers must use smaller component or configure existing components in a way that optimizes space on the printed circuit board.

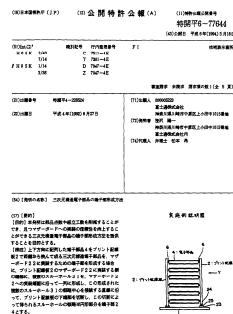
One technique used to increase the number of memory chips that can be attached to a printed circuit board is vertical stacking. This technique increases the density of memory chips on printed circuit boards while creating shorter circuit paths between components. Shorter circuit paths allow components to operate at higher speeds.



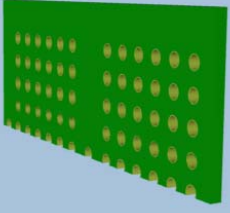
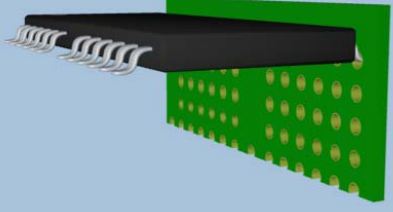
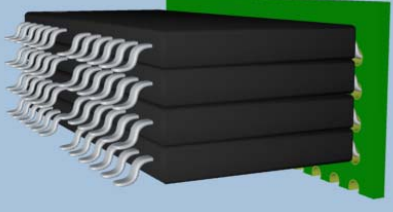
Dense-Pac Microsystems Incorporated is a leader in designing and manufacturing memory products using the vertical stacking technique. Dense-Pac's patented, proprietary vertical stacking technology significantly increases the amount of memory that can be used in high performance computers and electronic systems, without requiring any significant increase in the size of the printed circuit board.

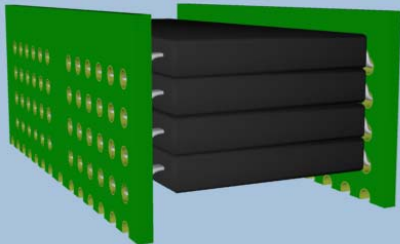
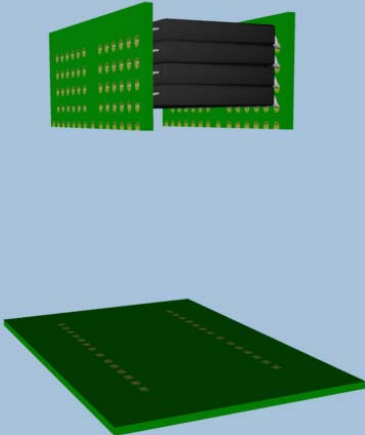
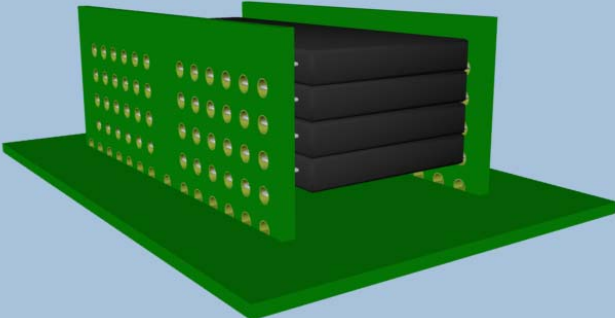


In the mid-to-late 1980s, many other companies were involved in developing surface mount technology.



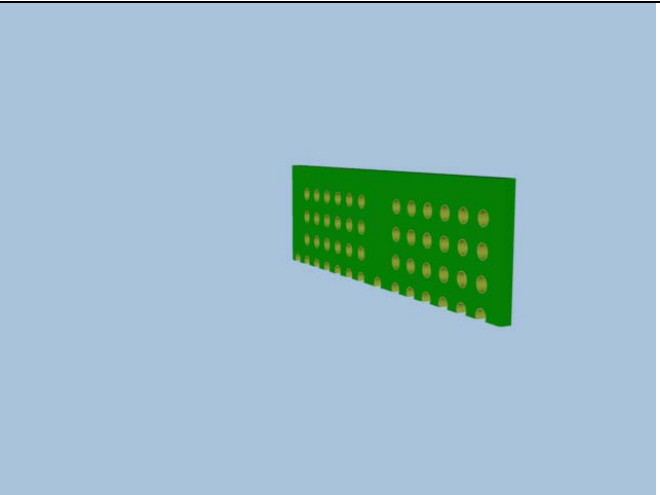
For example, on August 27, 1992, Fujitsu Limited filed a Japanese patent application on behalf of its inventor Yoichi Sasazawa. The invention involved mounting standard TSOPs and other components onto a motherboard. The application describing this invention became publicly available on March 18, 1994.

	<p>Mr. Sasazawa's invention comprises a plurality of electronic components arranged in a vertical direction and sandwiched from both sides by vertically disposed printed circuit boards. These circuit boards hold together and electrically interconnect the electronic components and are referred to as side boards. Each side board includes a series of vertically and horizontally aligned through-holes that extend through the board and along the bottom edge. The boards are cut off along the straight line connecting the substantial centers of a bottom row of through-holes. The substantially semicircular portions of the through-holes obtained by this cutting are used as terminals for surface mounting the side board to a bottom circuit board.</p>
	<p>During assembly, electronic components, such as the displayed TSOPs, are connected to side boards. This connection involves inserting the metal leads of the TSOPs through the through-holes in the side boards.</p>
	<p>Multiple TSOPs may be connected to side boards in a vertically stacked configuration.</p>

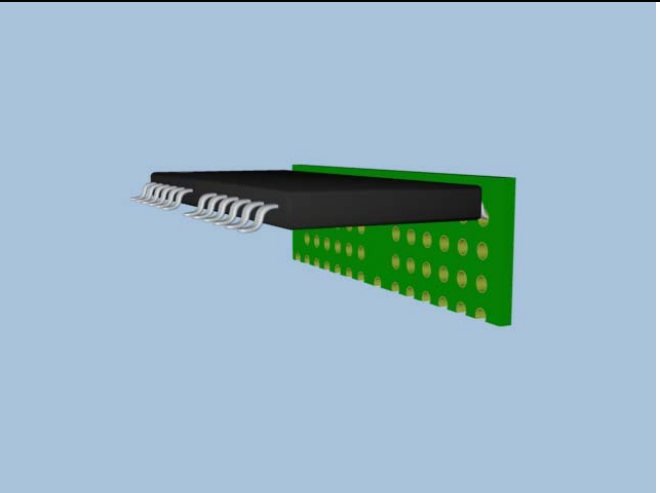
	<p>The TSOPs are attached to both a first and a second side board, as shown. The first and second side boards are parallel to each other. The side boards hold the vertically stacked TSOPs together and electrically interconnect them as well.</p>
	<p>Once assembled, the vertically stacked TSOP assembly is mounted onto the bottom board arranged perpendicular to the side boards.</p>
	<p>Where the side boards meet the bottom board, the through-holes are aligned in a row. Each of the terminal portions on the bottom edges of the side boards is then soldered onto a corresponding surface mount pad located on the bottom board.</p>



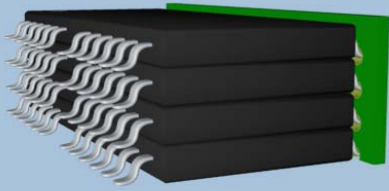
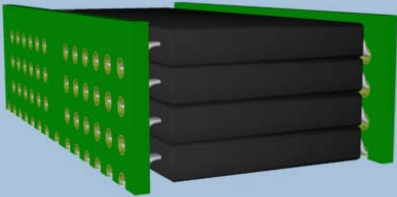
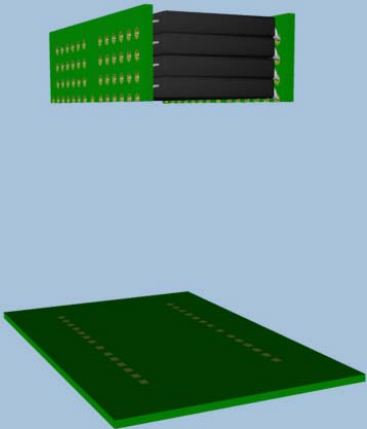
More than one year after Mr. Sasazawa’s invention was publicly known, Simple Technologies filed a United States patent application for the same invention. This patent application evolved into United States Patent Number 5,514,907, otherwise known as the ‘907 patent.

