



The 40631 is a high performance multifunction card providing high-speed analog I/O and digital I/O functions. The 40631 card has a universal PCI interface supporting both 3.3 V and 5 V PCI bus. This card features a continuous, 250 k Samples/Sec 16-bit resolution A/D converter, 8 K samples hardware FIFO, 2-ch 16-bit D/A converter, 32-ch programmable digital I/O and DO read back. The 40631 provides either 32-ch single-ended or 16-ch differential analog inputs which are jumper selectable. The 40631 is equipped with a high speed PGA featuring programmable gain controls (1, 2, 4, 8).

The 40631 has the Card ID switch and pull-high/pull-low resistors for DI on board. Users can set Card ID on a board and recognize the board by the ID via software when using two or more 40631 cards in one computer. The pull-high/pull-low resistors allow specifying the DI status; when the DI channels are unconnected, the DI status will remain in high or low status other than floating.

The 40631 provides two programmable trigger methods: software trigger and pacer trigger. The A/D channel scan function of 40631 is so amazing, we call it MagicScan. The MagicScan controller takes out most works of getting A/D value such as select channel, set gain, settling time, trigger ADC and get data. With the built-in MagicScan and interrupt features, it is effectively off-loading your CPU from the job. Even in channel scan mode, it can have different gain code for each channel, and the sampling rate can still reach 250 kS/s totally. The 40631 is suitable for high end applications.

Analog Input	
Channels	32 single-ended/16 differential
AD Conversion	16-bit, 4 μ s conversion time
Sampling Rate	250 kS/s. max.
FIFO Size	8192 samples
Over voltage Protection	Continuous +/-35 Vp-p
Input Impedance	10,000 M /4pF
Trigger Modes	Software, Pacer
Data Transfer	Polling, Interrupt
Accuracy	0.05% of FSR \pm 1 LSB @ 25°C, \pm 10V
Zero Drift	15ppm/°C of FSR
Analog Output	
Channels	2
Resolution	16-bit
Accuracy	\pm 6 LSB
Output Range	-5 V ~ 5 V , -10 V ~ 10 V, 0 ~ 10 V, 0 ~ 5 V
Output Driving	+/- 5 mA
Slew Rate	8.33 V/ μ s
Output Impedance	0.1 max.
Operating Mode	Software

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in

Programmable I/O	
Channels	32
Digital Input	
Compatibility	5 V/TTL
Input Voltage	Logic 0: 0.8 V max. Logic 1: 2.0 V min.
Pull High/Pull Low	Yes
Response Speed	1.0 MHz (Typical)
Digital Output	
Compatibility	5 V/TTL
Output Voltage	Logic 0: 0.4 V (max.) Logic 1: 2.4 V (min.)
Output Capability	Sink: 40 mA Source: 20 mA
DO Read Back	Yes
Response Speed	1.0 MHz (Typical)
General	
Bus Type	3.3 V/5 V Universal PCI, 32-bit
Data Bus	16-bit
Card ID	Yes(4-bit)
I/O Connector	Female DB37 x 1 20-pin box header x 2
Dimensions (L x W x D)	170 mm x 150 mm x 22 mm
Power Consumption	1 A @ +5 V max.
Operating Temperature	0 ~ 60 °C
Storage Temperature	-20 ~ 70 °C
Humidity	5 ~ 85% RH, non-condensing

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in

