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(54) **INSTALLATION AND REMOVAL OF COMPUTING COMPONENTS**

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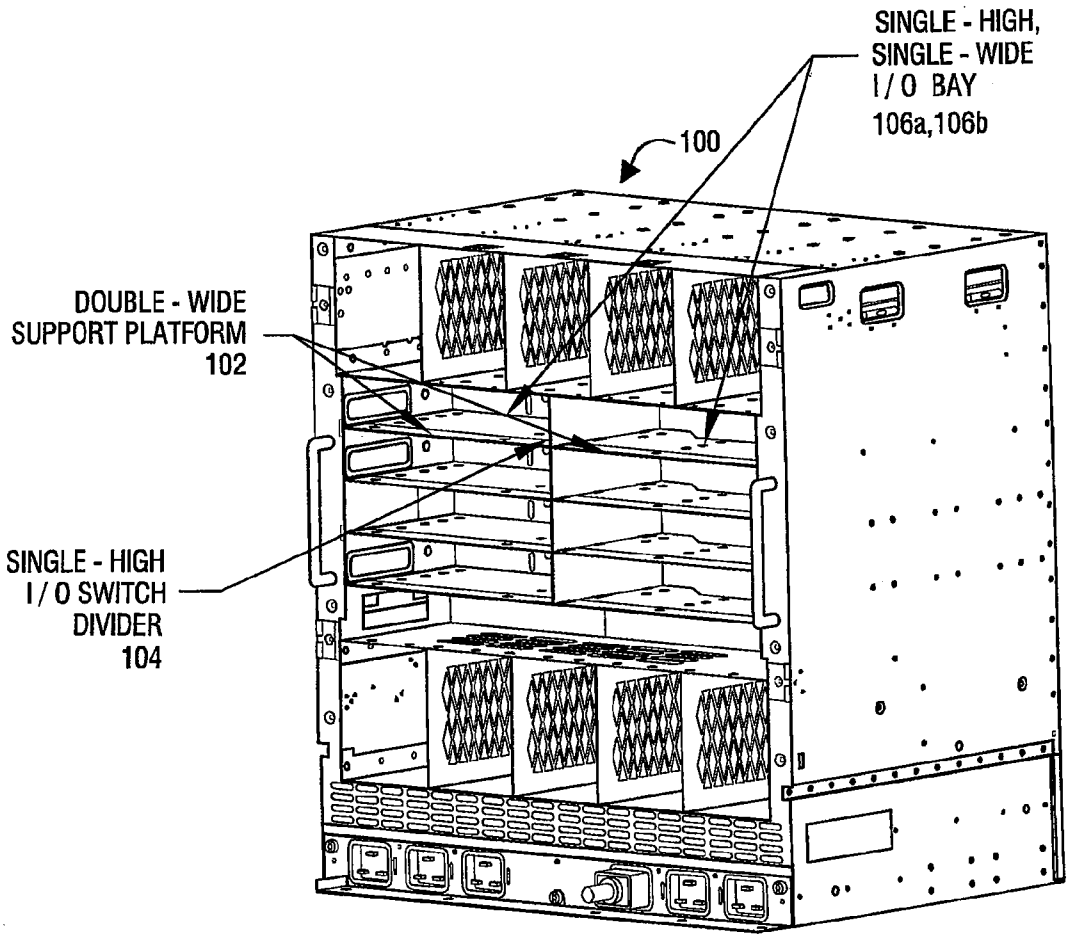
(57) **ABSTRACT**

Included are embodiments for installation and removal of computing components. More specifically, at least one embodiment of an apparatus includes at least one removable support platform configured to define a computing device bay and at least one removable switch divider configured to further define the computing device bay, the computing device bay configured to receive a double-high component.



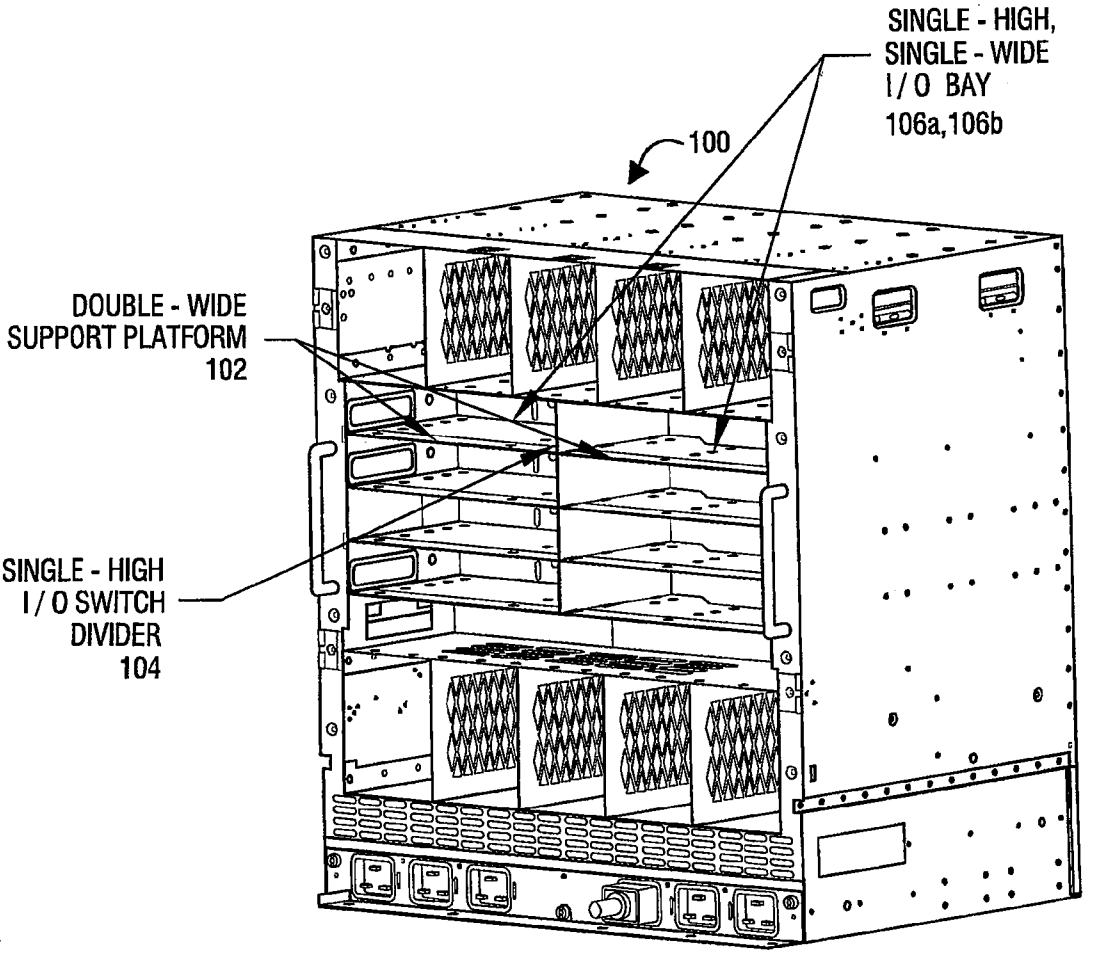

SINGLE - HIGH,
SINGLE - WIDE
I/O BAY
106a,106b
100
DOUBLE - WIDE
SUPPORT PLATFORM
102
SINGLE - HIGH
I/O SWITCH
DIVIDER
104

