

puter, a network switch, a network hub, a network bridge, a router, a router-switch combination, a telecommunications distribution module, or any device that includes multiple connection ports. For example, electronic device 105 is an internet switch with multiple user connection ports, and auxiliary port 140 for internet service provider access and auxiliary port 145 for a universal serial bus (USB) connection.

Faceplate 110 is an enclosure structure of electronic device 105, typically a front or back side, which includes connection ports, identification of connection ports, and corresponding status indicators in the form of a status light for I/O connection ports. The number of connection ports for faceplate 110 is limited only by the size of electronic device 105 and the physical density of connection ports of electronic device 105. Faceplate 110 is depicted as having multiple connection ports, including port 115 with port ID 120 which provides identification for port 115. Port 115 has a corresponding status indicator light, status indicator 125, which displays various status conditions associated with port 115.

For example, in one embodiment of the present invention, if port 115 is inactive, status indicator 125 is blank, displaying no light and indicating inactivity. If port 115 is active but not sending output or receiving input, it displays a steady light. When port 115 is sending output or receiving input, it displays a flashing light indicating it is actively sending and/or receiving signals. Faceplate 110 also depicts auxiliary ports 140 and 145 which represent additional connections to electronic device 105, for example, an Ethernet connection for an internet service provider and a USB connection, respectively. Faceplate 110 may include any type or number of connection ports, and may have multiple status indicators corresponding to a connection port.

For example, the multiple connection ports of faceplate 110 are each identified by designations "A" through "R", respectively. Port 115 is associated with port ID 120 of faceplate 110, which has the designation "E", and associated with status indicator 125. Port 115 receives connection of a cable, wire or connection device and provides services associated with the connection. For example, port 115 may provide internet access, telephone service access, wireless service or other service or access to the device connected to port 115.

Port ID 120 is an identification mark associated with port 115. Each connection port of faceplate 110 includes an associated identification mark, which may be positioned generally adjacent to the port with which it is associated, such that an observer of faceplate port ID 120 associates the ID mark with port 115.

Label holder 150 includes label 155, label indicator 160, and connection point 185 (not shown). Label holder 150 is a flexible body constructed of a pliable material, typically in the shape and size of the faceplate that it represents, such as faceplate 110. The pliable material enables label holder 150 to attach to and bend around a cylindrical shaped rod in a spiral orientation allowing label holder 150 to be stored in a retractable enclosure. Label holder 150 includes attachment surface 350 (FIG. 3B) to which label 155 is attached.

Label holder 150 includes circuitry to enable status indicators, such as label indicator 160, to display visual status information regarding the actual connections associated with the label status indicator. Label holder 150 makes an electrical connection to a component of electronic device 105 that provides electrical signals indicating the status of connection ports of faceplate 110, so that the connection port status is displayed via label indicators on label holder 150.

For example, label indicator 160 displays a steady illuminated light as a status, indicating that port 115, which is the connection port associated with label indicator 160, is active,

but currently neither sending output or receiving input. The pliable material of which label holder 150 is constructed possesses dielectric properties that insulates low voltage circuitry included on, or within the pliable material. For example, label holder 150 may be comprised of one or more sheets of pliable polyimide material. The polyimide material is processed to include conductive circuitry capable of propagating an electric current, which is on or enclosed within pliable polyimide material.

Label housing 130 is an encasement for label holder 150, which retracts into label housing 130, when no pulling force is applied to label housing 130. The proximal end of label holder 150 is affixed or otherwise attached, by connection point 185, to an internal component of label housing 130 (discussed further with respect to FIG. 2A). In one embodiment, label holder 150 is attached at its distal end to surface 117 of electronic device 105. Surface 117 is a side of electronic device 105 attached on one edge to an edge of top 112, attached on the opposite edge to an edge of bottom 114 and perpendicular to faceplate 110. Label housing 130 is held in place at or near electronic device 105 by tension applied to label holder 150 from a retracting device within label housing 130, for example a coiled spring, when label holder 150 is fully retracted.

Label housing 130 includes a top, generally parallel to a bottom, and has a length, width and a general body shape that accommodates the spiral orientation of label holder 150 when fully retracted within label housing 130, such as a cylindrical shape or polygon shape. Label housing 130 can be made of one or a combination of metal, plastic, or carbon-fiber materials. Label housing 130 includes housing slot 135, which is a vertical opening located on a side of label housing 130, extending a distance between the top and bottom of label housing 130 to accommodate the height of label holder 150. Housing slot 135 provides a passage for flexible label holder 150 to extend from and retract into, label housing 130.

In one embodiment of the present invention, grasping and pulling label housing 130 in a direction away from electronic device 105, aligned with and parallel to the side of electronic device 105 to which label holder 150 is attached, extends label holder 150. Returning label housing 130 to the position near or in contact with electronic device 105 results in label holder 150 retracting into label housing 130. In another embodiment, label housing 130 is immovably attached to electronic device 105 and grasping a portion of label holder 150 extending external to label housing 130, and pulling away from electronic device 105 in a generally perpendicular direction, in the same general plane as faceplate 110, extends label holder 150. Relaxing the force to extend label holder 150 results in retraction of label holder 150 into label housing 130.

Label indicator 160 which is an electronic indicator, electrically connected to label holder 150 and receives electrical signals from circuitry on or within label holder 150. The circuitry on or within label holder 150 is connected to an electrical component of electronic device 105 that provides the electrical signals indicating the status of corresponding connection ports on faceplate 110. Signals received by label indicator 160 produce a visual display indicating a status condition of a corresponding connection in electronic device 105, but presented from an easily accessible label. For example, label indicator 160 is an indicator device connected to label holder 150 and receiving electrical signals though circuitry within or on label holder 150. The status display of label indicator 160 corresponds to status indicator 125 on electronic device 105, both corresponding to port 115, depicted as "A" by port ID 120 of electronic device 105. In one embodiment of the present invention, label indicator 160