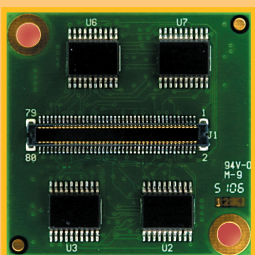
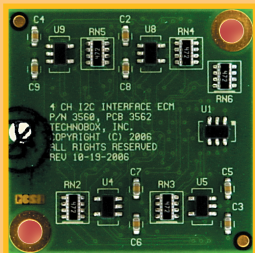
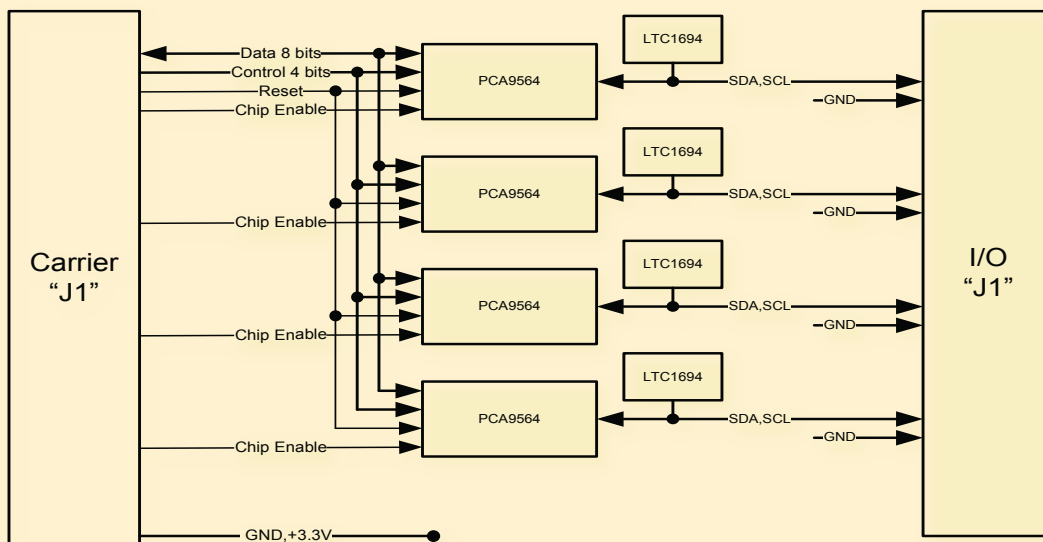


Conversion Module

4-channel I2C Interface Converter



3560



- I2C Interface ECM
- Quad I2C channels
- PCA9564 parallel data to I2C
- LTC1694 I2C signal rise-time enhancement
- On board serial identification circuit
- Extended temperature range
- 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 Char-
acterized

MTBF: Available on request

Weight: 3 grams

Power: TBD

Ordering Information

3560: 4-channel I2C Interface
Converter

Technobox, inc.

140 Mount Holly Bypass
Unit 1
Lumberton, NJ 08048

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

www.technobox.com

The Technobox P/N 3560 Interface ECM module provides 4 I2C channels.

The PCA9564 IC converts parallel data to I2C serial communication.

The LTC1694 I2C accelerator IC decreases the rise time of the passively pulled up I2C bus allowing for greater capacitive loading or higher bus speeds.

Each channel is comprised of I2C signals SCL, SDA and two Grounds.

The LTC1694 active pull up device on the SDA and SCL signals, provides better rise times and better signal drive with variable load capacitance. The trace in red shows how the LTC1694 detects the rising edge of the I2C signal and turns on a current source boosting drive and reducing rise time. Note that since the I2C bus is actively pulled down, the fall times are about the same with or without the LTC1694.

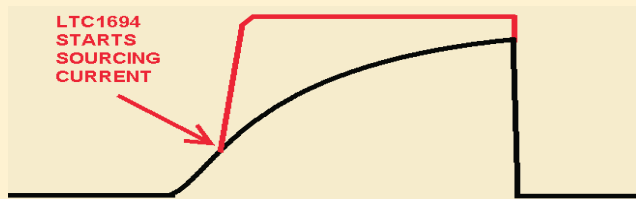


Figure 1 LTC1694 effect on I2C rise time.

PCA9564 Signals. Some signals from the carrier card are common to all four PCA9564s, these include data0..7, write, read, address0, address1 and reset. Unique to each PCA9564 are the chip enable and interrupt lines.

User IO	J1 Pin number	Direction	Description
IO0	16	BIDIR	U2-18, SCL
IO1	18	POWER	GND
IO2	28	BIDIR	U2-19, SDA
IO3	30	POWER	GND
IO4	52	BIDIR	U3-18, SCL
IO5	54	POWER	GND
IO6	64	BIDIR	U3-19, SDA
IO7	66	POWER	GND
IO8	65	BIDIR	U6-18, SCL
IO9	63	POWER	GND
IO10	53	BIDIR	U6-19, SDA
IO11	51	POWER	GND
IO12	29	BIDIR	U7-18, SCL
IO13	27	POWER	GND
IO14	17	BIDIR	U7-19, SDA
IO15	15	POWER	GND

Table 1 User IO signal connections

Carrier Data	J1 Pin number	Direction	Description
DA0	10	BIDIR	PCA9564 Data 0
DA1	12	BIDIR	PCA9564 Data 1
DA2	22	BIDIR	PCA9564 Data 2
DA3	24	BIDIR	PCA9564 Data 3
DA4	34	BIDIR	PCA9564 Data 4
DA5	36	BIDIR	PCA9564 Data 5
DA6	46	BIDIR	PCA9564 Data 6
DA7	48	BIDIR	PCA9564 Data 7
DA8	58	INPUT	PCA9564 U2-13 chip enable low
DA9	60	OUTPUT	PCA9564 U2-16 interrupt low
DA10	70	INPUT	PCA9564 U3-13 chip enable low
DA11	72	OUTPUT	PCA9564 U3-16 interrupt low
DA12	71	INPUT	PCA9564 Write
DA13	69	INPUT	PCA9564 Read
DA14	59	INPUT	PCA9564 Address 0
DA15	57	INPUT	PCA9564 Address 1
DA16	47	N/C	No connection
DA17	45	N/C	No connection
DA18	35	N/C	No connection
DA19	33	N/C	No connection
DA20	23	INPUT	PCA9564 U6-13 chip enable low
DA21	21	OUTPUT	PCA9564 U6-16 interrupt
DA22	11	INPUT	PCA9564 U7-13 chip enable low
DA23	9	OUTPUT	PCA9564 U7-16 interrupt
DA24	40	INPUT	PCA9564 Reset
DA25	41	N/C	No connection
DA26	42	N/C	No connection
DA27	39	N/C	No connection

Table 2 Carrier DA signal connections

