###### **HSMC-160-ADAPTER**

###### **High Speed Mezzanine**

###### **Connector**

###### **Adapter Board**

###### Rev 1

Table of Contents

1. Overview 3

2. Key specifications 3

3. Targeted application 4

4. Architecture 4

5. Protype area 5

6. Connection Tables 6

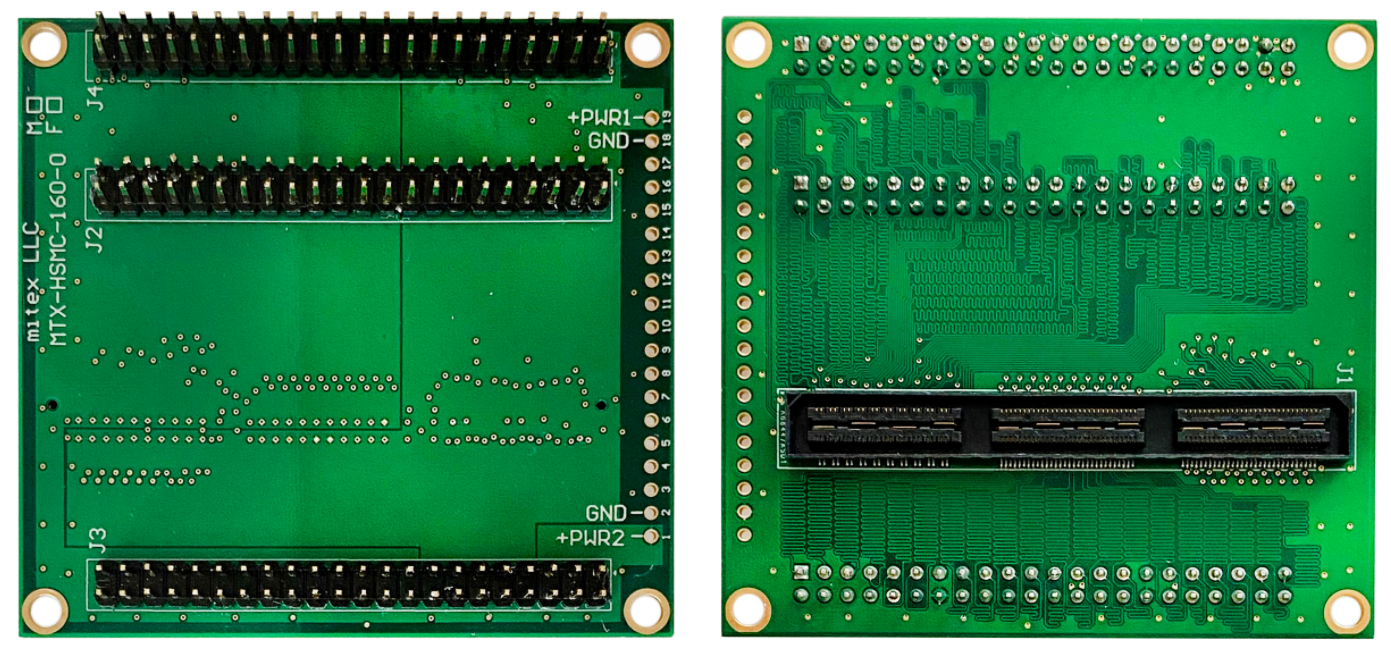
7. Ordering information 9

8. Revision history 9

8. Disclaimer 10

# Overview

The HSMC-160-ADAPTER is designed to convert its High-Speed Mezzanine connector I/O from 160 pins to three 44 pins, which results in 2 rows measured 0.1” (2.54mm).



**Figure 1. HSMC-160-ADAPTER** **board top and back side view. Female version.**

# Key specifications

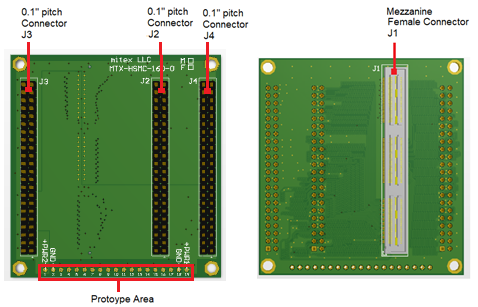
* Uses three standard, two-row, 44-pin headers
* Each header is dedicated to one of the three banks of the HSMC
* Headers have a pitch of 2.54 mm (0.1 in)
* Equally sized data traces ensure optimal signal integrity
* Prototyping area with plated holes for creating small circuits when debugging hardware
* Dimensions: 7.3 x 6.8 x 1.3 cm

# Targeted application

Any application that requires a bridging between an HSMC interface to the standard 0.1” pitch connector.