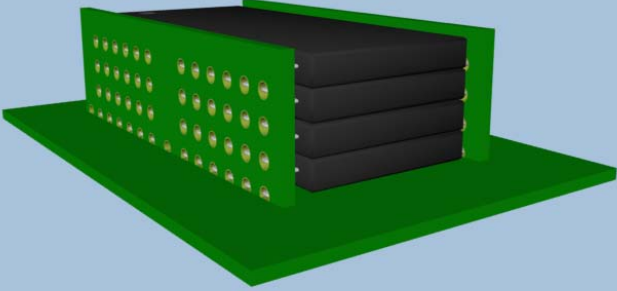
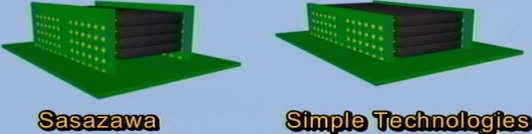


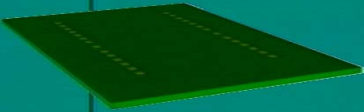
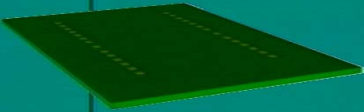
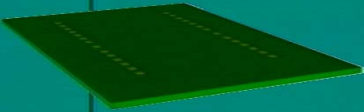
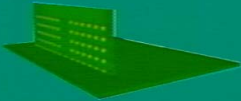
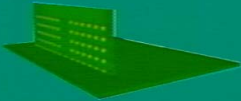
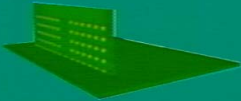
Simple’s ‘907 patent uses side boards, which are identical to the side boards used by Mr. Sasazawa. Simple defined its side boards as printed circuit boards that hold together and electrically interconnect the vertically-stacked TSOPs identical to the Sasazawa patent. Simple’s side boards have through-holes defined in the ‘907 patent as “vias” identical to the Sasazawa patent. In column 4 of the ‘907 patent, Simple describes the vias as follows: “For each side board, the vias of the bottom-most row are partially cut away, with the conductive cylinder of each such via extending to the lower edge of the side board . . .”

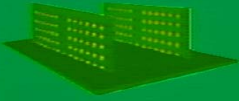
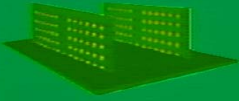
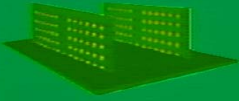


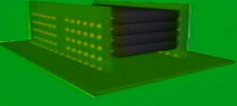
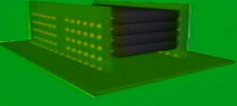
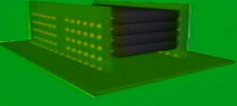
“Each side board has a plurality of plated through-holes or ‘vias’ for receiving the pins of the chips, with each via comprising a conductive tubular cylinder portion that extends through the side board.”

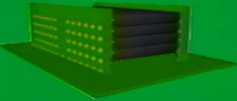
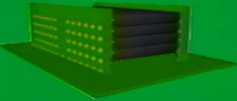
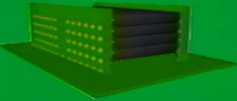
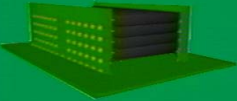
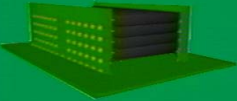
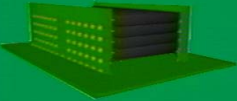



	<p>“The vias are positioned to form four horizontal rows with each row corresponding to a respective memory chip.”</p>
	<p>“The vertically-stacked memory chips are held together and electrically interconnected by a pair of side boards. The side boards are positioned in parallel to each other, and perpendicular to the top surfaces of the chips.”</p>
	<p>“The multi-chip module is configured to be surface-mounted to a memory board.”</p>

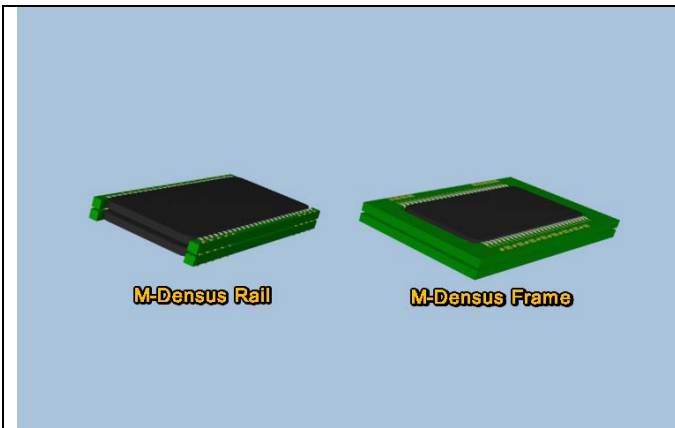
	<p>Terminals at the bottom edges of the side boards are soldered to the surface mount pads on the printed circuit board. As the '907 patent states, "the pins of the bottom-most chip can be soldered directly to the surface mount pads."</p>				
	<p>The vertically-stacked memory chip assemblies of Sasazawa and Simple are virtually identical in that both have side boards that hold together and electrically connect the memory chips, and that facilitate surface mounting onto the bottom circuit board.</p>				
<table border="1"> <thead> <tr> <th>CLAIM 7</th> <th>SASAZAWA</th> </tr> </thead> <tbody> <tr> <td> <p>"a circuit board with surface mount pads"</p> </td> <td></td> </tr> </tbody> </table>	CLAIM 7	SASAZAWA	<p>"a circuit board with surface mount pads"</p>		<p>Let's compare the elements in Claim 7 of the '907 patent to Sasazawa.</p> <p>Claim 7 provides "a circuit board with surface mount pads".</p>
CLAIM 7	SASAZAWA				
<p>"a circuit board with surface mount pads"</p>					

<table border="1"> <thead> <tr> <th>CLAIM 7</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"a circuit board with surface mount pads."</td><td> <p>Yes</p>  </td></tr> </tbody> </table>	CLAIM 7	SASAZAWA	"a circuit board with surface mount pads."	<p>Yes</p> 	<p>Sasazawa has this element.</p>
CLAIM 7	SASAZAWA				
"a circuit board with surface mount pads."	<p>Yes</p> 				
<table border="1"> <thead> <tr> <th>CLAIM 7</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"a first planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."</td><td></td></tr> </tbody> </table>	CLAIM 7	SASAZAWA	"a first planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."		<p>Claim 7 provides "a first planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."</p>
CLAIM 7	SASAZAWA				
"a first planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."					
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CLAIM 7	SASAZAWA				
"a first planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."	<p>Yes</p> 				

