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**MTX-HSMC-160-ADAPTER**  
**High Speed Mezzanine**  
**Connector**  
**Adapter Board**

Rev 2

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## 1. Overview

The MTX-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).

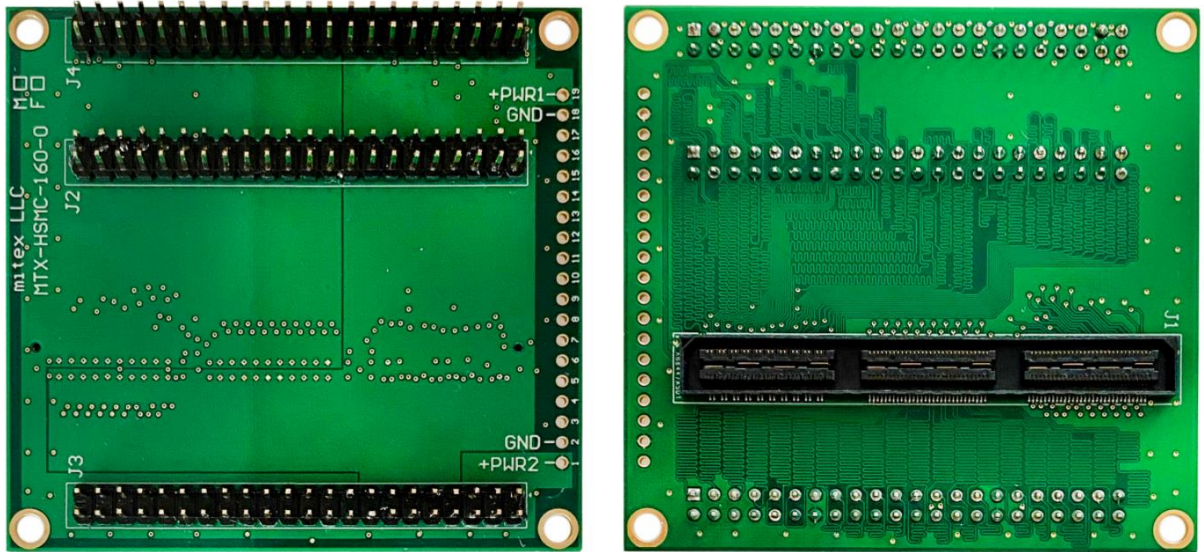


Figure 1. MTX-HSMC-160-ADAPTER board top and back side view. Female version.