FIG. 1

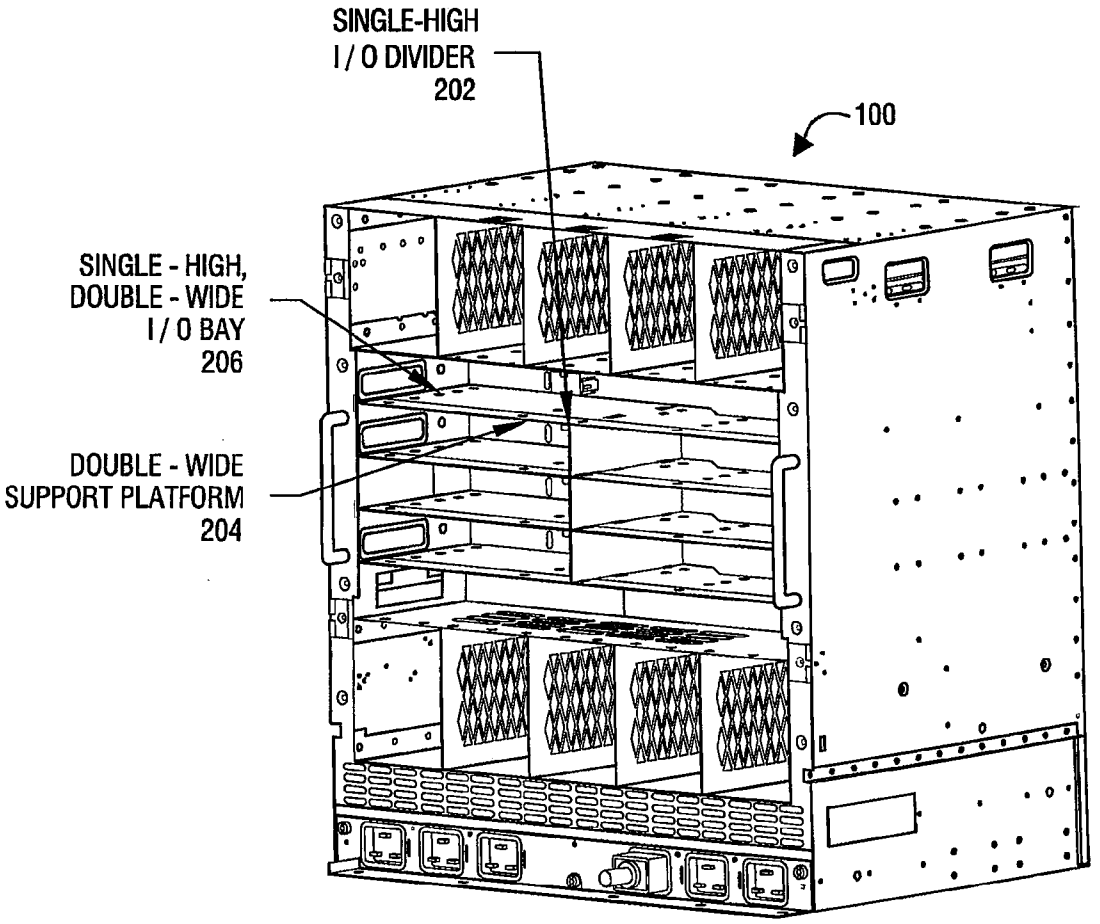

SINGLE-HIGH
I / O DIVIDER
202
100
SINGLE - HIGH,
DOUBLE - WIDE
I / O BAY
206
DOUBLE - WIDE
SUPPORT PLATFORM
204

FIG. 2

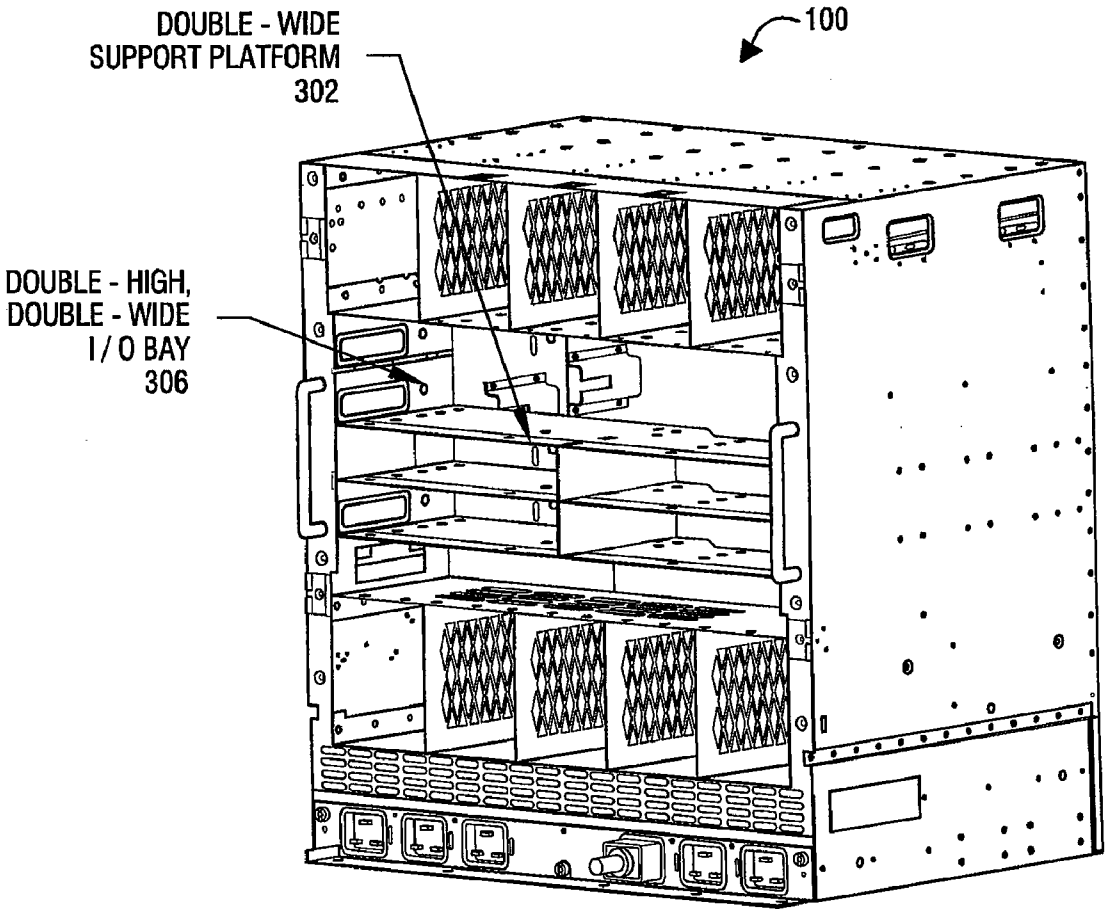

DOUBLE - WIDE
SUPPORT PLATFORM
302
100
DOUBLE - HIGH,
DOUBLE - WIDE
I / O BAY
306

FIG. 3

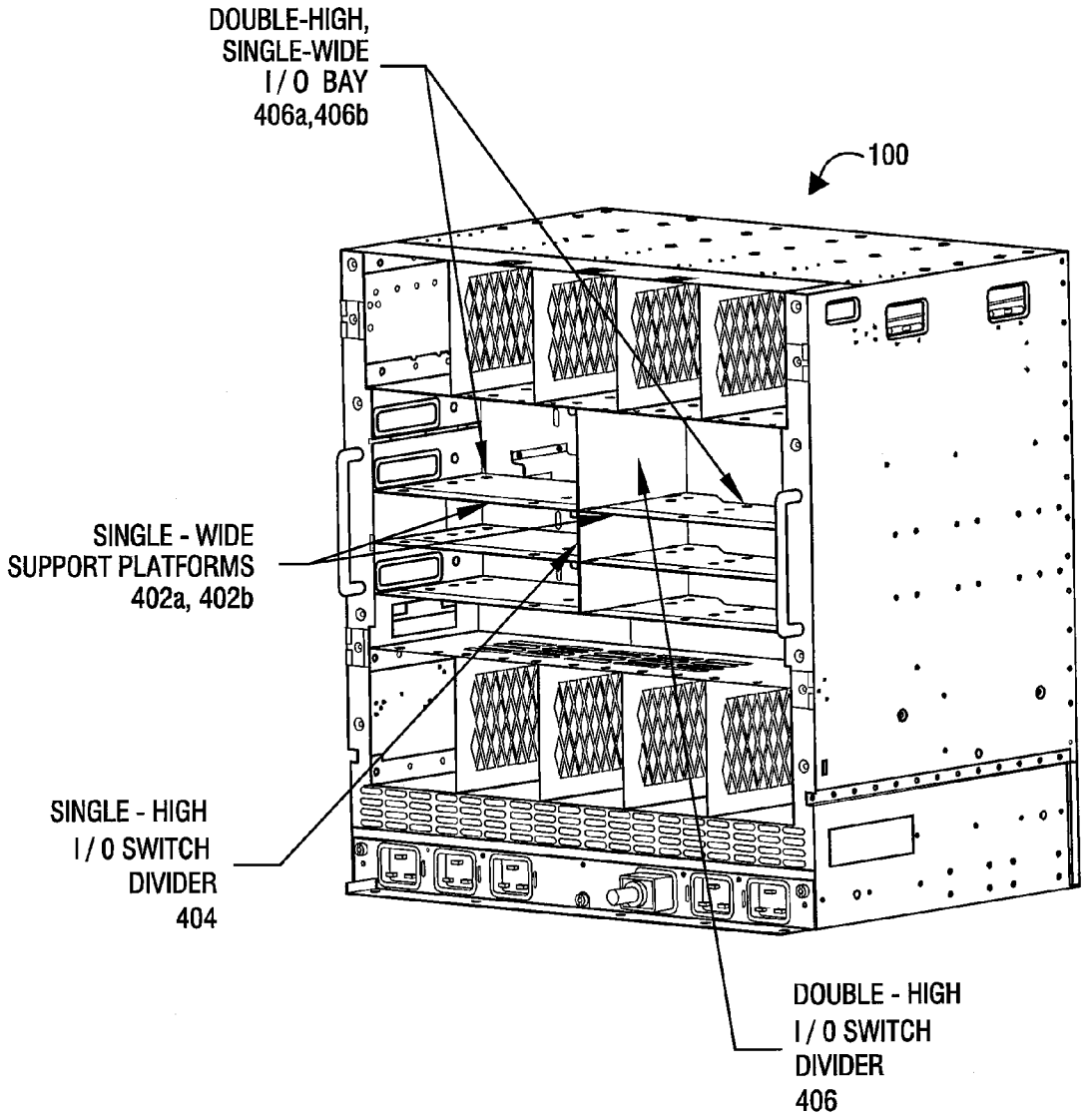

DOUBLE-HIGH,
SINGLE-WIDE
I/O BAY
406a,406b
100
SINGLE - WIDE
SUPPORT PLATFORMS
402a, 402b
SINGLE - HIGH
I/O SWITCH
DIVIDER
404
DOUBLE - HIGH
I/O SWITCH
DIVIDER
406