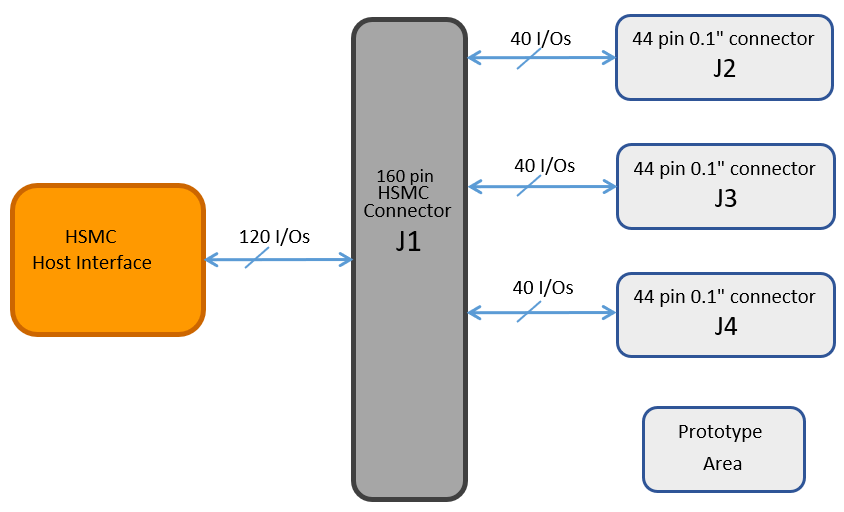
# Architecture

Figure 2 depicts the layout of the board and indicates the locations of the connectors.



**Figure 2. HSMC-160-0** **top and back side of female version**

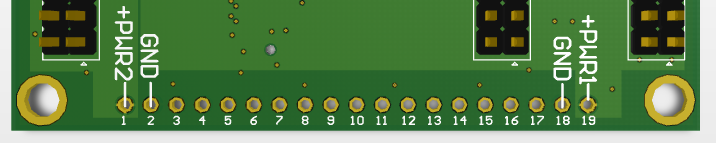
Figure 3 shows the block diagram of the HSMC-160-ADAPTER board.



**Figure 3. HSMC-160-0** **block diagram**

# Protype area

Figure 4 shows the prototype area’s detailed view of the HSMC-160-ADAPTER board. Its holes are plated with a diameter measured 1mm.



**Figure 4. HSMC-160-ADAPTER** **protype area**

Each area’s holes have connections as follows:

Hole 1: +PWR2

Hole 2: GND

Holes 3-17: no connections

Hole 18: GND

Hole 19: +PWR1

# Connection Tables

Table 1 contains the Bank 1 connection information of the signals and power/ground mechanisms found in the HSMC and 0.1” pitch connectors of the

HSMC-160-ADAPTER board.

**Table 1. Bank 1 connections**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **HSMC connector**  **J1** | **Connector**  **J2** | **HSMC connector**  **J1** | **Connector**  **J2** | **Power/Gnd** | **HSMC connector**  **J1** | **Connector**  **J2** |
| 1 | 1 | 21 | 23 | +PWR1 |  | 13 |
| 2 | 2 | 22 | 24 | +PWR2 |  | 31 |
| 3 | 3 | 23 | 25 | Gnd | 161 | 14 |
| 4 | 4 | 24 | 26 | Gnd | 162 | 32 |
| 5 | 5 | 25 | 27 | Gnd | 163 |  |
| 6 | 6 | 26 | 28 | Gnd | 164 |  |
| 7 | 7 | 27 | 29 |  |  |  |
| 8 | 8 | 28 | 30 |  |  |  |
| 9 | 9 | 29 | 33 |  |  |  |
| 10 | 10 | 30 | 34 |  |  |  |
| 11 | 11 | 31 | 35 |  |  |  |
| 12 | 12 | 32 | 36 |  |  |  |
| 13 | 15 | 33 | 37 |  |  |  |
| 14 | 16 | 34 | 38 |  |  |  |
| 15 | 17 | 35 | 39 |  |  |  |
| 16 | 18 | 36 | 40 |  |  |  |
| 17 | 19 | 37 | 41 |  |  |  |
| 18 | 20 | 38 | 42 |  |  |  |
| 19 | 21 | 39 | 43 |  |  |  |
| 20 | 22 | 40 | 44 |  |  |  |

Table 2 contains the Bank 2 connection information of the signals and power/ground mechanisms found in the HSMC and 0.1” pitch connectors of the

MHSMC-160-ADAPTER board.

**Table 2. Bank 2 connections**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **HSMC connector**  **J1** | **Connector**  **J3** | **HSMC connector**  **J1** | **Connector**  **J3** | **Power/Gnd** | **HSMC connector**  **J1** | **Connector**  **J3** |
| 41 | 1 | 77 | 27 | +PWR1 | 45 | 13 |
| 42 | 2 | 78 | 28 | +PWR1 | 51 |  |
| 43 | 3 | 79 | 29 | +PWR1 | 57 |  |
| 44 | 4 | 80 | 30 | +PWR1 | 63 |  |
| 47 | 5 | 83 | 33 | +PWR1 | 69 |  |
| 48 | 6 | 84 | 34 | +PWR1 | 75 |  |
| 49 | 7 | 85 | 35 | +PWR1 | 81 |  |
| 50 | 8 | 86 | 36 | +PWR1 | 87 |  |
| 53 | 9 | 89 | 37 | +PWR1 | 93 |  |
| 54 | 10 | 90 | 38 | +PWR1 | 99 |  |
| 55 | 11 | 91 | 39 | +PWR2 | 46 | 31 |
| 56 | 12 | 92 | 40 | +PWR2 | 52 |  |
| 59 | 15 | 95 | 41 | +PWR2 | 58 |  |
| 60 | 16 | 96 | 42 | +PWR2 | 64 |  |
| 61 | 17 | 97 | 43 | +PWR2 | 70 |  |
| 62 | 18 | 98 | 44 | +PWR2 | 76 |  |
| 65 | 19 |  |  | +PWR2 | 82 |  |
| 66 | 20 |  |  | +PWR2 | 88 |  |
| 67 | 21 |  |  | +PWR2 | 94 |  |
| 68 | 22 |  |  | +PWR2 | 100 |  |
| 71 | 23 |  |  | Gnd | 165 | 14 |
| 72 | 24 |  |  | Gnd | 166 | 32 |
| 73 | 25 |  |  | Gnd | 167 |  |
| 74 | 26 |  |  | Gnd | 168 |  |