## 2. 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

## 3. Targeted application

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

## 4. Architecture

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

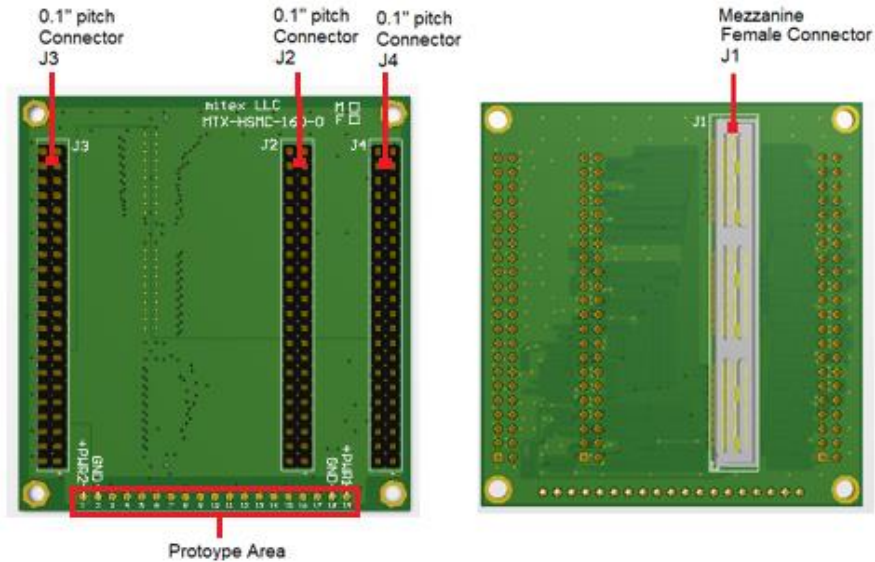


Figure 2. MTX-HSMC-160-0 top and back side of female version

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

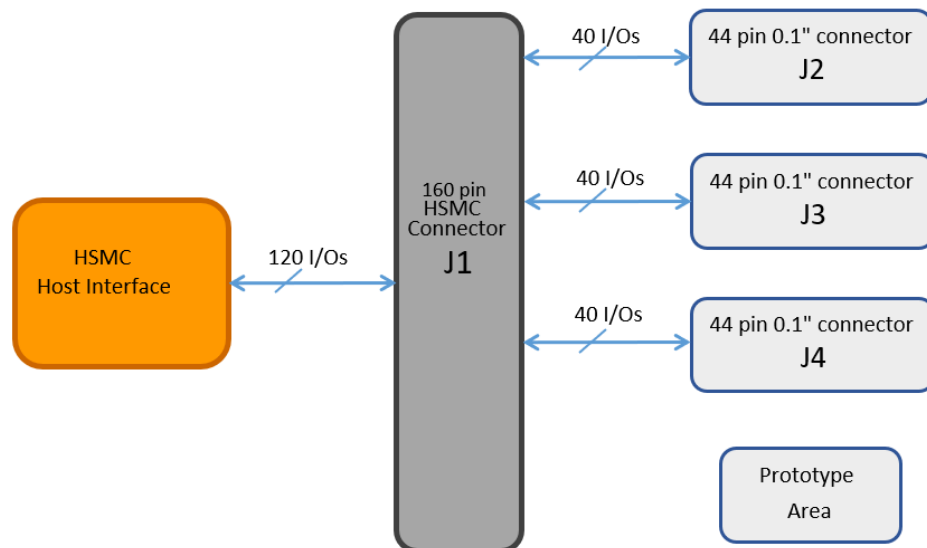
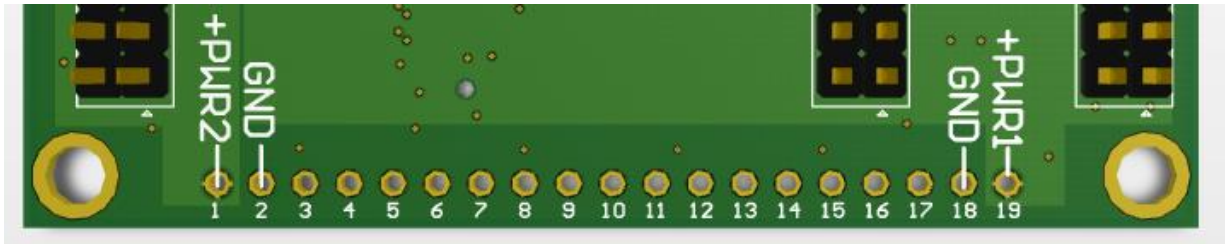


Figure 3. MTX-HSMC-160-0 block diagram

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## 5. Prototype area

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



**Figure 4. MTX-HSMC-160-ADAPTER prototype 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

## 6. 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 MTX-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 MTX-HSMC-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	

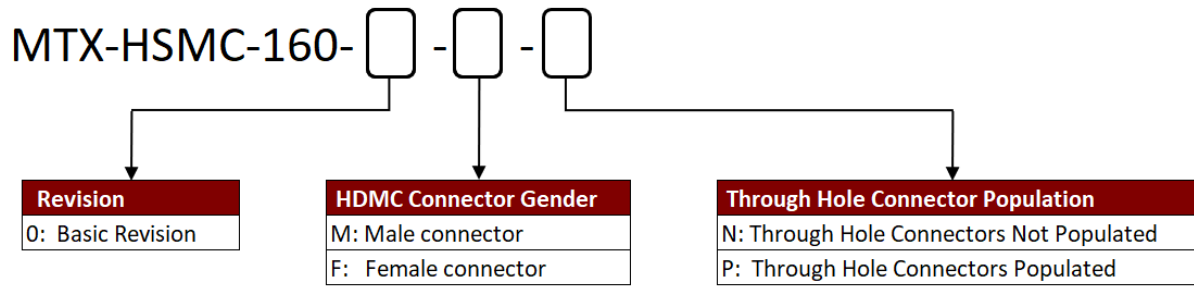
Table 3 contains the Bank 3 connection information of the signals and power/ground mechanisms found in the HSMC and 0.1" pitch connectors of the MTX-HSMC-160-ADAPTER board.

**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	



## 7. Ordering information



## 8. 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.
1/28/2021	1	1.The product name changed to MTX-HSMC-160-ADAPTER. 2. EU market compliance notes added to the Disclaimer section.

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## 8. Disclaimer

We expressly disclaim any liability arising out of the application or use of the MTX-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 MTX-HSMC-160-ADAPTER.

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The MTX-HSMC-160-ADAPTER is not designed or intended for use in the development of on-line control equipment in hazardous environments requiring fail-safe controls, such as in the operation of nuclear facilities, aircraft navigation or communications systems, air traffic control, life support, or weapons systems ("High-Risk Applications"). We specifically disclaim any express or implied warranties of fitness for such High-Risk Applications. You represent that use of the MTX-HSMC-160-ADAPTER in such High-Risk Applications is fully at your risk.

The MTX-HSMC-160-ADAPTER board is intended for use for ENGINEERING DEVELOPMENT, DEMONSTRATION, OR EVALUATION PURPOSES ONLY and is not considered by mitex LLC to be a finished end-product fit for general consumer use. Persons handling the product must have electronics training and observe good engineering practice standards. The MTX-HSMC-160-ADAPTER board does not fall within the scope of the European Union directives regarding electromagnetic compatibility, restricted substances (RoHS), recycling (WEEE), FCC, CE or UL, and therefore may not meet the technical requirements of these directives or other related directives.