FIG. 4

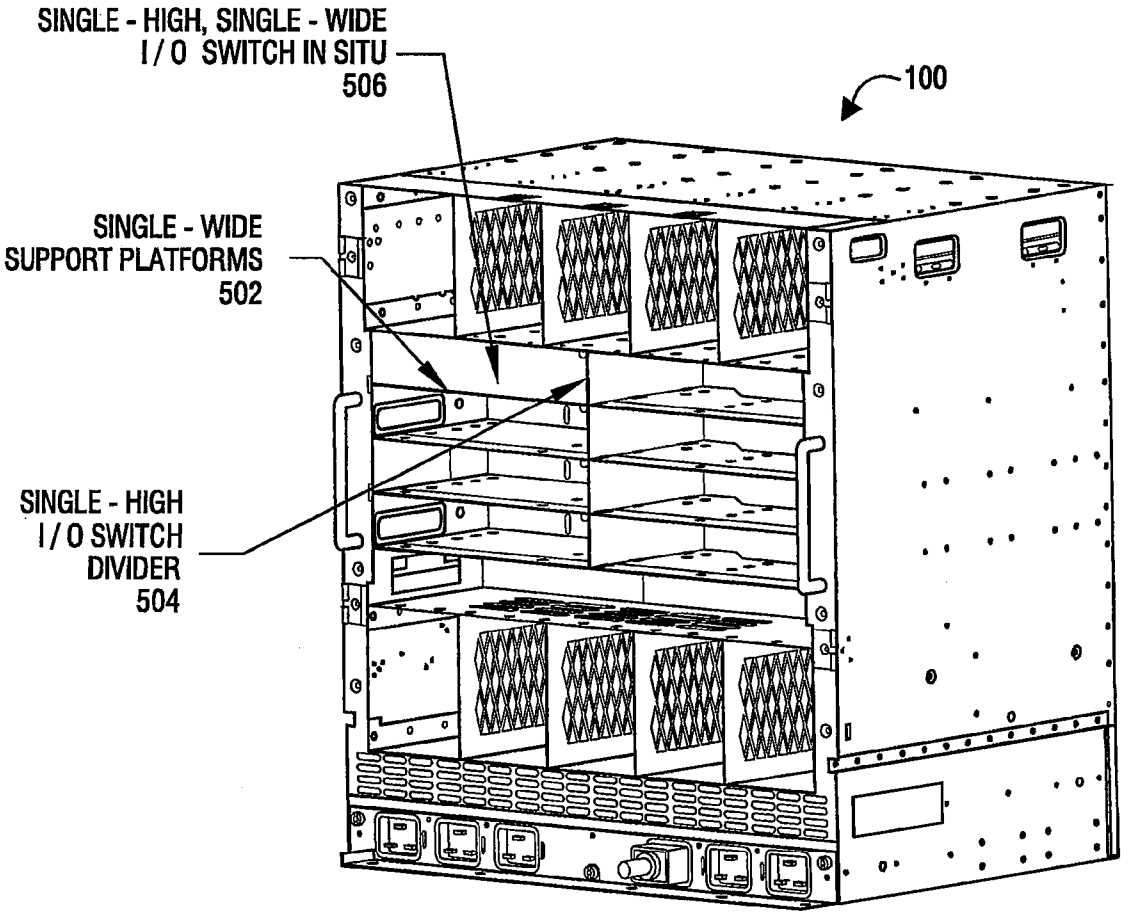

SINGLE - HIGH, SINGLE - WIDE
I / O SWITCH IN SITU
506
100
SINGLE - WIDE
SUPPORT PLATFORMS
502
SINGLE - HIGH
I / O SWITCH
DIVIDER
504

