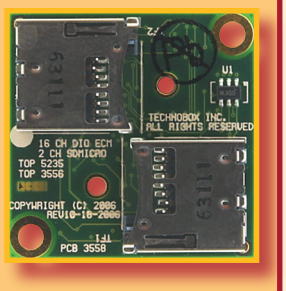
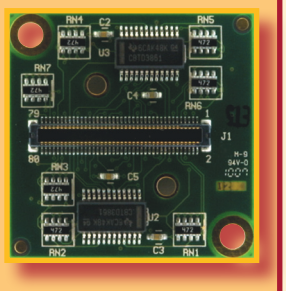
Conversion Module

Dual microSD™ Memory Adapter





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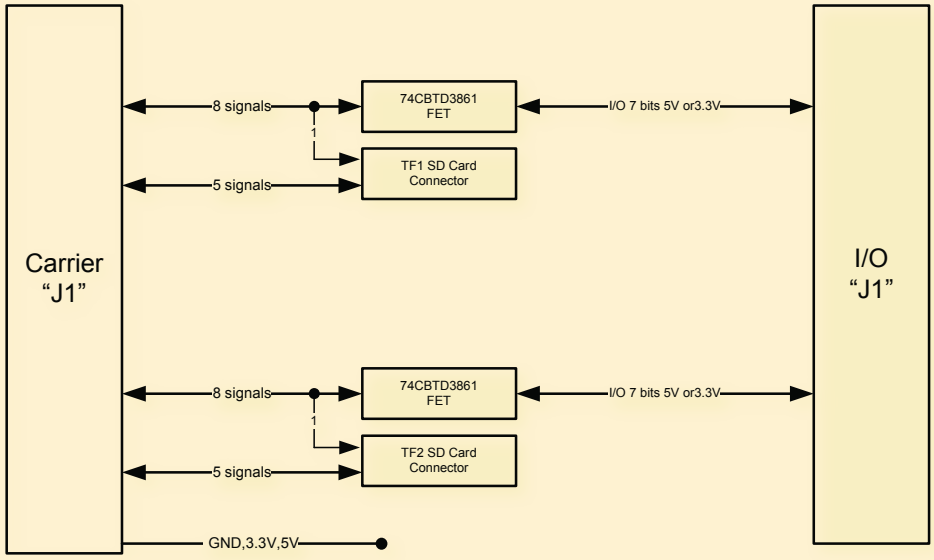

- **Memory ECM with digital I/O**
- **Two Micro SD flash memory sites**
- **Micro SD card Retention mechanism**
- **14-bit digital I/O, 5V tolerant**
- **On-board serial identification circuit**
- **RoHS compliant**
- **Patented**

Specifications

Temperature (Operating): -40 to +85 degrees C

Temperature (Storage): -55 to +100 degrees C

Altitude: Not Specified or Characterized. Typical similar equipment is at 15,000 ft.

Humidity (Operating/Storage): 5% to 90% non-condensing

Vibration: Not specified or Characterized

Shock: Not specified or Characterized

MTBF: Available on request

Weight: 3 grams

Power: TBD

Ordering Information

3556: Dual microSD Memory Adapter

Technobox, inc.®

140 Mount Holly Bypass
Unit 1
Lumberton, NJ 08048

Tel: 609-267-8988
Fax: 609-261-1011

www.technobox.com

Micro SD card user IO, In the case where a Micro SD card and user IO are used simultaneously, avoid the shared signals IO7 and IO15. Electrically the IO signals are the carrier digital signals buffered by a FET. A simplified model is shown below of the connection between DA0 and IO0. For input voltages below about 0.5V the circuit acts like a low resistance typically about 5 ohms. The resistance increases with increasing voltage.

Carrier Data	J1 Pin number	Direction	Description
DA0	10	BIDIR	FET buffered IO bit. IO0
DA1	12	BIDIR	FET buffered IO bit. IO1
DA2	22	BIDIR	FET buffered IO bit. IO2
DA3	24	BIDIR	FET buffered IO bit. IO3
DA4	34	BIDIR	FET buffered IO bit. IO4
DA5	36	BIDIR	FET buffered IO bit. IO5
DA6	46	BIDIR	FET buffered IO bit. IO6
DA7	48	BIDIR	Micro SD data signal DAT3 TF1
DA8	58	INPUT	Micro SD command signal TF1
DA9	60	BIDIR	Micro SD data signal DAT0 TF1
DA10	70	BIDIR	Micro SD data signal DAT1 TF1
DA11	72	BIDIR	Micro SD data signal DAT2 TF1
DA12	71	BIDIR	FET buffered IO bit. IO8
DA13	69	BIDIR	FET buffered IO bit. IO9
DA14	59	BIDIR	FET buffered IO bit. IO10
DA15	57	BIDIR	FET buffered IO bit. IO11
DA16	47	BIDIR	FET buffered IO bit. IO12
DA17	45	BIDIR	FET buffered IO bit. IO13
DA18	35	BIDIR	FET buffered IO bit. IO14
DA19	33	BIDIR	Micro SD data signal DAT3 TF2
DA20	23	INPUT	Micro SD command signal TF2
DA21	21	BIDIR	Micro SD data signal DAT0 TF2
DA22	11	BIDIR	Micro SD data signal DAT1 TF2
DA23	9	BIDIR	Micro SD data signal DAT2 TF2
DA24	40	INPUT	Micro SD clock signal TF1
DA25	41	INPUT	Micro SD clock signal TF2
DA26	42	NC	NC
DA27	39	NC	NC

Table 1 Carrier DA signal connections

User IO	J1 Pin number	Direction	Description
IO0	16	BIDIR	FET buffered IO bit. DA0
IO1	18	BIDIR	FET buffered IO bit. DA1
IO2	28	BIDIR	FET buffered IO bit. DA2
IO3	30	BIDIR	FET buffered IO bit. DA3
IO4	52	BIDIR	FET buffered IO bit. DA4
IO5	54	BIDIR	FET buffered IO bit. DA5
IO6	64	BIDIR	FET buffered IO bit. DA6
IO7	66	BIDIR	FET buffered IO bit. DA7, do not use
IO8	65	BIDIR	FET buffered IO bit. DA12
IO9	63	BIDIR	FET buffered IO bit. DA13
IO10	53	BIDIR	FET buffered IO bit. DA14
IO11	51	BIDIR	FET buffered IO bit. DA15
IO12	29	BIDIR	FET buffered IO bit. DA16
IO13	27	BIDIR	FET buffered IO bit. DA17
IO14	17	BIDIR	FET buffered IO bit. DA18
IO15	15	BIDIR	FET buffered IO bit. DA19, do not use

Table 2 User IO signal connections

Use of the Micro SD card retention feature. When a more permanent installation of the SD card is needed add the retention mechanism as shown below.

Put the Micro SD card in the connector. Apply the components shown, the head of the screw should presses lightly against the Micro SD card. Apply thread-locker to the screw before assembly if greater resistance to loosening is needed. Loctite 222MS or similar.