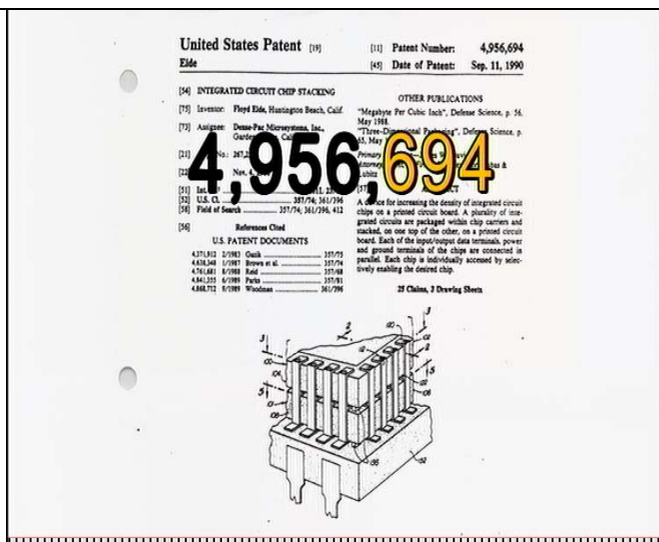
<table border="1"> <thead> <tr> <th>CLAIM 7</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"a second planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."</td><td></td></tr> </tbody> </table>	CLAIM 7	SASAZAWA	"a second planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."		<p>Claim 7 provides "a second planar side board with surface mount contacts along an edge abutting the circuit board, and surface-mounted to the circuit board."</p>
CLAIM 7	SASAZAWA				
"a second planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."					
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CLAIM 7	SASAZAWA				
"a second planar side board with surface mount contacts along an edge abutting the circuit board, and surface mounted to the circuit board."	<p>Yes</p> 				
<table border="1"> <thead> <tr> <th>CLAIM 7</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."</td><td></td></tr> </tbody> </table>	CLAIM 7	SASAZAWA	"standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."		<p>Claim 7 provides "standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."</p>
CLAIM 7	SASAZAWA				
"standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."					

<table border="1"> <thead> <tr> <th>CLAIM 7</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."</td><td> <p>Yes</p>  </td></tr> </tbody> </table>	CLAIM 7	SASAZAWA	"standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."	<p>Yes</p> 	<p>As demonstrated, Sasazawa has this element.</p> <p>Because each element of claim 7 is found in Sasazawa, claim 7 is invalid..</p>
CLAIM 7	SASAZAWA				
"standard surface mount chips stacked between the side boards, with the chips conductively connected to the side boards."	<p>Yes</p> 				
<table border="1"> <thead> <tr> <th>CLAIM 12</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td></td><td></td></tr> </tbody> </table>	CLAIM 12	SASAZAWA			<p>Let's compare Claim 12 of the '907 patent to Sasazawa. Claim 12 adds additional limitations to Claim 7.</p>
CLAIM 12	SASAZAWA				
<table border="1"> <thead> <tr> <th>CLAIM 12</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"A module as defined in claim 7"</td><td></td></tr> </tbody> </table>	CLAIM 12	SASAZAWA	"A module as defined in claim 7"		<p>Claim 12 states "A module as defined in Claim 7"</p>
CLAIM 12	SASAZAWA				
"A module as defined in claim 7"					

<table border="1"> <thead> <tr> <th>CLAIM 12</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"A module as defined in claim 7"</td><td> <p>Yes</p>  </td></tr> </tbody> </table>	CLAIM 12	SASAZAWA	"A module as defined in claim 7"	<p>Yes</p> 	<p>Sasazawa has each element claimed in Claim 7.</p>
CLAIM 12	SASAZAWA				
"A module as defined in claim 7"	<p>Yes</p> 				
<table border="1"> <thead> <tr> <th>CLAIM 12</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"a lower most chip of the plurality of chips soldered to the surface mount pads of the circuit board."</td><td>  </td></tr> </tbody> </table>	CLAIM 12	SASAZAWA	"a lower most chip of the plurality of chips soldered to the surface mount pads of the circuit board."		<p>Claim 12 has an additional element, this element is "a lower most chip plurality soldered to the surface mount pads of the circuit board."</p> <p>The addition of the lower most chip to Sasazawa is obvious.</p>
CLAIM 12	SASAZAWA				
"a lower most chip of the plurality of chips soldered to the surface mount pads of the circuit board."					
<table border="1"> <thead> <tr> <th>CLAIM 12</th><th>SASAZAWA</th></tr> </thead> <tbody> <tr> <td>"a lower most chip of the plurality of chips soldered to the surface mount pads of the circuit board."</td><td>  </td></tr> </tbody> </table>	CLAIM 12	SASAZAWA	"a lower most chip of the plurality of chips soldered to the surface mount pads of the circuit board."		<p>Thus, Claim 12 is also invalid.</p>
CLAIM 12	SASAZAWA				
"a lower most chip of the plurality of chips soldered to the surface mount pads of the circuit board."					



Dense-pac's vertically-stacked memory chip modules are significantly different than both Sasazawa's and Simple's vertically-stacked memory chip modules in design, manufacture, and functionality.

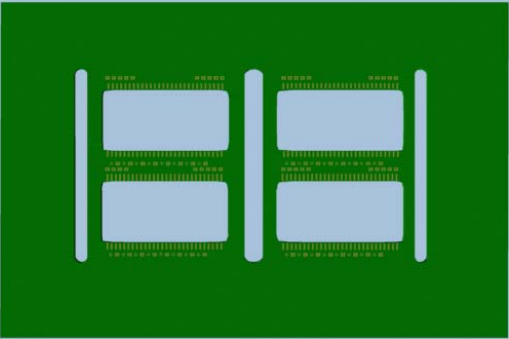
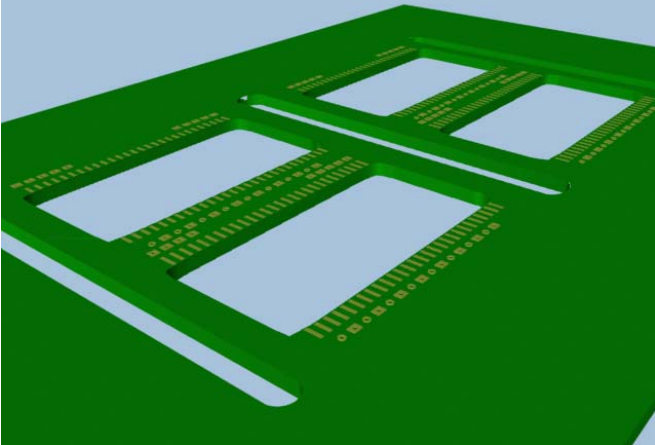
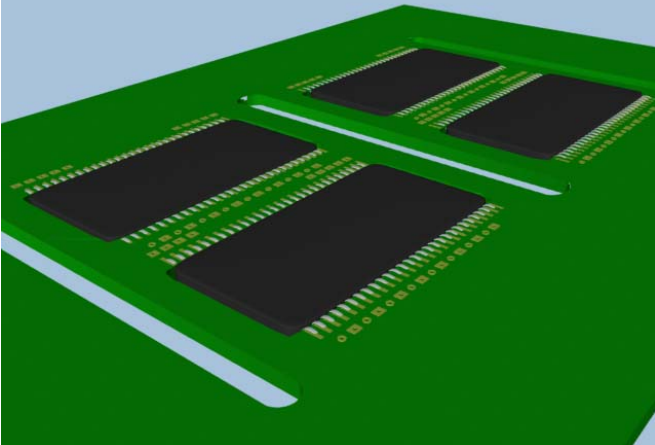


