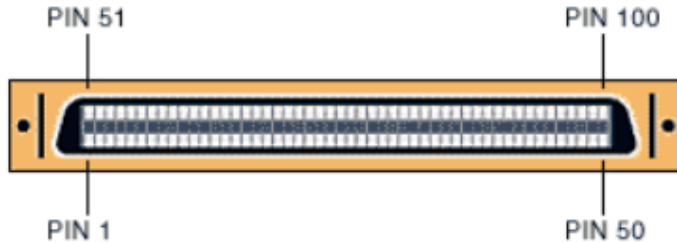


# Matrox Genesis – Digital Interface Connectors

The digital interface connector on the Matrox Genesis digital input companion board (GEN-DIG-BRD) is a high density DB-100 (SCSI-2 like) connector. It is used for video input as well as sync & control I/O. The pin-outs are as follows:



| Pin | Signal           | Pin | Signal           |
|-----|------------------|-----|------------------|
| 1   | DATA, INPUT, 0+  | 51  | DATA, INPUT, 16+ |
| 2   | DATA, INPUT, 0-  | 52  | DATA, INPUT, 16- |
| 3   | DATA, INPUT, 1+  | 53  | DATA, INPUT, 17+ |
| 4   | DATA, INPUT, 1-  | 54  | DATA, INPUT, 17- |
| 5   | DATA, INPUT, 2+  | 55  | DATA, INPUT, 18+ |
| 6   | DATA, INPUT, 2-  | 56  | DATA, INPUT, 18- |
| 7   | DATA, INPUT, 3+  | 57  | DATA, INPUT, 19+ |
| 8   | DATA, INPUT, 3-  | 58  | DATA, INPUT, 19- |
| 9   | DATA, INPUT, 4+  | 59  | DATA, INPUT, 20+ |
| 10  | DATA, INPUT, 4-  | 60  | DATA, INPUT, 20- |
| 11  | DATA, INPUT, 5+  | 61  | DATA, INPUT, 21+ |
| 12  | DATA, INPUT, 5-  | 62  | DATA, INPUT, 21- |
| 13  | DATA, INPUT, 6+  | 63  | DATA, INPUT, 22+ |
| 14  | DATA, INPUT, 6-  | 64  | DATA, INPUT, 22- |
| 15  | DATA, INPUT, 7+  | 65  | DATA, INPUT, 23+ |
| 16  | DATA, INPUT, 7-  | 66  | DATA, INPUT, 23- |
| 17  | DATA, INPUT, 8+  | 67  | DATA, INPUT, 24+ |
| 18  | DATA, INPUT, 8-  | 68  | DATA, INPUT, 24- |
| 19  | DATA, INPUT, 9+  | 69  | DATA, INPUT, 25+ |
| 20  | DATA, INPUT, 9-  | 70  | DATA, INPUT, 25- |
| 21  | DATA, INPUT, 10+ | 71  | DATA, INPUT, 26+ |

|    |                                     |     |                                     |
|----|-------------------------------------|-----|-------------------------------------|
| 22 | DATA, INPUT, 10-                    | 72  | DATA, INPUT, 26-                    |
| 23 | DATA, INPUT, 11+                    | 73  | DATA, INPUT, 27+                    |
| 24 | DATA, INPUT, 11-                    | 74  | DATA, INPUT, 27-                    |
| 25 | DATA, INPUT, 12+                    | 75  | DATA, INPUT, 28+                    |
| 26 | DATA, INPUT, 12-                    | 76  | DATA, INPUT, 28-                    |
| 27 | DATA, INPUT, 13+                    | 77  | DATA, INPUT, 29+                    |
| 28 | DATA, INPUT, 13-                    | 78  | DATA, INPUT, 29-                    |
| 29 | DATA, INPUT, 14+                    | 79  | DATA, INPUT, 30+                    |
| 30 | DATA, INPUT, 14-                    | 80  | DATA, INPUT, 30-                    |
| 31 | DATA, INPUT, 15+                    | 81  | DATA, INPUT, 31+                    |
| 32 | DATA, INPUT, 15-                    | 82  | DATA, INPUT, 31-                    |
| 33 | HSYNC, INPUT, +                     | 83  | HSYNC, OUTPUT, +                    |
| 34 | HSYNC, INPUT, -                     | 84  | HSYNC, OUTPUT, -                    |
| 35 | VSYNC, INPUT, +                     | 85  | VSYNC, OUTPUT, +                    |
| 36 | VSYNC, INPUT, -                     | 86  | VSYNC, OUTPUT, -                    |
| 37 | GROUND                              | 87  | EXPOSURE1, OUTPUT, TTL              |
| 38 | GROUND                              | 88  | EXPOSURE2, OUTPUT, TTL              |
| 39 | CLOCK, INPUT, +                     | 89  | CLOCK, OUTPUT, +                    |
| 40 | CLOCK, INPUT, -                     | 90  | CLOCK, OUTPUT, -                    |
| 41 | USER, INPUT, 0+                     | 91  | USER, OUTPUT, 0+                    |
| 42 | USER, INPUT, 0-                     | 92  | USER, OUTPUT, 0-                    |
| 43 | USER, INPUT, 1+                     | 93  | USER, OUTPUT, 1+                    |
| 44 | USER, INPUT, 1-                     | 94  | USER, OUTPUT, 1-                    |
| 45 | VALID, INPUT, +                     | 95  | EXPOSURE1, OUTPUT, +                |
| 46 | VALID, INPUT, -                     | 96  | EXPOSURE1, OUTPUT, -                |
| 47 | TRIGGER, INPUT, +                   | 97  | EXPOSURE2, OUTPUT, +                |
| 48 | TRIGGER, INPUT, -                   | 98  | EXPOSURE2, OUTPUT, -                |
| 49 | CAMERA CONTROL BIT0,<br>OUTPUT, TTL | 99  | CAMERA CONTROL BIT1,<br>OUTPUT, TTL |
| 50 | GROUND                              | 100 | CAMERA CONTROL BIT2,<br>OUTPUT, TTL |

