

## **MODULE CONTACT FINGER AND MODULE CONNECTOR BLOCK CONTACT IDENTIFICATION**

DIGITAL plug-in (FLIP CHIP) modules have contact fingers either on one side (single-sided modules) or on both sides (double-sided modules). Modules with contact fingers on only one side always have them on side 2 (the solder side) (Figures 6, 7, and 8). DIGITAL module connector blocks have module slots with contacts either on one or on both sides. Modules with contact fingers on only one side can be plugged into connector blocks with contacts on both sides of the module slots; then electrical contact between the module and the connector block is only via module slot side 2 contacts. The module contact fingers and connector block contacts are identified by alphanumeric codes. These alphanumeric codes are used throughout this handbook, the **HARDWARE ACCESSORIES CATALOG**, the **PERIPHERALS HANDBOOK**, individual module data sheets, engineering drawings, and other DIGITAL publications. This coded numbering scheme must be understood to ensure proper system interconnections (Figures 6, 7, and 8). Letters G, I, O, and Q are not used in this numbering scheme.

DIGITAL modules are **SINGLE-HEIGHT**, **DOUBLE-HEIGHT**, or **QUAD-HEIGHT**; **STANDARD LENGTH** or **EXTENDED LENGTH**; and **SINGLE-WIDTH** or **DOUBLE-WIDTH** (Figures 6, 7, and 8). Each DIGITAL module is a specific, fixed size; the size of each module is stated in the module description in the previously mentioned DIGITAL publications. DIGITAL **SINGLE-HEIGHT** and **DOUBLE-HEIGHT** modules are **STANDARD LENGTH** or **EXTENDED LENGTH**. DIGITAL **QUAD-HEIGHT** modules are always **EXTENDED LENGTH**. Any DIGITAL module can be **SINGLE-WIDTH** or **DOUBLE-WIDTH**; most, however, are **SINGLE-WIDTH**.

The height and length requirement is determined by the quantity and size of discrete components and integrated circuits located on side 1 of the module, and, to some extent, by the amount of etched printed circuitry on sides 1 and 2. The width requirement is determined by the distance the largest component extends from its mounting surface on the module.

All DIGITAL module connector blocks accommodate any height (standard or double) module. The length of the modules to be used in a logic system must, however, be considered when connector block mounting drawers, system unit mounting drawers, or cabinets are being selected; enough space must be provided to accommodate the longest module. DIGITAL's **STANDARD-LENGTH** modules are 5.40/5.60 in. (13.72/14.22 cm) long and **EXTENDED-LENGTH** modules are 8.84/9.04 in. (22.58/22.96 cm) long from the bottom of the contact fingers to the top of the attached handle(s).

All DIGITAL module connector blocks accommodate any width (single or double) module. The width of the module must be considered, however, when any connector block module slot is occupied by a **DOUBLE-WIDTH** module; this is because no module can be inserted into the module slot on the immediate right on the same connector block unless that connector block provides sufficient space between module slots for the mounted components, i.e., an H808 Module Connector Block. DIGITAL's **SINGLE-WIDTH** modules require 0.338/0.348 in. (0.859/0.884 cm) for conductive components and 0.370/0.380 in. (0.940/0.965 cm) for nonconductive components. **DOUBLE-WIDTH** modules require 0.820/0.839 in. (2.106/2.131 cm) for conductive components and 0.870/0.880 in. (2.210/2.235 cm) for nonconductive components. These component space requirements are the distance from the module's side 1 surface to the side 2 surface of the module mounted on the immediate right. Normal module spacing is on half-inch centers.

Some DIGITAL module connector blocks accommodate only SINGLE-HEIGHT modules and others accept either SINGLE-HEIGHT or DOUBLE-HEIGHT modules. No single connector block can accommodate QUAD-HEIGHT modules; QUAD-HEIGHT modules must be mounted in mounting frames, system units, or module drawers comprising module connector blocks with slotted ends so that four module slots are arranged end to end (i.e., at least two H863 or H8030 Module Connector Blocks mounted end to end). SINGLE-HEIGHT modules are 2.417/2.452 in. (6.139/6.228 cm) high, DOUBLE-HEIGHT modules are 5.167/5.202 in. (13.124/13.213 cm) high, and QUAD-HEIGHT modules are 10.437/10.472 in. (26.510/26.599 cm) high (Figure 9).

SINGLE-HEIGHT modules (standard length and extended length) may be plugged into the upper (row A, C, or E) or lower (row B, D, or F) module slot of a connector block (Figure 9). Contact fingers A1 through V1 are on side 1 (component side) of the module, and contact fingers A2 through V2 are on side (solder side) of the module (Figure 6).

DOUBLE-HEIGHT modules (standard length and extended length) have two plug-in sections of contact fingers and occupy two module slots (rows A and B, C and D, or E and F) of a connector block (Figure 9). The two plug-in sections are identified by the designations A and B. Contact fingers A1 through V1 and A2 through V2 of the A section are designated AA1 through AV1 and AA2 through AV2, respectively; contact fingers A1 through V1 and A2 through V2 of the B section are designated BA1 through BV1 and BA2 through BV2, respectively (Figure 7). Note that the positioning notch in the module base must mate with the protrusion on the connector block for correct positioning.

QUAD-HEIGHT modules (always extended length) have four plug-in sections of contact fingers and occupy four module slots (rows A through D or C through F) of two connector blocks (Figure 9). The four plug-in sections are identified by the designations A, B, C, and D. The four sections of contact fingers are designated AA1 through AV1 and AA2 through AV2; BA1 through BV1 and BA2 through BV2; CA1 through CV1 and CA2 through CV2; and DA1 through DV1 and DA2 through DV2 (Figure 8).