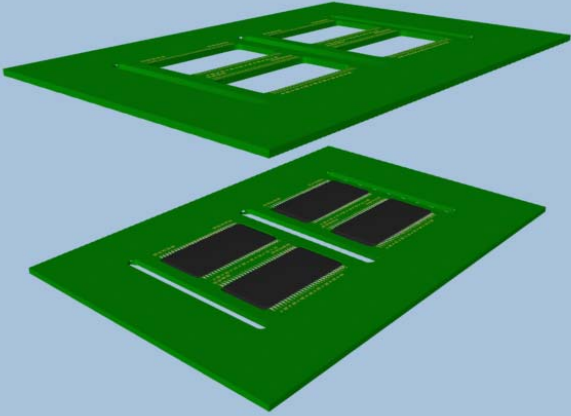
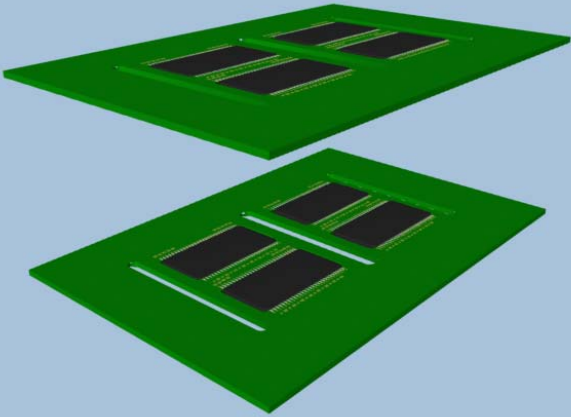
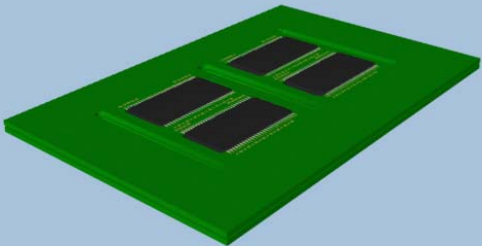
In September of 1990, United States Patent Number 4,956,694 for integrated circuit chip stacking was issued to Dense-Pac. Initially, Dense-Pac stacked integrated circuit chips were placed in leadless chip carriers. The leadless chip carriers (LCCs) were rectangular, box-shaped housings with conductive pads instead of metal leads.

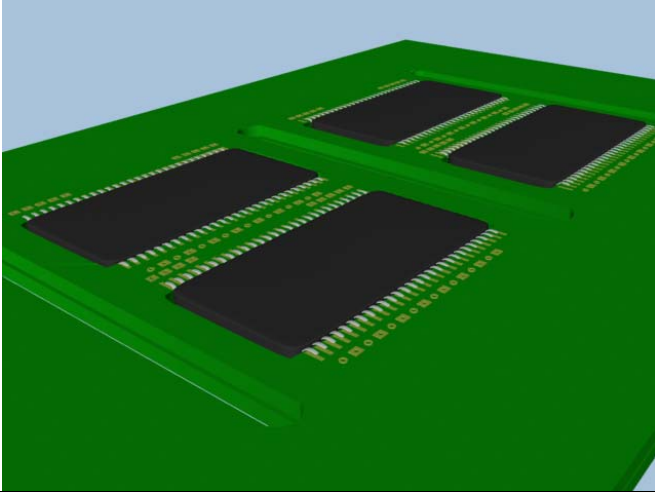
Carrying forward the '694's patent's horizontal concept, Dense-Pac's next products, the M-Densus products use horizontal printed circuit boards to hold the stacked memory chips, which is significantly different from both Sasazawa and Simple. Dense-Pac has both a frame and a rail M-Densus design.



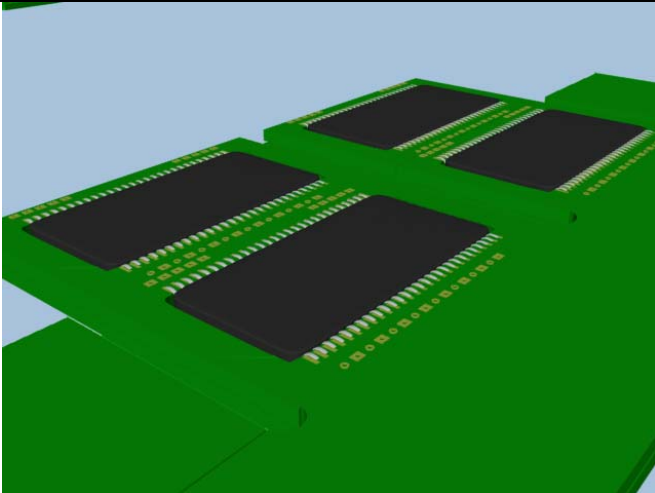
The assembly process for the frame M-Densus design is first demonstrated, followed by the rail design. To manufacture its frame design memory chip stack, Dense-Pac begins with a clean printed circuit board.

	<p>Portions of the printed circuit board are cut and removed.</p>
	<p>In this example, four rectangular apertures are formed in the printed circuit board. Elongated cutout portions extending between and on the side of the four rectangular holes permit a later cutting process.</p>
	<p>The TSOPs are turned upside down and inserted into the four rectangular apertures. The TSOPs connect to the printed circuit board by their metal leads.</p>

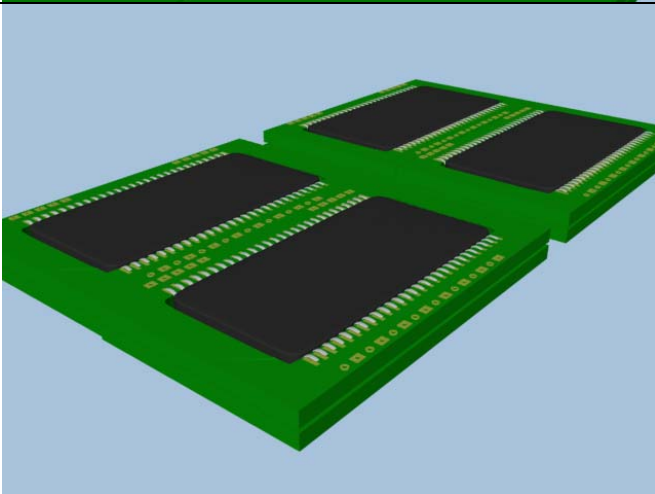
	<p>Multiple printed circuit boards are prepared . . .</p>
	<p>. . .with TSOPs inserted into the rectangular apertures.</p>
	<p>Once the TSOPs are inserted into the rectangular apertures, the printed circuit boards are stacked. The metal leads of the stacked TSOPs are soldered to provide an electrical connection between the chips.</p>