FIG. 5

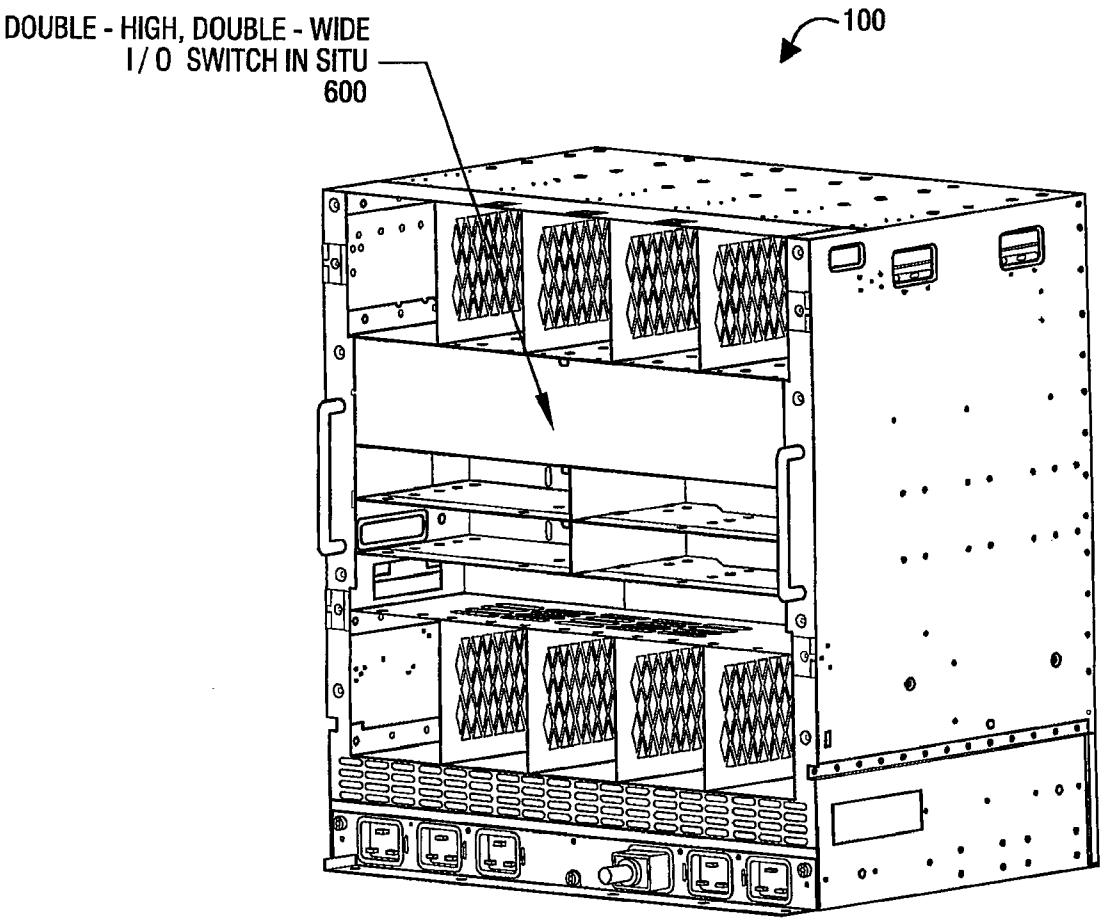


FIG. 6

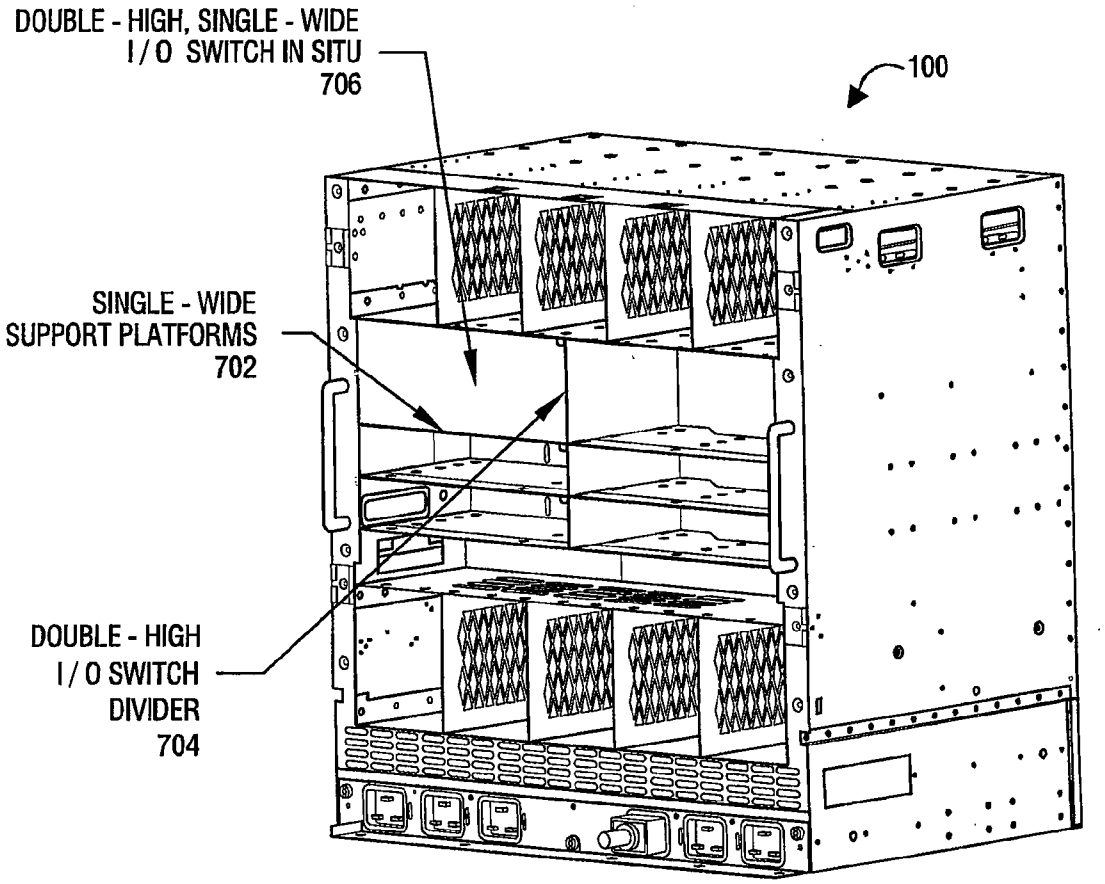

DOUBLE - HIGH, SINGLE - WIDE
I / O SWITCH IN SITU
706
100
SINGLE - WIDE
SUPPORT PLATFORMS
702
DOUBLE - HIGH
I / O SWITCH
DIVIDER
704

FIG. 7

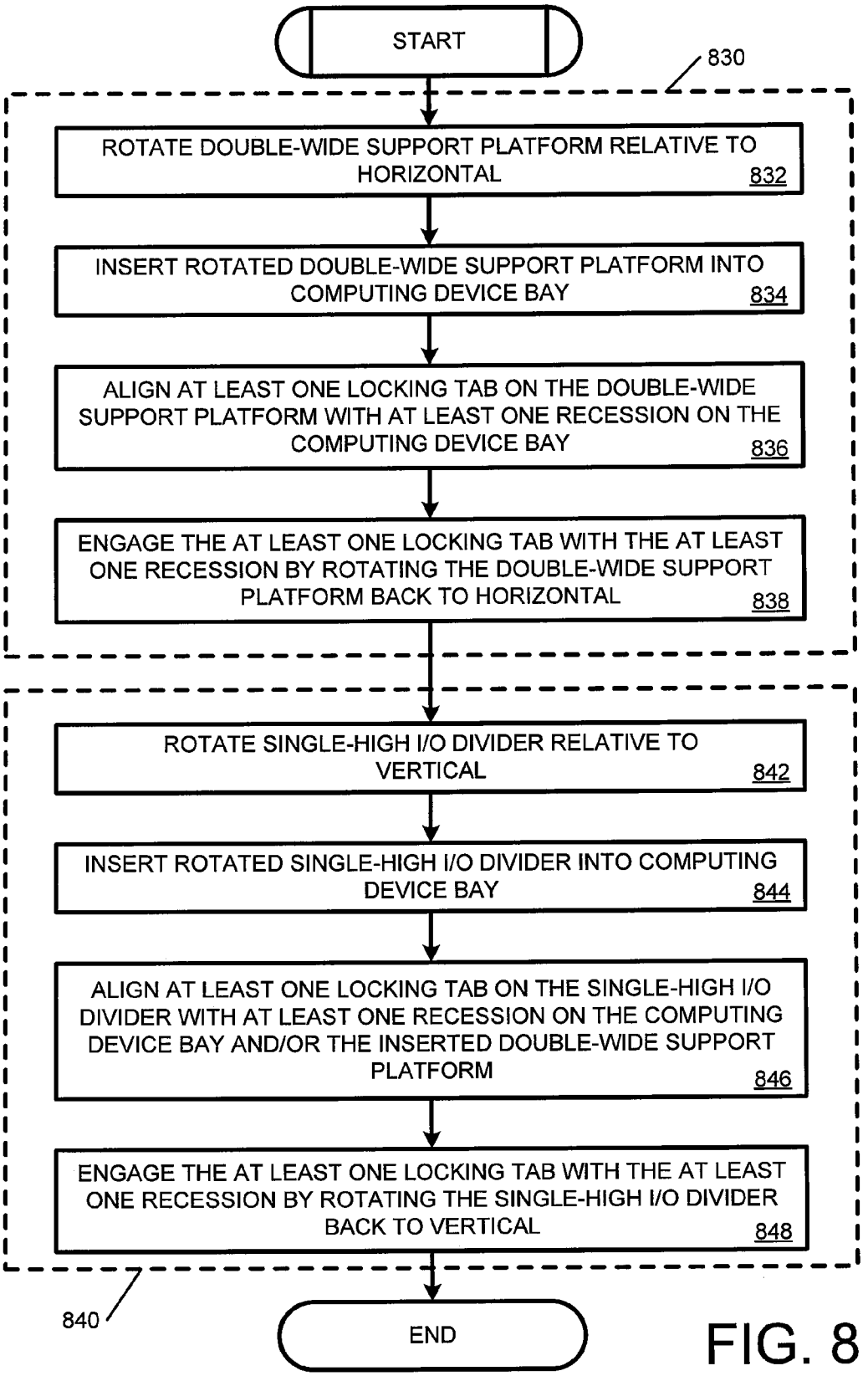

START
830
ROTATE DOUBLE-WIDE SUPPORT PLATFORM RELATIVE TO HORIZONTAL 832
INSERT ROTATED DOUBLE-WIDE SUPPORT PLATFORM INTO COMPUTING DEVICE BAY 834
ALIGN AT LEAST ONE LOCKING TAB ON THE DOUBLE-WIDE SUPPORT PLATFORM WITH AT LEAST ONE RECESSION ON THE COMPUTING DEVICE BAY 836
ENGAGE THE AT LEAST ONE LOCKING TAB WITH THE AT LEAST ONE RECESSION BY ROTATING THE DOUBLE-WIDE SUPPORT PLATFORM BACK TO HORIZONTAL 838
ROTATE SINGLE-HIGH I/O DIVIDER RELATIVE TO VERTICAL 842
INSERT ROTATED SINGLE-HIGH I/O DIVIDER INTO COMPUTING DEVICE BAY 844
ALIGN AT LEAST ONE LOCKING TAB ON THE SINGLE-HIGH I/O DIVIDER WITH AT LEAST ONE RECESSION ON THE COMPUTING DEVICE BAY AND/OR THE INSERTED DOUBLE-WIDE SUPPORT PLATFORM 846
ENGAGE THE AT LEAST ONE LOCKING TAB WITH THE AT LEAST ONE RECESSION BY ROTATING THE SINGLE-HIGH I/O DIVIDER BACK TO VERTICAL 848
840
END

