



## Quick Reference Guide

### Express Mini Card and Display Mini Card Sockets

TE Connectivity's (TE) express mini card and display mini card sockets address interconnect requirements for expansion cards added on boards across server, desktop, consumer devices and notebook platforms. This product portfolio consists of right angle, surface mount sockets with 52 contacts (express mini card) or 76 contacts (display mini card). Latches are available for selected heights. The design meets the PCI-SIG industry standard for high speed data.

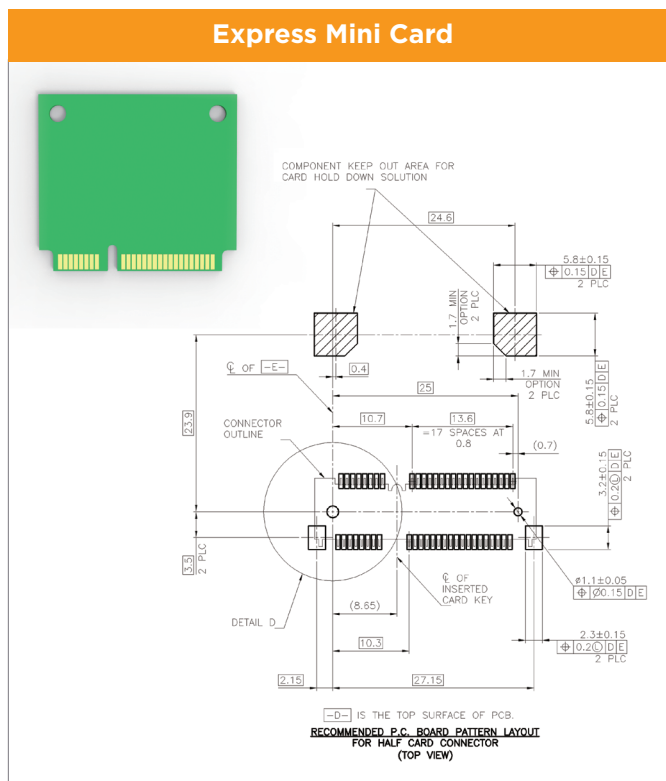
#### FEATURES & BENEFITS

- Sockets available in heights from 4mm to 9.9 mm
- Capable of withstanding 50G mechanical shock testing
- Contact manufacturing method creates a contact with more stable normal force than other methods
- Compliant with PCI-SIG standard

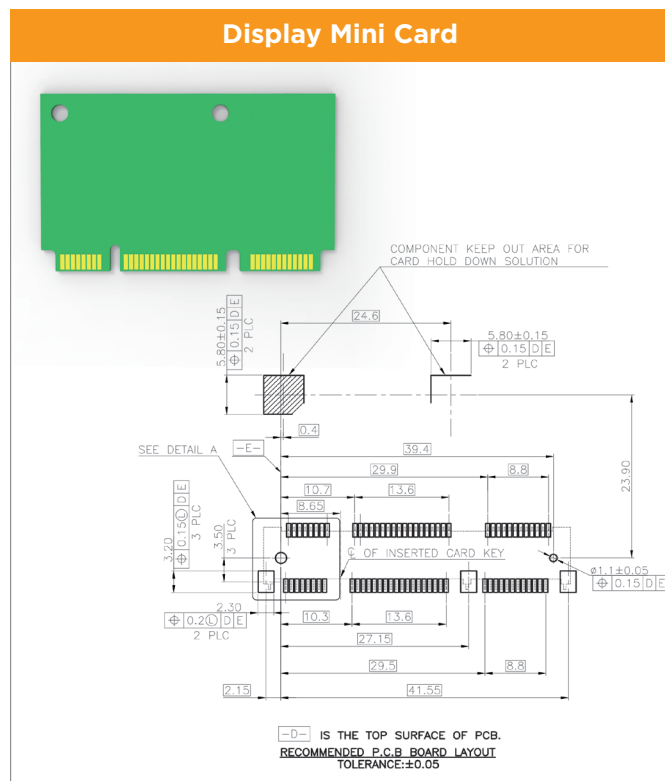
#### APPLICATIONS

- Notebook PC
- Desktop PC
- Wireless Communication Equipment

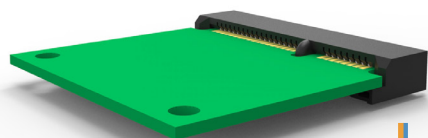
## Product Sizes



TE Connectivity's express mini card is fully compatible with PCI express mini card specification.