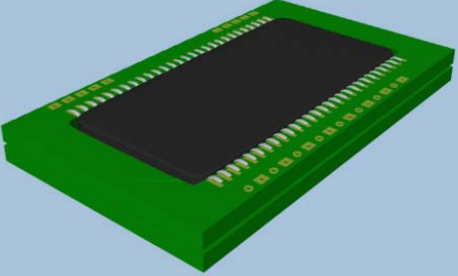
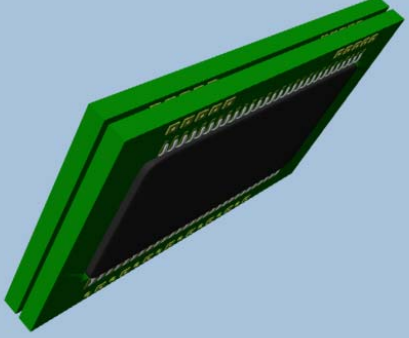
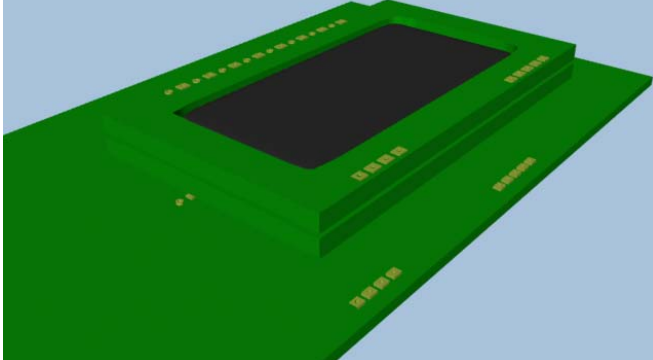
The stacked printed circuit board assemblies are now ready to be cut.

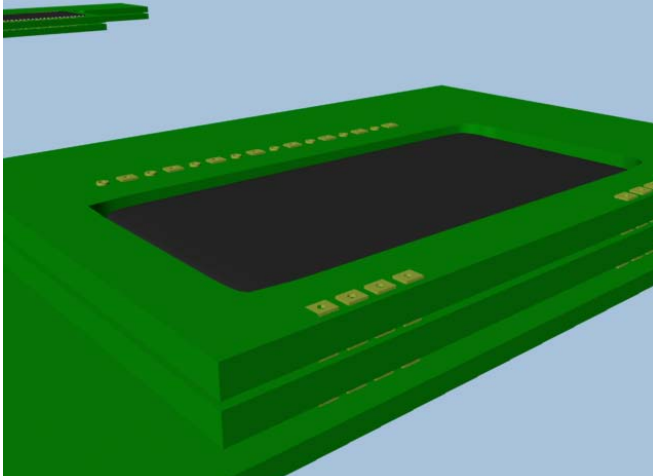
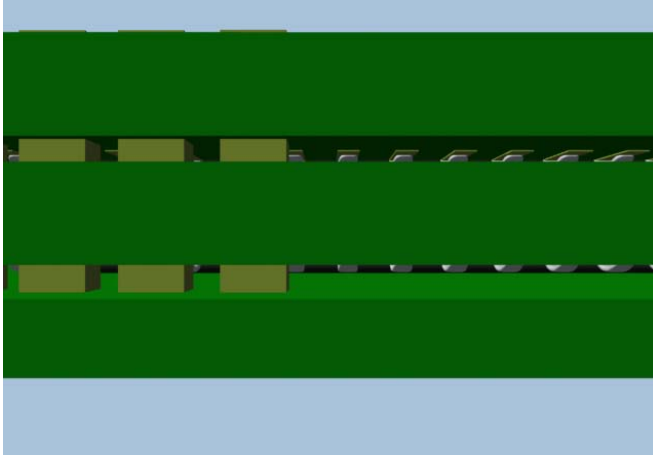
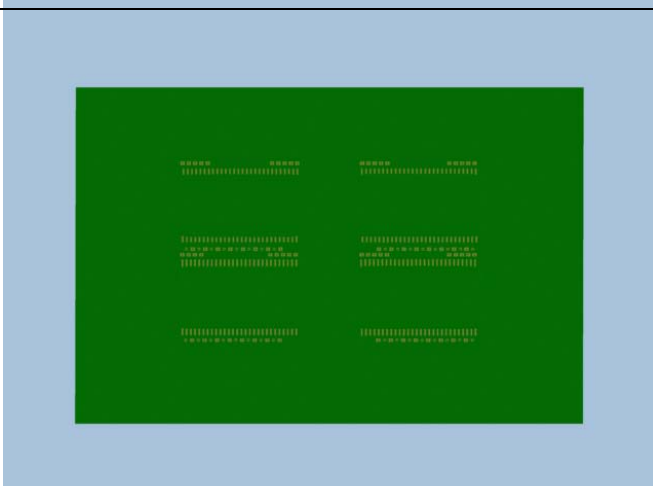


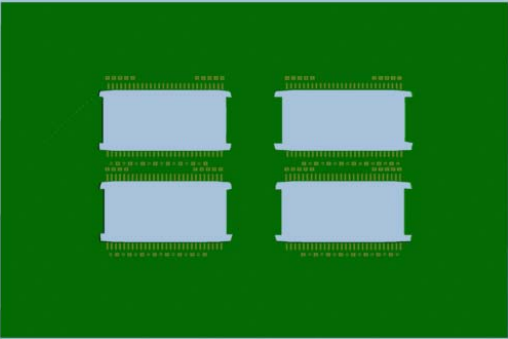
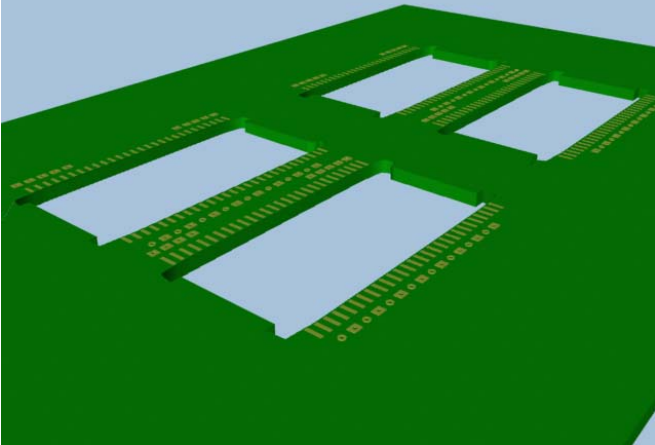
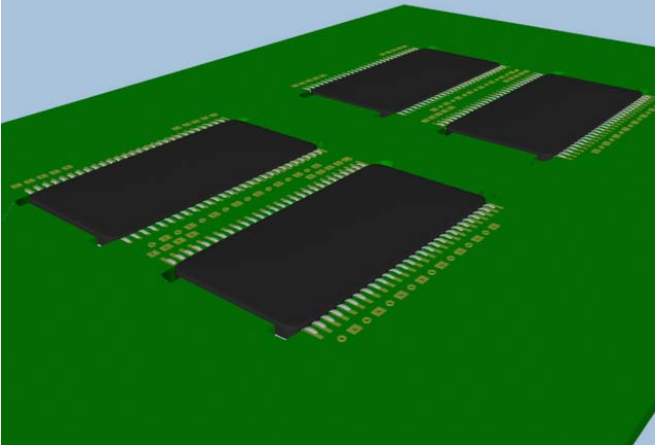
First, two cuts are made perpendicular to the longitudinal axis of the elongated cutout portions to remove excess circuit board material. These initial cuts separate the four vertically-stacked TSOPs into two chipset pairs.