FIG. 8

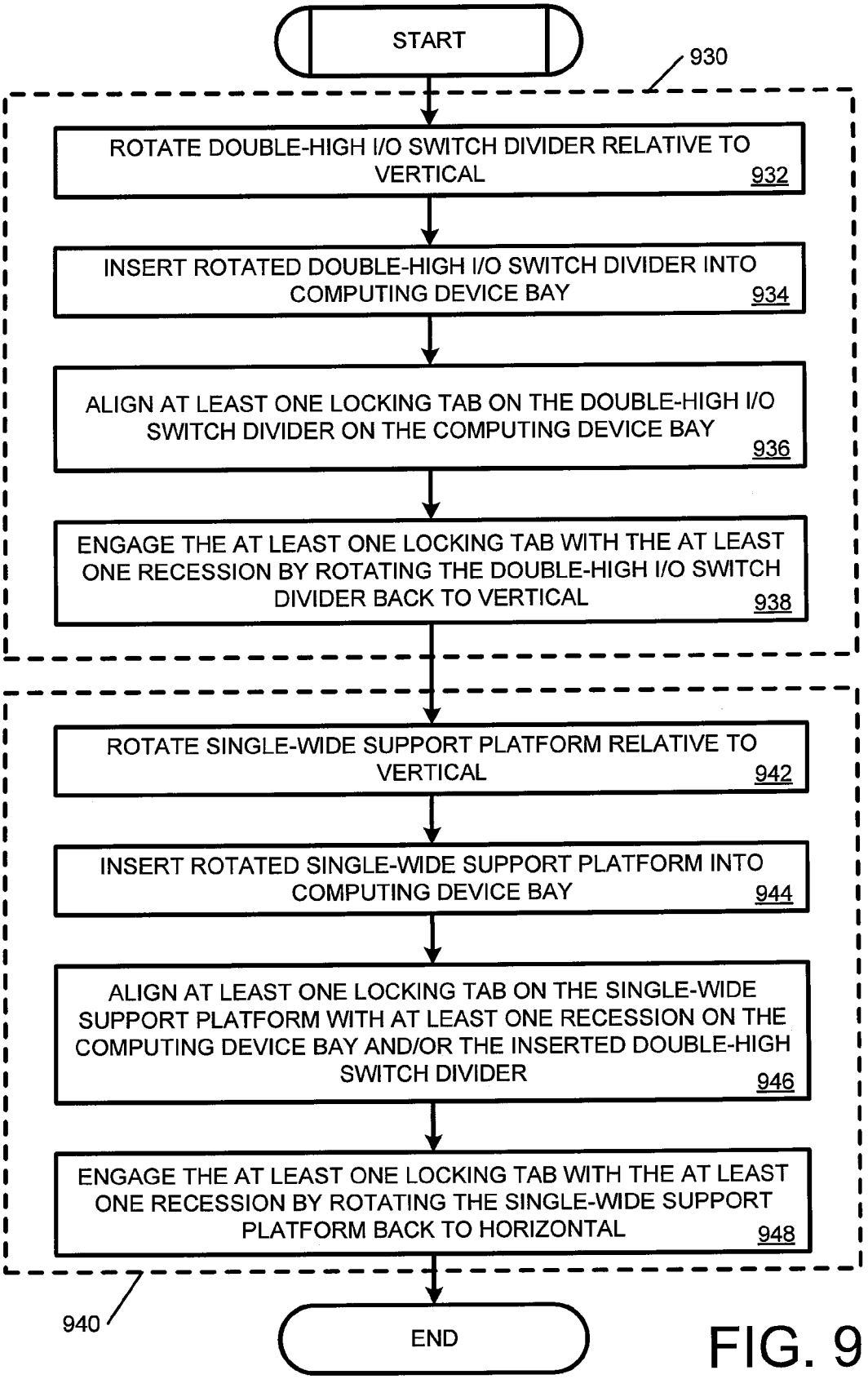

START
930
ROTATE DOUBLE-HIGH I/O SWITCH DIVIDER RELATIVE TO VERTICAL 932
INSERT ROTATED DOUBLE-HIGH I/O SWITCH DIVIDER INTO COMPUTING DEVICE BAY 934
ALIGN AT LEAST ONE LOCKING TAB ON THE DOUBLE-HIGH I/O SWITCH DIVIDER ON THE COMPUTING DEVICE BAY 936
ENGAGE THE AT LEAST ONE LOCKING TAB WITH THE AT LEAST ONE RECESSION BY ROTATING THE DOUBLE-HIGH I/O SWITCH DIVIDER BACK TO VERTICAL 938
ROTATE SINGLE-WIDE SUPPORT PLATFORM RELATIVE TO VERTICAL 942
INSERT ROTATED SINGLE-WIDE SUPPORT PLATFORM INTO COMPUTING DEVICE BAY 944
ALIGN AT LEAST ONE LOCKING TAB ON THE SINGLE-WIDE SUPPORT PLATFORM WITH AT LEAST ONE RECESSION ON THE COMPUTING DEVICE BAY AND/OR THE INSERTED DOUBLE-HIGH SWITCH DIVIDER 946
ENGAGE THE AT LEAST ONE LOCKING TAB WITH THE AT LEAST ONE RECESSION BY ROTATING THE SINGLE-WIDE SUPPORT PLATFORM BACK TO HORIZONTAL 948
940
END

FIG. 9

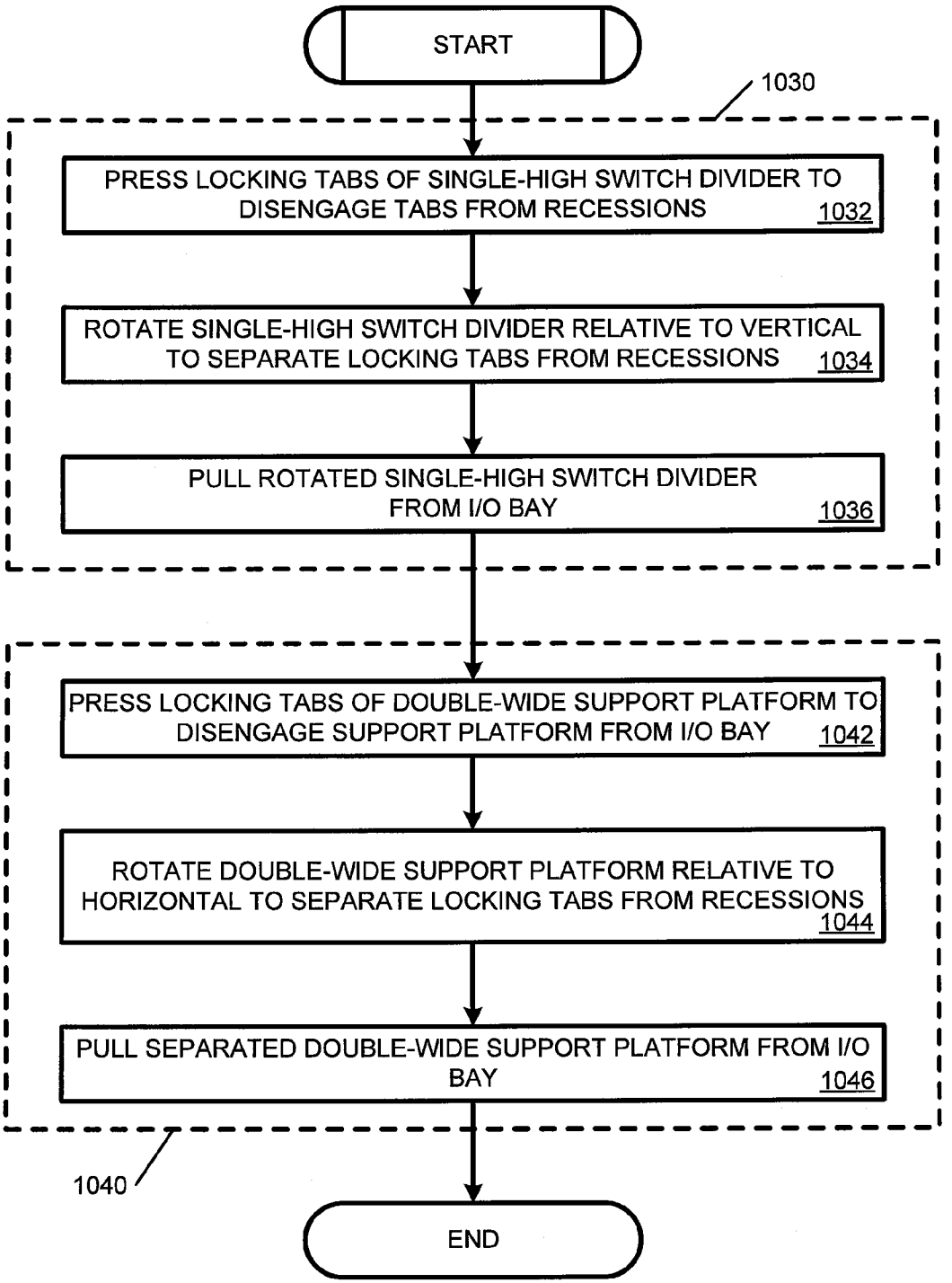

START
1030
PRESS LOCKING TABS OF SINGLE-HIGH SWITCH DIVIDER TO DISENGAGE TABS FROM RECESSIONS 1032
ROTATE SINGLE-HIGH SWITCH DIVIDER RELATIVE TO VERTICAL TO SEPARATE LOCKING TABS FROM RECESSIONS 1034
PULL ROTATED SINGLE-HIGH SWITCH DIVIDER FROM I/O BAY 1036
PRESS LOCKING TABS OF DOUBLE-WIDE SUPPORT PLATFORM TO DISENGAGE SUPPORT PLATFORM FROM I/O BAY 1042
ROTATE DOUBLE-WIDE SUPPORT PLATFORM RELATIVE TO HORIZONTAL TO SEPARATE LOCKING TABS FROM RECESSIONS 1044
PULL SEPARATED DOUBLE-WIDE SUPPORT PLATFORM FROM I/O BAY 1046
1040
END