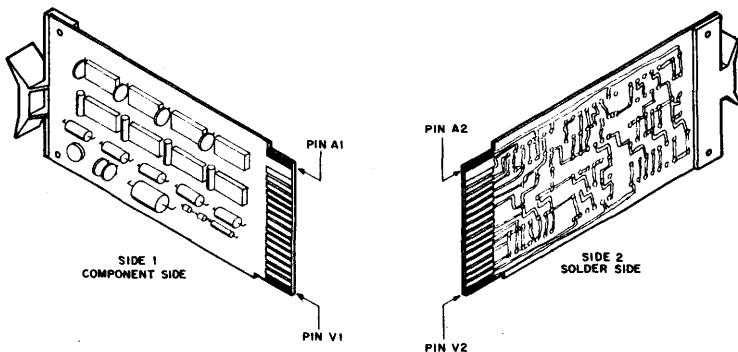


Figure 6. Single-Height Module

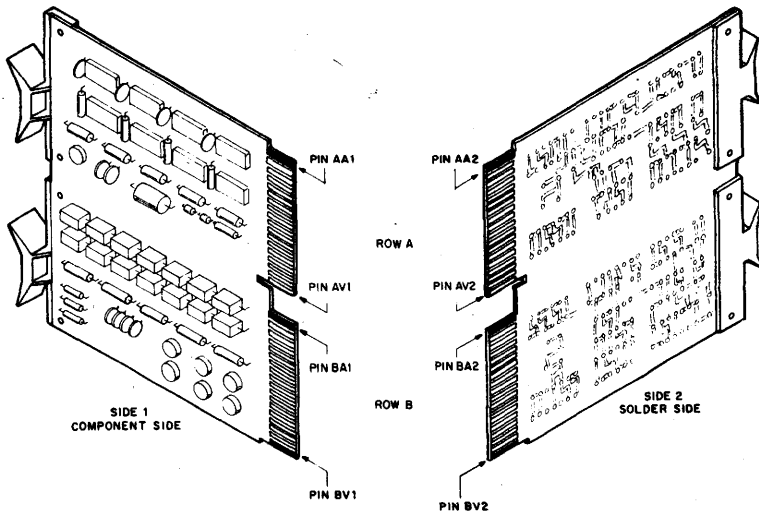


Figure 7. Double-Height Module

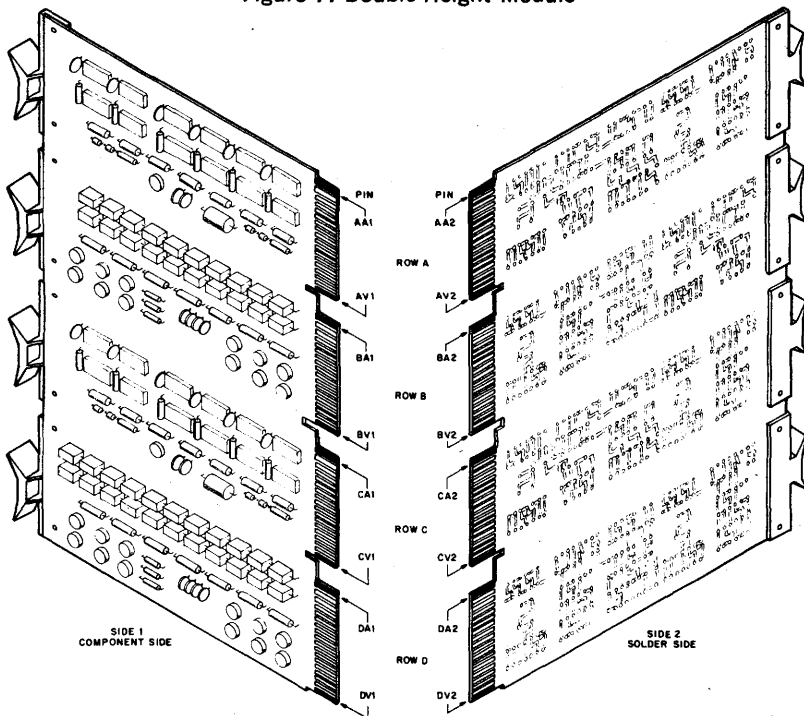


Figure 8. Quad-Height Module

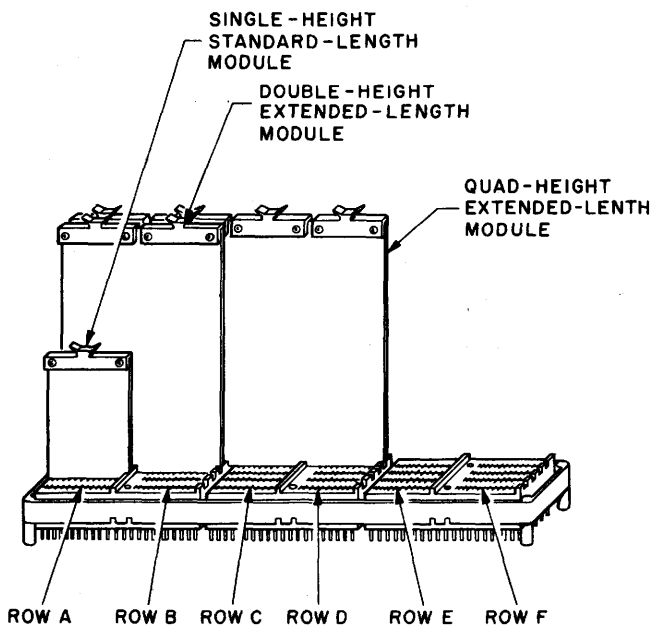


Figure 9. Connector Block Slot Identification

Figure 10. Module Dimensions