TE Connectivity's display mini card is fully compatible with PCI express mini card, HDMI and displayport specification.



DMC card fully inserted into socket



DMC card fully inserted into socket

CONNECTOR PIN-OUT DEFINITIONS (FOR BOTH DISPLAY AND EXPRESS MINI CARD)

| PIN# | NAME      | MECHANICAL KEY | PIN#               | NAME     | PIN#       | NAME      |
|------|-----------|----------------|--------------------|----------|------------|-----------|
| 16   | UIM_VPP   |                | 51                 | RESERVED | 52         | +3.3Vaux  |
| 15   | GND       |                | 49                 | RESERVED | 50         | GND       |
| 14   | UIM_RESET |                | 47                 | RESERVED | 48         | +1.5V     |
| 13   | REFCLK+   |                | 45                 | RESERVED | 46         | LED_WPAN# |
| 12   | UIM_CLK   |                | 43                 | GND      | 44         | LED_WPAN# |
| 11   | REFCLK-   |                | 41                 | +3.3Vaux | 42         | LED_WPAN# |
| 10   | UIM_DATA  |                | 39                 | +3.3Vaux | 40         | GND       |
| 9    | GND       |                | 37                 | GND      | 38         | USB_D+    |
| 8    | UIM_PWR   |                | 35                 | GND      | 36         | USB_D-    |
| 7    | CLKRQF#   |                | 33                 | PETn0    | 34         | GND       |
| 6    | 1.5V      |                | 31                 | PETn03   | 25         | MB_DATA   |
| 5    | COEX2     |                | 29                 | GND      | 30         | SMB_CLK   |
| 4    | GND       |                | 27                 | GND      | 28         | +1.5V     |
| 3C   | OEX1      |                | 25                 | PETn02   | 6          | GND       |
| 23   | 3Vaux     |                | 23                 | PETn0    | 24         | +3.3Vaux  |
| 1W   | AKE#      |                | 21                 | GND      | 22         | PERST#    |
|      |           | 19             | RESERVED*(UIM)_C4) | 20       | W_DISABLE# |           |
|      |           | 17             | RESERVED*(UIM)_C8) | 8        | GND        |           |

\* RESERVED FOR FUTURE UIM INTERFACE (IF NEEDED)

| CONNECTOR PIN-OUT DEFINITIONS (FOR DMC) |       |     |       |
|-----------------------------------------|-------|-----|-------|
| PIN#                                    | NAMEP | IN# | NAME  |
| 75                                      | GND   | 76  | MLDIR |
| 73                                      | MLOn  | 74  | GND   |
| 71                                      | MLOn  | 72  | GND   |
| 69                                      | GND   | 70  | MLIp  |
| 67                                      | GND   | 68  | MLIp  |
| 65                                      | ML2n  | 66  | GND   |
| 63                                      | ML2n  | 64  | GND   |
| 61                                      | GND   | 62  | ML3P  |
| 59                                      | GND   | 60  | ML3n  |
| 57                                      | AUXp  | 58  | GND   |
| 55                                      | AUXn  | 57  | GND   |
| 53                                      | DMC#  | 54  | HPD   |