FIG. 10

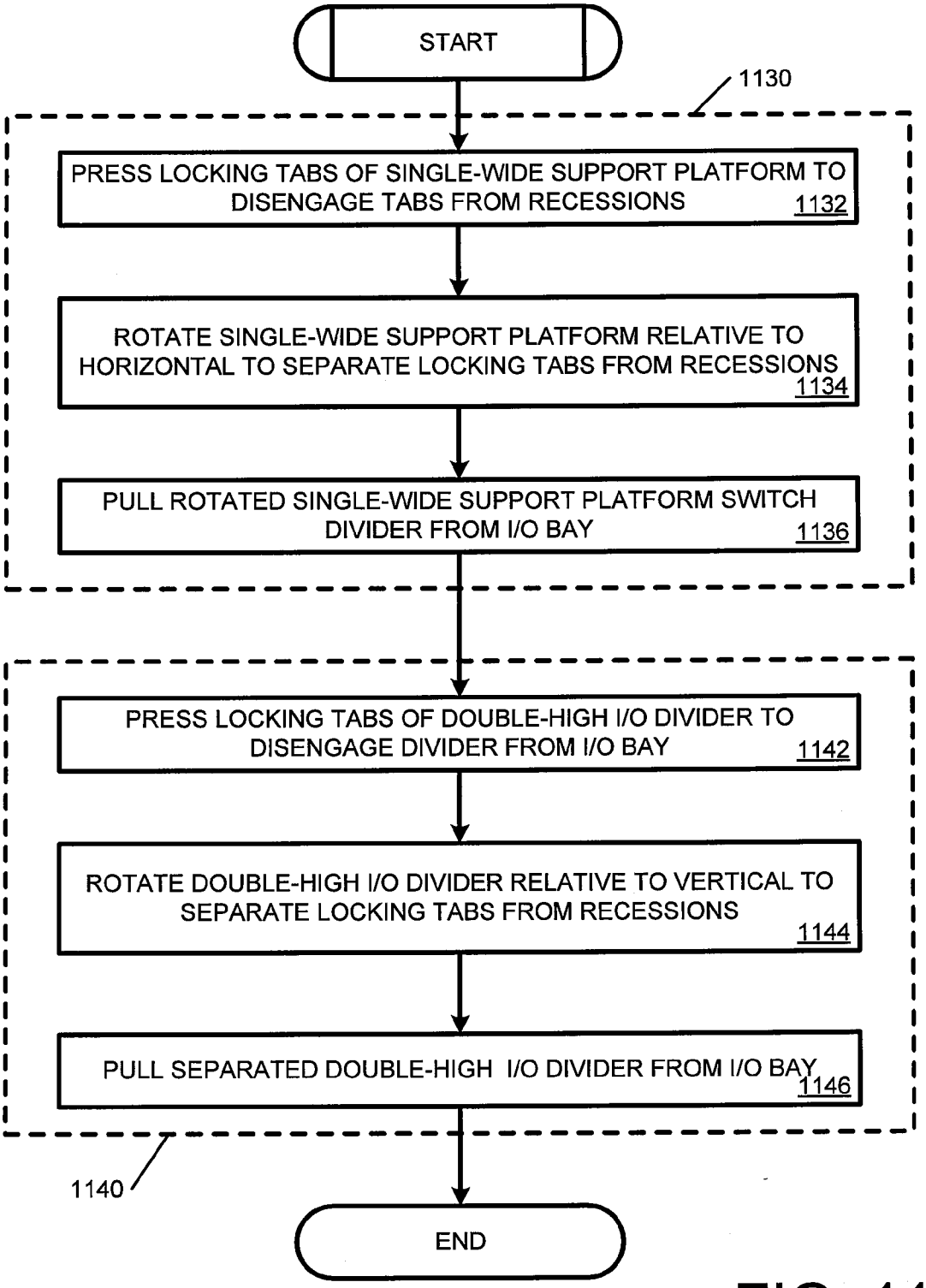

START
1130
PRESS LOCKING TABS OF SINGLE-WIDE SUPPORT PLATFORM TO DISENGAGE TABS FROM RECESSIONS 1132
ROTATE SINGLE-WIDE SUPPORT PLATFORM RELATIVE TO HORIZONTAL TO SEPARATE LOCKING TABS FROM RECESSIONS 1134
PULL ROTATED SINGLE-WIDE SUPPORT PLATFORM SWITCH DIVIDER FROM I/O BAY 1136
PRESS LOCKING TABS OF DOUBLE-HIGH I/O DIVIDER TO DISENGAGE DIVIDER FROM I/O BAY 1142
ROTATE DOUBLE-HIGH I/O DIVIDER RELATIVE TO VERTICAL TO SEPARATE LOCKING TABS FROM RECESSIONS 1144
PULL SEPARATED DOUBLE-HIGH I/O DIVIDER FROM I/O BAY 1146
1140
END

FIG. 11

INSTALLATION AND REMOVAL OF COMPUTING COMPONENTS

CROSS REFERENCE

[0001] This application claims the benefit of U.S. Provisional Application No. 60/943,691, filed Jun. 13, 2007, which is hereby incorporated by reference in its entirety.

BACKGROUND

[0002] In a computing device, many components that may be integrated into a computing device are configured to utilize a single-high, single wide input/output (I/O) switch bay for performing the desired operations. More specifically, a computing device may include a plurality of interfaces for receiving these components. As many such components are configured as a certain size to interface with the computing device in a certain manner, these devices may be described as single-high, single-wide components. Accordingly, the computing device may be divided in to two or more rows and columns of input/output bays for receiving these components. However, oftentimes, components may be larger than the single-high, single-wide configuration and may be configured as a double-high, single wide, a single-high, double wide, and/or a double-high, double-wide configuration. However, since current computing devices are configured to receive single-wide, single-high components, other techniques for interfacing these components is desired.

SUMMARY

[0003] Included are embodiments for installation and removal of computing components. More specifically, at least one embodiment of an apparatus includes at least one removable support platform configured to define a computing device bay and at least one removable switch divider configured to further define the computing device bay, the computing device bay configured to receive a double-high component.

[0004] Also included are embodiments of a method. At least one embodiment includes toollessly securing a removable support platform configured to define a computing device bay and toollessly securing a removable switch divider configured to further define the computing device bay, the computing device bay configured to receive a double-high component.

[0005] Other embodiments and/or advantages of this disclosure will be or may become apparent to one with skill in the art upon examination of the following drawings and detailed description. It is intended that all such additional systems, methods, features, and advantages be included within this description and be within the scope of the present disclosure.

BRIEF DESCRIPTION

[0006] Many aspects of the disclosure can be better understood with reference to the following drawings. The components in the drawings are not necessarily to scale, emphasis instead being placed upon clearly illustrating the principles of the present disclosure. Moreover, in the drawings, like reference numerals designate corresponding parts throughout the several views. While several embodiments are described in connection with these drawings, there is no intent to limit the disclosure to the embodiment or embodiments disclosed herein. On the contrary, the intent is to cover all alternatives, modifications, and equivalents.

[0007] FIG. **1** depicts an exemplary embodiment of a computing device, which may include one or more single-high, single-wide configuration.

[0008] FIG. **2** depicts an exemplary embodiment of a computing device utilizing a single-high, double-wide configuration, similar to the computing device from FIG. **1**.

[0009] FIG. **3** depicts an exemplary embodiment of a computing device utilizing a double-high, double-wide configuration, similar to the computing device from FIG. **2**.

[0010] FIG. **4** depicts an exemplary embodiment of a computing device utilizing double high, single-wide configuration, similar to the computing device, from FIG. **1**.

[0011] FIG. **5** depicts an exemplary embodiment of a computing device utilizing a single-high, single-wide configuration and a single-high, single-wide I/O switch in situ (sitting in a bay), similar to the computing device from FIG. **1**.

[0012] FIG. **6** depicts an exemplary embodiment of a computing device utilizing a double-high, double-wide configuration that receives a double-high, double-wide I/O switch in situ, similar to the computing device from FIG. **2**.

[0013] FIG. **7** depicts an exemplary embodiment of a computing device utilizing a double-high, singe-wide configuration that receives a double-high, single-wide I/O switch in situ, similar to the computing device from FIG. **3**.