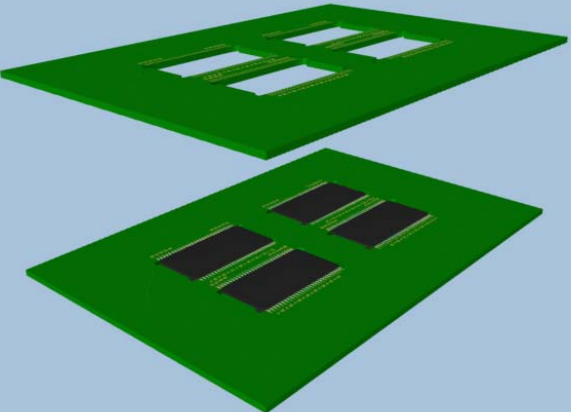
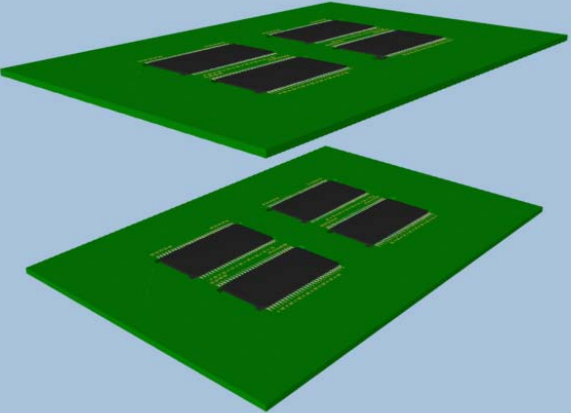
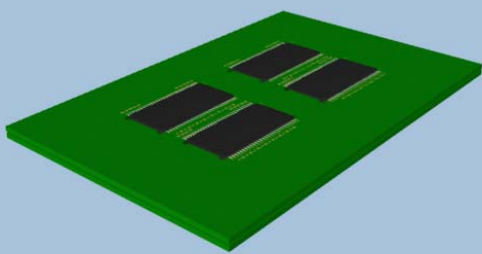


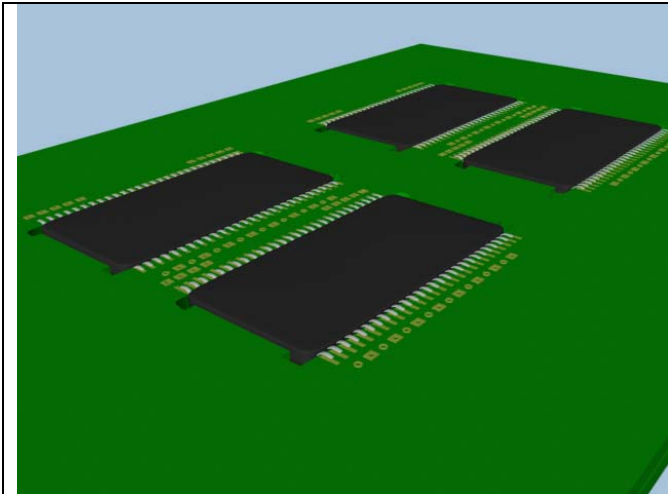
Then, two more cuts are made. . .

	<p>... to separate the chipset pairs into individually framed M-Densus product.</p>
	<p>The M-Densus product is then flipped ...</p>
	<p>...and mounted onto a bottom circuit board.</p>

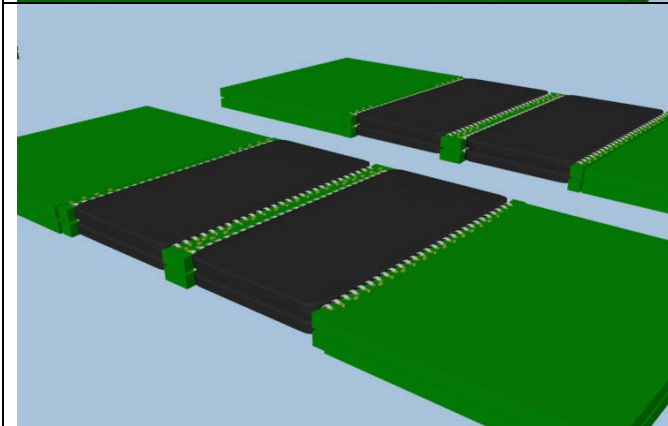
	<p>With the frame M-Densus product, the frames surrounding the TSOPs are separated from each other by the leads of the TSOPs.</p>
	<p>Dense-Pac's vertically-stacked memory chip product, the frame M-Densus product, includes spaced-apart frames. Unlike Sasazawa's and Simple's side boards, these frames do not hold the memory chip assembly together. The memory chips are held together by soldering the frames and the metal leads of adjacent memory chips. In addition, the bottom frame does not abut the printed circuit board, but instead, sits on the TSOP leads.</p>
	<p>Dense-Pac uses a similar process to manufacture its rail M-Densus product, which is also a vertically-stacked memory chip assembly. This process also starts with a clean printed circuit board.</p>

	<p>Portions of the printed circuit board are cut and removed.</p>
	<p>In this example, four rectangular apertures are formed in the printed circuit board to receive TSOPs. This step does not have the elongated portions along the sides of the apertures as is used in the frame M-Densus product's manufacturing process.</p>
	<p>The TSOPs are inverted and inserted into the four rectangular apertures and connected to the printed circuit board by their metal leads.</p>

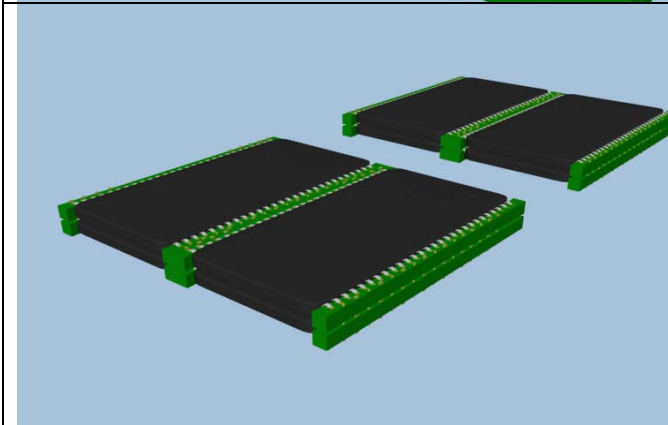
	<p>Multiple printed circuit boards are prepared . . .</p>
	<p>. . . with TSOPs inserted into the rectangular apertures.</p>
	<p>Once the TSOPs are inserted into the rectangular apertures, the printed circuit boards are stacked. The metal leads of the stacked TSOPs are soldered to provide an electrical connection between the chips.</p>



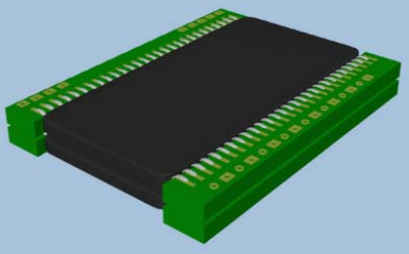
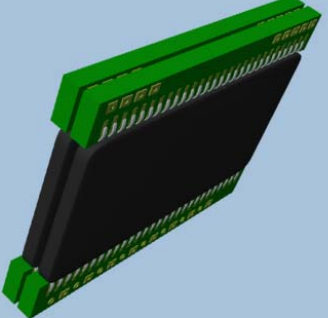
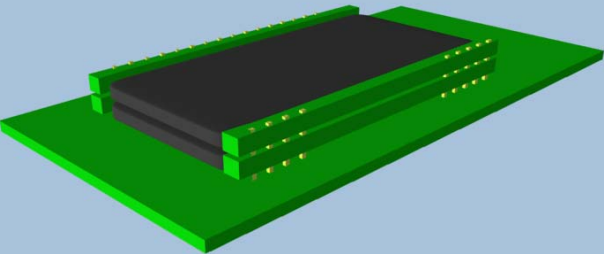
The stacked printed circuit board assemblies are now ready to be cut.