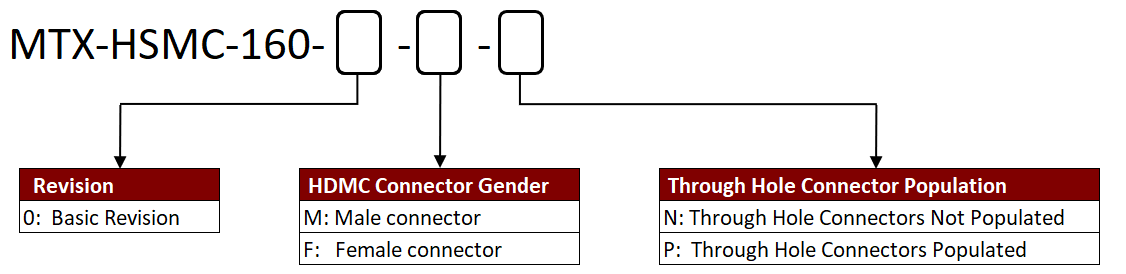
Table 3 contains the Bank 3 connection information of the signals and power/ground mechanisms found in the HSMC and 0.1” pitch connectors of the

HSMC-160-ADAPTER board.

**Table 3. Bank 3 connections**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **HSMC connector**  **J1** | **Connector**  **J4** | **HSMC connector**  **J1** | **Connector**  **J4** | **Power/Gnd** | **HSMC connector**  **J1** | **Connector**  **J4** |
| 101 | 1 | 137 | 27 | +PWR1 | 105 | 13 |
| 102 | 2 | 138 | 28 | +PWR1 | 111 |  |
| 103 | 3 | 139 | 29 | +PWR1 | 117 |  |
| 104 | 4 | 140 | 30 | +PWR1 | 123 |  |
| 107 | 5 | 143 | 33 | +PWR1 | 129 |  |
| 108 | 6 | 144 | 34 | +PWR1 | 135 |  |
| 109 | 7 | 145 | 35 | +PWR1 | 141 |  |
| 110 | 8 | 146 | 36 | +PWR1 | 147 |  |
| 113 | 9 | 149 | 37 | +PWR1 | 153 |  |
| 114 | 10 | 150 | 38 | +PWR1 | 159 |  |
| 115 | 11 | 151 | 39 | +PWR2 | 106 | 31 |
| 116 | 12 | 152 | 40 | +PWR2 | 112 |  |
| 119 | 15 | 155 | 41 | +PWR2 | 118 |  |
| 120 | 16 | 156 | 42 | +PWR2 | 124 |  |
| 121 | 17 | 157 | 43 | +PWR2 | 130 |  |
| 122 | 18 | 158 | 44 | +PWR2 | 136 |  |
| 125 | 19 |  |  | +PWR2 | 142 |  |
| 126 | 20 |  |  | +PWR2 | 148 |  |
| 127 | 21 |  |  | +PWR2 | 154 |  |
| 128 | 22 |  |  | +PWR2 | 160 |  |
| 131 | 23 |  |  | Gnd | 169 | 14 |
| 132 | 24 |  |  | Gnd | 170 | 32 |
| 133 | 25 |  |  | Gnd | 171 |  |
| 134 | 26 |  |  | Gnd | 172 |  |

# Ordering information



# Revision history

|  |  |  |
| --- | --- | --- |
| **Date** | **Version** | **Revision** |
| 7/22/2020 | 0 | Original revision |
| 11/25/2020 | 1 | 1.The product name changed to HSMC-160-ADAPTER.  2. EU market compliance notes added to the Disclaimer section. |
|  |  |  |

# Disclaimer

We expressly disclaim any liability arising out of the application or use of the HSMC-160-ADAPTER. We reserve the right to make changes, at any time, to the HSMC-160-0 as deemed desirable in the sole discretion of ours. We assume no obligation to correct any errors contained herein or to advise you of any correction if such be made. We will not assume any liability for the accuracy or correctness of any engineering or technical support or assistance provided to you in connection with the HSMC-160-ADAPTER.

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HSMC-160-ADAPTER in such High-Risk Applications is fully at your risk.

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