A variety of Matrox cables are available to interface to this connector. A custom cable can be built using the following components:

| Part Description    | Manufacturer                             | Part no.       |
|---------------------|------------------------------------------|----------------|
| Connector and shell | <a href="#">A.R. Gray and Associates</a> | HP-100C-20F-BO |

The digital connector on the Matrox Genesis digital cable adaptor board included with the Matrox Genesis board) is a high density DB-68 (SCSI-2 like) connector. It is used for video sync & control I/O only. The pin-outs are as follows:



| Pin | Signal                  | Pin | Signal                  |
|-----|-------------------------|-----|-------------------------|
| 1   | NC                      | 35  | NC                      |
| 2   | EXPOSURE2, OUTPUT, 422+ | 36  | EXPOSURE2, OUTPUT, 422- |
| 3   | EXPOSURE1, OUTPUT, 422+ | 37  | EXPOSURE1, OUTPUT, 422- |
| 4   | USER1, OUTPUT, 422+     | 38  | USER1, OUTPUT, 422-     |
| 5   | USER0, OUTPUT, 422+     | 39  | USER0, OUTPUT, 422-     |
| 6   | CLOCK, OUTPUT, 422+     | 40  | CLOCK, OUTPUT, 422-     |
| 7   | VSYNC, OUTPUT, 422+     | 41  | VSYNC, OUTPUT, 422-     |
| 8   | HSYNC, OUTPUT, 422+     | 42  | HSYNC, OUTPUT, 422-     |
| 9   | TRIGGER, INPUT, 422+    | 43  | TRIGGER, INPUT, 422-    |
| 10  | VALID, INPUT, 422+      | 44  | VALID, INPUT, 422-      |
| 11  | USER1, INPUT, 422+      | 45  | USER1, INPUT, 422-      |
| 12  | USER0, INPUT, 422+      | 46  | USER0, INPUT, 422-      |
| 13  | CLOCK, INPUT, 422+      | 47  | CLOCK, INPUT, 422-      |
| 14  | CSYNC, INPUT, 422+      | 48  | CSYNC, INPUT, 422-      |
| 15  | VSYNC, INPUT, 422+      | 49  | VSYNC, INPUT, 422-      |

|    |                           |    |                          |
|----|---------------------------|----|--------------------------|
| 16 | HSYNC, INPUT, 422+        | 50 | HSYNC, INPUT, 422-       |
| 17 | NC                        | 51 | NC                       |
| 18 | NC                        | 52 | GROUND                   |
| 19 | GROUND                    | 53 | NC                       |
| 20 | NC                        | 54 | NC                       |
| 21 | MODULE CLOCK, OUTPUT, TTL | 55 | MODULE LOAD, OUTPUT, TTL |
| 22 | GROUND                    | 56 | MODULE DATA, OUTPUT, TTL |
| 23 | USER0, OUTPUT, TTL        | 57 | USER1, OUTPUT, TTL       |
| 24 | EXPOSURE1, OUTPUT, TTL    | 58 | EXPOSURE2, OUTPUT, TTL   |
| 25 | GROUND                    | 59 | CLOCK, OUTPUT, TTL       |
| 26 | VSYNC, OUTPUT, TTL        | 60 | GROUND                   |
| 27 | NC                        | 61 | NC                       |
| 28 | GROUND                    | 62 | HSYNC, OUTPUT, TTL       |
| 29 | USER0, INPUT, TTL         | 63 | USER1, INPUT, TTL        |
| 30 | VALID, INPUT, TTL         | 64 | GROUND                   |
| 31 | GROUND                    | 65 | CLOCK, INPUT, TTL        |
| 32 | CSYNC, INPUT, TTL         | 66 | GROUND                   |
| 33 | VSYNC, INPUT, TTL         | 67 | TRIGGER, INPUT, TTL      |
| 34 | HSYNC, INPUT, TTL         | 68 | GROUND                   |

A Matrox cable is available to interface to this connector. A custom cable can be built using the following components:

| Part Description | Manufacturer                    | Part no.    |
|------------------|---------------------------------|-------------|
| Connector        | <a href="#">DDK Electronics</a> | DHA-PA68-3G |
| Shell            | <a href="#">DDK Electronics</a> | DHA-HPA68   |
| Shell            | <a href="#">DDK Electronics</a> | DHA-HPA68   |

Note: Use twisted pair cable (twisted along signal pairs).