[0014] FIG. **8** depicts an exemplary embodiment of a process that may be utilized for inserting at least one support platform and/or I/O divider into a computing device bay, such as in the computing device from FIG. **1**.

[0015] FIG. **9** depicts an exemplary embodiment of a process that may be utilized for inserting at least one support platform and/or I/O divider into a computing device bay, such as in the computing device from FIG. **4**.

[0016] FIG. **10** depicts an exemplary embodiment of a process that may be utilized for removing at least one switch divider and/or support platform, such as in the computing device, from FIG. **1**.

[0017] FIG. **11** depicts an exemplary embodiment of a process that may be utilized for removing at least one switch divider and/or support platform, such as in the computing device, from FIG. **4**.

DETAILED DESCRIPTION

[0018] Embodiments disclosed herein include configuration of input/output (I/O) bays for a computing device. More specifically, embodiments disclosed herein include toolless removal of a single-high I/O switch divider, which may include converting two side-by-side single-high, single-wide I/O switch bays into one single-high-double-wide I/O switch bay. Removal of two above-and-below single-high I/O switch dividers in conjunction with the toolless removal of the shared I/O switch support platform may convert the four affected single-high-single-wide access bays into one double-high-double-wide I/O switch bay. Installation of a double-high I/O switch divider converts the space into two double-high-single-wide I/O switch bays.

[0019] Similarly, some computing components utilize the channel capacity associated with the single-high, double-wide scenario. However due to the desire to use tall electronic components, the height benefit associated with the double-high blade may be desired. As disclosed herein, a double-high

divider can be installed, which converts the one double-high, double-wide I/O switch bay into two double-high, single-wide I/O switch bays.

[0020] A single-high switch divider may be configured to create a locating and lateral support surface shared by two single-high, single-wide I/O switches. The physical geometry of the divider may be approximately 1 inch tall by 6 inches long by 0.040 inches thick. The divider may ride in a plastic guide affixed to the underside of a horizontal sheet metal support platform. Upon full insertion into the rear cage, two tabs interlock stationary sheet metal. Reverse motion may be prevented by a plastic latch snapping over the divider's end. Removal is the reverse. Depending on the particular configuration, any and all of these actions may be performed without the use of tools (toollessly).

[0021] A double-high switch divider may be configured to create a locating and lateral support surface shared by two double-high, single-wide I/O switches. The physical geometry of the double-high divider may be approximately 2 inches tall by 6 inches long by 0.040 inches thick. Installation and/or removal of the double-high divider may be the same as that of the single-high divider. The removable I/O switch support platform may be configured as a sheet metal and/or plastic assembly, which may be approximately 10 inches by 16 inches by 0.080 inches thick. Each side of the platform may be configured to reside in a grooved feature in the left and right interior walls of the removable rear cage. After full insertion into the rear cage of a computing device, two latches, one on the left side and the other on the right, may be configured to snap into interlocking features. Removal may include both latches be depressed so the platform can be pulled out of the rear cage. Depending on the particular configuration, any and all of these actions may be performed without the use of tools (toollessly).

[0022] Referring now to the drawings, FIG. **1** depicts an exemplary embodiment of a computing device **100**, which may include one or more single-high, single-wide configuration. Also included with the computing device **100** are one or more single-high I/O switch dividers **104**. As illustrated, the support platforms **102** may be configured to define a horizontal portion of a space for single-high, single-wide input/output (I/O) bays **106***a*, **106***b*. Similarly, the I/O switch divider **104** may be configured to define a vertical portion of a space for single-high, single-wide input/output (I/O) bays **106***a*, **106***b*.

[0023] In operation, the double-wide support platforms **102** may be installed by inserting the double-wide support platform **102** into the I/O bay at an angle, relative to horizontal. The double-wide support platform **102** may be aligned such that one or more locking tabs on the double-wide support platform **102** align with one or more recessions in the I/O bay. The locking tabs on one side of the double-wide support platform **102** may engage with the recessions on one side of the I/O bay. The double-wide support platform **102** may then be rotated back to horizontal to engage the one or more locking tabs on the other side of the double-wide support platform **102**. Similarly, the single-high I/O switch divider **104** may be engaged by toollessly pressing the one or more tabs on the double-wide support platform **102**, rotating the double-wide support platform **102** relative to horizontal, and pulling the double-wide support platform **102** from the I/O bay.

[0024] Similarly, the single-high, I/O switch divider **104** may be inserted into the I/O bay by rotating the single-high, I/O switch divider **104** relative to vertical. The single-high, I/O switch divider **104** may then be inserted into the I/O bay, and rotated back to vertical to engage one or more locking tabs on the single-high, I/O switch divider **104** with one or more recessions on the I/O bay and/or the previously inserted double-wide support platform **102**. The single-high, I/O switch divider **104** may be removed by pressing the one or more locking tabs to disengage, rotating the single-high, I/O switch divider **104** relative to vertical, and pulling the single-high, I/O switch divider **104** from the I/O bay.

[0025] FIG. **2** depicts an exemplary embodiment of a computing device utilizing a single-high, double-wide configuration, similar to the computing device **100** from FIG. **1**. More specifically, as illustrated in the nonlimiting example of FIG. **2**, the computing device **100** converted from a configuration with the two single-high, single-wide I/O bays **106***a*, **106***b* to a single-high, double-wide I/O bay **206** by removing the single-high I/O switch divider **104** and utilizing a double-wide support platform **204**.

[0026] FIG. **3** depicts an exemplary embodiment of a computing device utilizing a double-high, double-wide configuration, similar to the computing device **100** from FIG. **2**. As illustrated in the nonlimiting example of FIG. **3**, computing device **100** may be configured to convert four single-high, single-wide I/O bays **106** (FIG. **1**) into one double-high, double-wide I/O bay by removing two of the single-high I/O dividers **104** and one I/O switch support platform **102**. As illustrated in FIG. **3**, by removing the double-wide support platform **102** and the single-high I/O divider **104**, a double-high, double-wide I/O bay may be defined by the double wide support platform **302**.

[0027] FIG. **4** depicts an exemplary embodiment of a computing device utilizing double-high, single-wide configuration, similar to the computing device **100**, from FIG. **1**. As illustrated in the nonlimiting example of FIG. **4**, single-wide support platforms similar to single-wide support platforms **402***a*, **402***b* may have been removed from the computing device **100** to create two double-high, single wide I/O bays **406***a*, **406***b*, which are defined by a double-high I/O switch divider **406**. Additionally, single-high, single wide bays are also included, as defined by single-wide platforms **402** and single-high I/O switch divider **404**.

[0028] One should note that with regard to FIGS. **1-3**, insertion and removal of the switch dividers and support platforms may be performed by first inserting the support platforms and then inserting the switch dividers (removal may occur in the opposite order). However in FIG. **4**, single-wide support platforms **402***a*, **402***b* are utilized with double-high I/O switch dividers **404** (which may actually be embodied as double-high, triple-high, quadruple-high, etc.). Accordingly, in such a configuration the double-high I/O switch divider **404** may be first inserted by rotating from vertical; aligning the locking tabs with recessions in the bay; and rotating the switch divider **404** back to vertical to engage the locking tabs with the recessions. Once the double-high switch divider **404** is engaged, the single-wide support platforms **402***a*, **402***b* may be engaged, by locking tabs with recessions in the I/O bay and the inserted double-high I/O switch divider **404**.

[0029] FIG. **5** depicts an exemplary embodiment of a computing device utilizing a single-high, single-wide configuration and a single-high, single-wide I/O switch in situ (sitting in a bay), similar to the computing device **100** from FIG. **1**. As illustrated in the nonlimiting example of FIG. **5**, the computing device **100** may include one or more single-high, single-

wide I/O bays that are defined by one or more single-wide support platform **502** and one or more single-high I/O switch divider **504**. Additionally, the I/O bay may receive a single-high, single wide I/O switch in situ **506**.

[0030] FIG. **6** depicts an exemplary embodiment of a computing device utilizing a double-high, double-wide configuration that receives a double-high, double-wide I/O switch in situ, similar to the computing device **100** from FIG. **2**. As illustrated in the nonlimiting example of FIG. **6**, the computing device **100** may include a double-high, double-wide I/O bay that is defined by a double-wide support platform and/or two single-wide support platforms. Additionally, the double-high, double-wide I/O bay may be configured to receive a double-high, double-wide I/O switch in situ **606**.

[0031] FIG. **7** depicts an exemplary embodiment of a computing device utilizing a double-high, singe-wide configuration that receives a double-high, single-wide I/O switch in situ, similar to the computing device **100** from FIG. **3**. As illustrated in the nonlimiting example of FIG. **7**, the computing device **100** may be configured with at least two single-wide support platforms **702***a*, **702***b* (and/or at least one double-wide support platforms) and at least one double-high I/O switch divider **704** to define a double-high, single-wide I/O bay. The double-high, single-wide I/O bay may be configured to receive a double-high, single-wide I/O switch in situ **706**.