MECHANICAL KEY

## MECHANICAL KEY

## 52 Position Express Mini Card Sockets

| TE Part Number | Contact Plating<br>Mating Area | Stack Height     | Mount  | Card Centerline<br>to PCB | Packaging     |
|----------------|--------------------------------|------------------|--------|---------------------------|---------------|
| 2041119-1      | Gold Flash                     | .157 in[4.00 mm] | Top    | 2.05mm                    | Tape and reel |
| 2041119-2      | Gold (10)                      | .157 in[4.00 mm] | Top    | 2.05mm                    | Tape and reel |
| 1775862-1      | Gold (10)                      | .205 in[5.2 mm]  | Top    | 3.25mm                    | Tape and reel |
| 1775862-2      | Gold Flash                     | .205 in[5.2 mm]  | Top    | 3.25mm                    | Tape and reel |
| 1775838-1      | Gold (10)                      | .220 in[5.6 mm]  | Top    | 3.65mm                    | Tape and reel |
| 1775838-2      | Gold Flash                     | .220 in[5.6 mm]  | Top    | 3.65mm                    | Tape and reel |
| 2041262-1      | Gold Flash                     | .268 in[6.8 mm]  | Top    | 4.85mm                    | Tape and reel |
| 2041262-2      | Gold (10)                      | .268 in[6.8 mm]  | Top    | 4.85mm                    | Tape and reel |
| 1759547-1      | Gold Flash                     | .276 in[7.0 mm]  | Top    | 5.05mm                    | Tape and reel |
| 1759503-1      | Gold Flash                     | .315 in[8.0 mm]  | Top    | 6.05mm                    | Tape and reel |
| 1759513-1      | Gold Flash                     | .354 in[9.0 mm]  | Top    | 7.05mm                    | Tape and reel |
| 1759546-1      | Gold Flash                     | .390 in[9.9 mm]  | Top    | 7.95mm                    | Tape and reel |
| 2041216-1      | Gold (10)                      | .390 in[9.9 mm]  | Top    | 7.95mm                    | Tape and reel |
| 1759941-1      | Gold Flash                     | .177 in[4.5 mm]  | Bottom | 2.5mm                     | Tape and reel |
| 1-1775861-2    | Gold Flash                     | .157 in[4.00mm]  | Top    | 2.05mm                    | Tape and reel |
| 1775861-2      | Gold Flash                     | .157 in[4.00mm]  | Top    | 2.05mm                    | Tape and reel |
| 1775861-2      | Gold Flash                     | .157 in[4.00mm]  | Top    | 2.05mm                    | Tape and reel |
| 1775838-5      | Gold Flash                     | .220 in[5.60mm]  | Top    | 3.65mm                    | Tape and reel |
| 2041286-2      | Gold (30)                      | .157 in[4.00mm]  | Top    | 2.04mm                    | Tape and reel |
|                |                                |                  |        |                           |               |

## 76 Position DMC (Display Mini Card) Sockets

|           |            |                  |     |        |               |
|-----------|------------|------------------|-----|--------|---------------|
| 2041286-1 | Gold Flash | .157 in[4.00 mm] | Top | 2.04mm | Tape and reel |
|-----------|------------|------------------|-----|--------|---------------|

## Latches for Express Mini Card Sockets

|           |     |                  |  |  |  |
|-----------|-----|------------------|--|--|--|
| 1717832-2 | N/A | .157 in[4.00 mm] |  |  |  |
| 1827682-1 | N/A | .276 in[7.00 mm] |  |  |  |

# Frequently asked questions

## Question 1

Will express mini card connectors replace existing mini PCI connectors ?

## Answer 1

The trend will be to move towards express mini card, but mini PCI will still be used for some time.

## Question 2

Is a latch required when using this connector ?

## Answer 2

TE Connectivity does offer latches for the 4mm and 7mm connectors, but many customers manufacture their own standoffs

## Question 3

When would I use the DMC (Display Mini Card) connector instead of the express mini card ?

## Answer 3

If you need a wireless display option, you would use the DMC connector.

## FOR MORE INFORMATION

### TE Technical Support Center

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\*as defined [www.te.com/leadfree](http://www.te.com/leadfree)

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