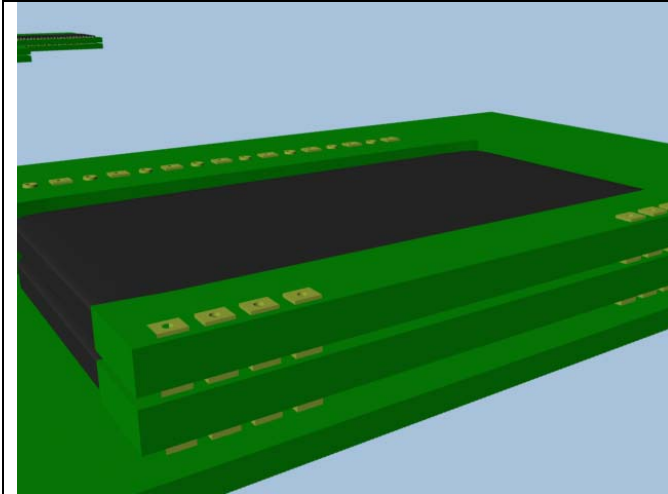


Initially, four cuts are made along the short edges of each pair of TSOPs and portions of the printed circuit board are removed.

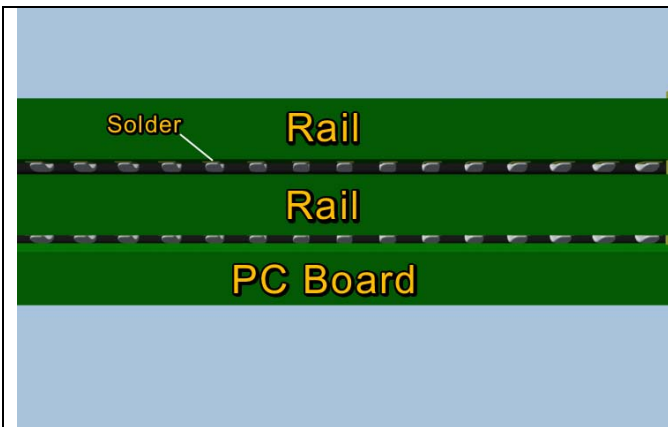


Four more cuts are then made to remove excess portions of the printed circuit board, leaving two vertically-stacked TSOP pairs.

	<p>Two final cuts are made to separate the pairs into the individual rail M-Densus product.</p>
	<p>The individual rail M-Densus product is then flipped over and . . .</p>
	<p>. . . mounted onto a bottom circuit board.</p>



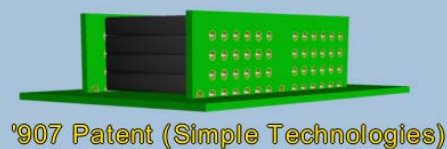
Unlike the side boards of the '907 patent, the rails along side the TSOPs are separated from each other by the leads of the TSOPs.



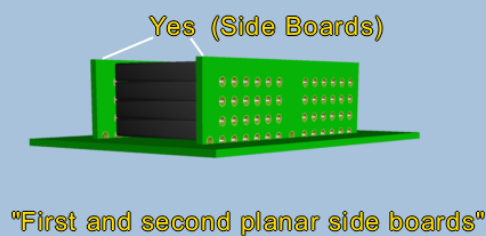
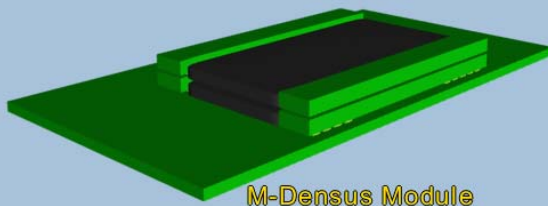
Dense-Pac's, rail M-Densus product, includes spaced-apart rails. Unlike Sasazawa's and Simple's side boards, these rails do not hold the TSOP assembly together. The TSOPs are held together by soldering the rails and the metal leads of adjacent TSOPs. The bottom rails do not abut the printed circuit board.

Elements Required by Claim 7 of '907 Patent

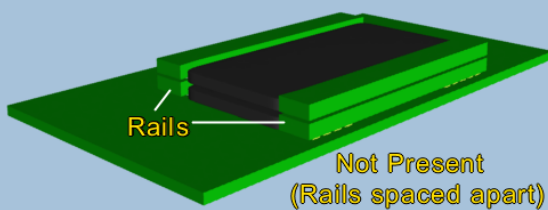
Claim 7 of Simple Technology's '907 patents also requires that certain elements be present. These elements are now demonstrated and compared to Dense-Pac's rail M-Densus product.

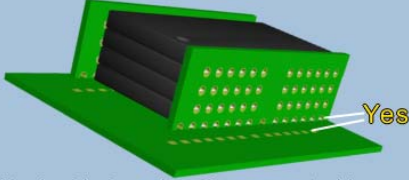
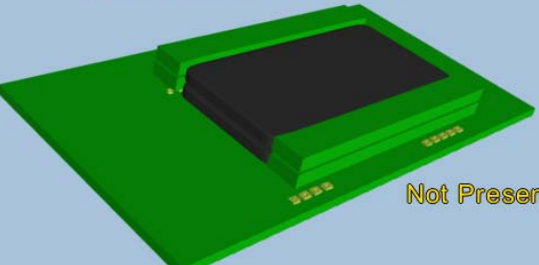

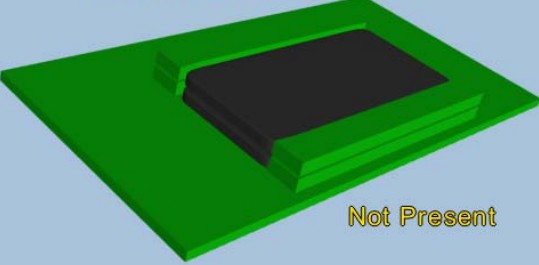
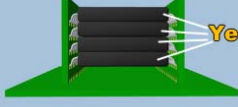
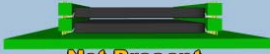


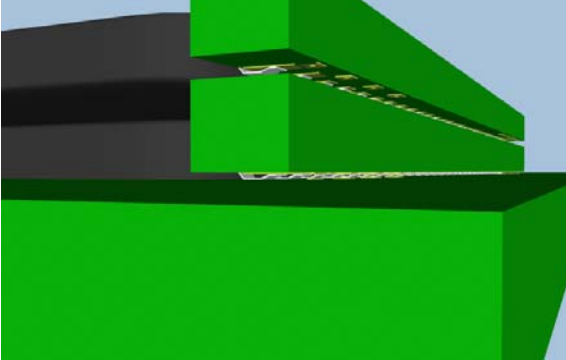
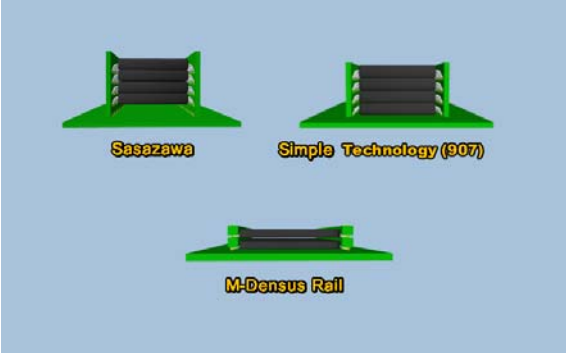
Shown here are the '907 device and the rail M-Densus product. The products are different in design, function, and the way they are manufactured.