[0032] FIG. **8** depicts an exemplary embodiment of a process that may be utilized for inserting at least one support platform and/or I/O divider into a computing device bay, such as in the computing device **100** from FIG. **1**. More specifically, as illustrated in the nonlimiting example of FIG. **8**, to insert a double-wide support platform **102** (block **830**), a user may rotate the double-wide support platform **102** relative to horizontal (block **832**). The rotated double-wide support platform **102** may then be inserted into the computing device bay (block **834**). At least one locking tab on the double-wide support platform **102** may be aligned with at least one recession on the computing device bay (block **836**). The locking tab may then be engaged with the at least one recession by rotating the double-wide support platform **102** back to horizontal (block **838**).

[0033] Additionally, included in FIG. **8** is a process for inserting at least one single-high I/O divider **104** (block **840**). As illustrated, the single-high I/O divider **104** may be rotated relative to vertical (block **842**). The rotated single-high I/O divider **104** can then be inserted into the computing device bay (block **844**). At least one locking tab on the single-high I/O divider **104** may be aligned with at least one recession on the computing device bay and/or on the inserted double-wide support platform **102** (block **846**). The at least one locking tab can be engaged with the at least one recession by rotating the single-high I/O divider **104** back to vertical (block **848**).

[0034] FIG. **9** depicts an exemplary embodiment of a process that may be utilized for inserting at least one support platform and/or I/O divider into a computing device bay, such as in the computing device **100** from FIG. **4**. As illustrated in the nonlimiting example of FIG. **9**, a double-high I/O switch divider **404** may be inserted in the computing device bay (block **930**). More specifically, the double-high I/O switch divider **404** may be rotated relative to vertical (block **932**). The double-high I/O switch divider **404** may then be inserted into the computing device bay (block **934**). At least one locking tab on the double-high I/O switch divider **404** may be aligned with at least one recession on the computing device bay (block **936**). The at least one locking tab may be engaged by rotating the double-high I/O switch divider **404** back to vertical (block **938**).

[0035] Additionally, included in FIG. **9** is a process for inserting at least one single-high support platform **402** (block **940**). As illustrated in block **940**, the single-high support platform **402** may be rotated relative to vertical (block **942**). The rotated single-high support platform **402** may be inserted into the computing device bay (block **944**). At least one locking tab on the single-high support platform **402** may be aligned with at least one recession on the computing device bay and/or on the inserted double-high switch divider **404** (block **946**). The at least one locking tab can be engaged with the at least one recession by rotating the single-wide support platform **402** back to horizontal (block **948**).

[0036] FIG. **10** depicts an exemplary embodiment of a process that may be utilized for removing at least one switch divider **104** and/or support platform **102**, such as in the computing device **100**, from FIG. **1**. As illustrated, the process may include removing the single-high switch divider **104** (block **1030**). In removing the single-high switch divider **104**, the locking tabs of the single-high switch divider **104** may be pressed to disengage the locking tabs from the recessions (block **1032**). Additionally, the single-high switch divider **104** may be rotated relative to vertical to separate the locking tabs from the recessions (block **1034**). The rotated single-high switch divider **104** may then be pulled from the I/O bay (block **1036**).

[0037] Additionally, included in FIG. **10** is a process for removing at least one double-wide support platform **102** (block **1040**). More specifically, the locking tabs of the double-wide support platform **102** may be pressed to disengage the double-wide support platform **102** from the I/O bay (block **1042**). The double-wide support platform **102** may then be rotated relative to horizontal to separate the locking tabs from the recessions (block **1044**). The separated double-wide support platform **102** may then be pulled from the I/O bay (block **1046**).

[0038] FIG. **11** depicts an exemplary embodiment of a process that may be utilized for removing at least one switch divider **404** and/or support platform **402**, such as in the computing device **100**, from FIG. **4**. As illustrated, the process may include removing the single-wide support platform **404** (block **1130**). In removing the single-wide support platform **404**, the locking tabs of the single-wide support platform **404** may be pressed to disengage the locking tabs from the recessions (block **1132**). Additionally, the single-wide support platform **404** may be rotated relative to vertical to separate the locking tabs from the recessions (block **1134**). The rotated single-wide support platform **404** may then be pulled from the I/O bay (block **1136**).

[0039] Additionally, included in FIG. **11** is a process for removing at least one double-high I/O divider **404** (block **1140**). More specifically, the locking tabs of the double-high I/O divider **404** may be pressed to disengage the double-high I/O divider **404** from the I/O bay (block **1142**). The double-wide support platform **102** may then be rotated relative to vertical to separate the locking tabs from the recessions (block **1144**). The separated double-wide support platform **102** may then be pulled from the I/O bay (block **1146**).

[0040] The embodiments disclosed herein can be implemented in hardware, software, firmware, or a combination thereof. At least one embodiment disclosed herein may be implemented in software and/or firmware that is stored in a

memory and that is executed by a suitable instruction execution system. If implemented in hardware, one or more of the embodiments disclosed herein can be implemented with any or a combination of the following technologies: a discrete logic circuit(s) having logic gates for implementing logic functions upon data signals, an application specific integrated circuit (ASIC) having appropriate combinational logic gates, a programmable gate array(s) (PGA), a field programmable gate array (FPGA), etc.

[0041] One should also note that conditional language, such as, among others, "can," "could," "might," or "may," unless specifically stated otherwise, or otherwise understood within the context as used, is generally intended to convey that certain embodiments include, while other embodiments do not include, certain features, elements and/or steps. Thus, such conditional language is not generally intended to imply that features, elements and/or steps are in any way required for one or more particular embodiments or that one or more particular embodiments necessarily include logic for deciding, with or without user input or prompting, whether these features, elements and/or steps are included or are to be performed in any particular embodiment.

[0042] It should be emphasized that the above-described embodiments are merely possible examples of implementations, merely set forth for a clear understanding of the principles of this disclosure. Many variations and modifications may be made to the above-described embodiment(s) without departing substantially from the spirit and principles of the disclosure. All such modifications and variations are intended to be included herein within the scope of this disclosure.

Therefore, at least the following is claimed:

1. An apparatus, comprising:
- at least one removable support platform configured to define a computing device bay; and
- at least one removable switch divider configured to further define the computing device bay, the computing device bay configured to receive a double-high component.

2. The apparatus of claim **1**, wherein the at least one removable switch divider is configured for configuring the computing device bay to receive a double-high, double-wide component.

3. The apparatus of claim **1**, wherein the at least one removable support platform includes at least one locking tab for toollessly securing the removable support platform in the computing device bay.

4. The apparatus of claim **1**, wherein the at least one switch divider includes at least one locking tab for toollessly locking the switch divider in the computing device bay.

5. The apparatus of claim **1**, wherein the at least one removable support platform includes at least one locking tab for toollessly removing the removable support platform from the computing device bay.

6. The apparatus of claim **1**, wherein the at least one switch divider includes at least one locking tab for toollessly removing the switch divider from the computing device bay.

7. A apparatus, comprising:
- means for defining a horizontal portion of a computing device bay; and
- means for defining a vertical portion of the computing device bay, the computing device bay configured to receive a double-wide component.

8. The apparatus of claim **7**, wherein the means for defining a vertical portion of the computing device bay is configured for the computing device bay to receive a double-high, double-wide component.

9. The apparatus of claim **7**, further comprising means for locking the means for defining the horizontal portion into computing device bay.

10. The apparatus of claim **7**, further comprising means for locking the means for defining a vertical portion into the computing device bay.

11. The apparatus of claim **7**, further comprising means for locking the means for defining a horizontal portion into the computing device bay.

12. The apparatus of claim **7**, further comprising means for toollessly removing the means for defining a vertical portion from the computing device bay.

13. A method, comprising:
- toollessly securing a removable support platform configured to define a computing device bay; and
- toollessly securing a removable switch divider configured to further define the computing device bay, the computing device bay configured to receive a double-high component.

14. The method of claim **13**, wherein toollessly inserting the removable support platform includes at least one of the following:
- rotating the removable support platform relative to horizontal;
- inserting the removable support platform into the computing device bay;
- aligning at least one locking tab on the support platform with at least one recession; and
- engaging the at least one locking tab with the at least one recession by rotating the removable support platform back to horizontal.

15. The method of claim **13**, wherein toollessly inserting the removable switch divider includes at least one of the following:
- rotating the removable support platform relative to vertical;
- inserting the removable switch divider into the computing device bay;
- aligning at least one locking tab on the support platform with at least one recession; and
- engaging the at least one locking tab with the at least one recession by rotating the removable support platform back to vertical.

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