Claim 7 of the '907 patent requires "first and second planar side boards." Planar is defined as a "flat plate." The planar side boards, as defined by the '907 patent, hold together and electrically interconnect the vertically-stacked memory chips. The rail M-Densus product uses spaced apart rails, not planar side boards.



 <p>Yes</p> <p>"Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board"</p>  <p>Not Present</p>	<p>Claim 7 further requires "each side board to be surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board."</p> <p>Because the rail M-Densus product does not use side boards, it does not meet this limitation of claim 7.</p>
 <p>Yes</p> <p>"The side boards substantially perpendicular to the bottom circuit board and abutting the bottom circuit board"</p>  <p>Not Present</p>	<p>Claim 7 also requires "side boards to be substantially perpendicular to the bottom circuit board and abutting the bottom circuit board." The rail M-Densus product does not abut the bottom circuit board. The rails of the rail M-Densus product sit above the TSOP leads and do not abut the bottom circuit board. In addition, the rails of the rail M-Densus product are parallel, not perpendicular to the bottom circuit board.</p>
 <p>Yes</p> <p>"A plurality of standard surface mount chips stacked between said side boards... each chip conductively connected to said first... and second side board."</p>  <p>Not Present</p>	<p>Claim 7 also requires "A plurality of standard surface mount chips stacked between said side boards...each chip conductively connected to said first... and said second side board."</p> <p>Thus, all of the elements of claim 7 are not present in the M-Densus product.</p>

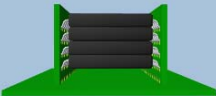

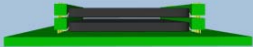
<p style="text-align: center;">Elements Required by Claim 12 of '907 Patent</p>	<p>Claim 12 of Simple Technology's '907 patent requires all the elements of claim 7. In addition, it requires that the lower-most chip of the plurality of standard surface mount chips is soldered to the side boards and the first and second sets of surface mount pads.</p>
	<p>Dense-Pac's rail M-Densus product does not have side boards, and the rails of the rail M-Densus product sit on top of the TSOP leads.</p> <p>Thus, all of the elements of claim 12 are not present in the M-Densus product.</p>
	<p>When viewed side-by-side the Sasazawa and Simple Technology memory chip assemblies are virtually identical. Dense-Pac's rail M-Densus product not only looks different, it is different. From an end view, the two side boards of the '907 device hold the TSOPs together, and abut the bottom board. In contrast, the rails of the M-Densus product are separate, do not hold the TSOPs together, and sit above the bottom board, on the TSOP leads. The rails are not side boards. The elements recited in claims 7 and 12 of the '907 patent are not found in Dense-Pac's rail M-Densus products. The rail M-Densus product does not infringe the '907 patent.</p>

CLAIM 7		Now, let's see how the assertions stated in claim 7 of the '907 patent compare with the M-Densus product.
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
CLAIM 7		<p>Claim 7 of the '907 patent states "first and second planar side boards".</p> <p>Planar is defined as a "flat plate".</p> <p>Keep in mind that the claim states there are two of them and the specification defines that the side boards hold together and electrically interconnect the stacked memory modules.</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards		
CLAIM 7		<p>The M-Densus product uses rails or frames. These rails or frames are not planar. A pair of rails or frames must exist per memory chip. If a memory chip stack consists of 4 memory chips, there will be a total of 8 rails or 4 frames.</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	

CLAIM 7		<p>Claim 7 states “Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board.”</p> <p>This means that the side boards have pads at their bottom to mount to the bottom circuit board.</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	
Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board		
CLAIM 7		<p>The M-Densus product does not use side boards. The bottom rails or frame are mounted and sit on top of the TSOP leads.</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	
Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board	Not Present	
CLAIM 7		<p>Claim 7 states the side board “abuts” and are substantially perpendicular to the bottom circuit board.</p> <p>The bottom surface of the side boards is in contact with the bottom circuit board without pins or TSOP leads interposed between them. The ‘907 patent side boards are at a 90 degree angle to the bottom circuit board.</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	
Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board	Not Present	
The side boards substantially perpendicular to the bottom circuit board and abutting the bottom circuit board		

CLAIM 7		<p>The M-Densus' product's rails or frame do not abut the bottom circuit board. Instead, the bottom frame or rail sits on top of the TSOP leads and connects to the bottom circuit board..</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	
Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board	Not Present	
The side boards substantially perpendicular to the bottom circuit board and abutting the bottom circuit board	Not Present	
CLAIM 7		<p>Claim 7 also states "a plurality of standard mount chips conductively connect to the side boards".</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	
Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board	Not Present	
The side boards substantially perpendicular to the bottom circuit board and abutting the bottom circuit board	Not Present	
A plurality of standard mount chips conductively connect to the side boards		
CLAIM 7		<p>The M-Densus products, not having side boards, use the individual frames or rails mounted to each chip to transfer electrical signals from the chips to the bottom circuit board.</p>
Elements Required by Claim 7 of '907 Patent	Elements Present in the M-Densus Modules	
First and second planar side boards	Not Present	
Each side board surface mounted by contacts positioned along its edge to surface mount pads of the bottom circuit board	Not Present	
The side boards substantially perpendicular to the bottom circuit board and abutting the bottom circuit board	Not Present	
A plurality of standard mount chips conductively connect to the side boards	Not Present	

CLAIM 12		Now, let's look at claim 12 of the '907 patent.
Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules	
CLAIM 12		Claim 12, first of all, includes all of the elements stated previously in claim 7.
Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules	
All elements contained in Claim 7 of '907 patent		
CLAIM 12		Remember that the elements of the Claim 7 of the '907 patent are not found in M-Densus product.
Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules	
All elements contained in Claim 7 of '907 patent	Not Present	

<div>CLAIM 12</div> <table><tr><td>Elements Required by Claim 12 of '907 Patent</td><td>Elements Present in the M-Densus Modules</td></tr><tr><td>All elements contained in Claim 7 of '907 patent</td><td>Not Present</td></tr><tr><td>wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads</td><td></td></tr></table>		Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules	All elements contained in Claim 7 of '907 patent	Not Present	wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads		<p>Claim 12 also states “wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads”. This means the bottom chip in a stack is soldered to the bottom circuit board itself.</p>
Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules							
All elements contained in Claim 7 of '907 patent	Not Present							
wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads								
<div>CLAIM 12</div> <table><tr><td>Elements Required by Claim 12 of '907 Patent</td><td>Elements Present in the M-Densus Modules</td></tr><tr><td>All elements contained in Claim 7 of '907 patent</td><td>Not Present</td></tr><tr><td>wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads</td><td>Not Present</td></tr></table>		Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules	All elements contained in Claim 7 of '907 patent	Not Present	wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads	Not Present	<p>The rail M-Densus product does not have a “plurality of standard mount chips conductively connected to the side boards.” The M-Densus product does not have side boards. Because the M-Densus Product does not have a plurality of chips “connected to side boards”, it cannot have a “lower-most chip of said plurality.”</p>
Elements Required by Claim 12 of '907 Patent	Elements Present in the M-Densus Modules							
All elements contained in Claim 7 of '907 patent	Not Present							
wherein a lower-most chip of said plurality is soldered to said first and second sets of surface mount pads	Not Present							
<div><div><p>Sasazawa</p></div><div><p>Simple Technology (907)</p></div><div><p>M-Densus Rail</p></div></div>		<p>Because of all of the limitations of these claims are not found in the M-Densus products as illustrated by Claims 7 and 12. It is clear that the M-Densus products do not infringe the ‘907 patent.</p>						