



GO-400 Multi-Function Data Collection Card

Googol Technology (HK) Limited

The GO-400 is a multifunction PC acquisition card that provides analog and digital inputs/outputs, high precision operation for quadrature incremental encoders, timer/counter for real-time operation and counting external events.

The GO-400 offers a compact solution for position and speed measurements on an IBM/AT-compatible PC. The evaluation of the incremental encoder signals and communication with PC are performed entirely by a FPGA chip. The acquisition card requires a 16-bit PC-slot.



Features

- High precision operations
- Extremely compact solution
- Compatible with IBM/AT PCs
- Companion board to GT/GE Series Motion Cards
- Flexible and powerful all-in-one multi-function board based on FPGA technology
- 4 channel incremental encoder interface for additional position monitoring
- 8 channel 12 bit analog inputs for data acquisition and process monitoring
- 4 channel 16 bit analog outputs for process controls
- 16 bit timer for flexible I/O control
- Optically isolated 8 digital inputs and 8 digital outputs.
- C++ function library provided

Applications

- Data collecting
- Automatic checking apparatus
- Medical treatment instruments

Specification

Encoder Interface inputs

- 4 channels of encoder input (with the max. frequency of 1MHz).
- A/B signals are quadrature signals. C signal is used to capture home point.
- 16-bit counter with a counting frequency of 4MHz.
- Single-end or differential signal input.

Analog Inputs

- Analog input: 8 channels
- Sampling frequency: 150 KHz.
- Conversion resolution: 12 bits.
- Program independently to select input range for each channel: $\pm 10V$, $\pm 5V$, 0-10V, 0-5V.

Analog Outputs

- Analog output: 4 channels.
- Output range: -10V - +10V.
- Output resolution: 16 bits.

Digital Inputs/Outputs

- Opto-isolated digital input: 8 channels.
- Opto-isolated digital output: 8 channels.

Programmable Timer

- 16-bit timer.
- Programmable clock source selecting.
- Generate independent PC interrupt request.

Hardware Watchdog

- The timing of hardware watchdog integrated on control board: 1.2 seconds.
- Reliable resetting pulse width: 250ms.

System Software

- Windows 98/2000/NT device driver program
- C/C++ function library and sample program in DOS.

Power Consumption

- $\pm 5V$, $I_{cc}=2A$; internal power supply provided by PC.
- $\pm 12V$, $I_{cc}=60mA$; internal power supply provided by PC.
- +24V or +12V, $I_{cc}=2A$, external power supply provided by user.

Requirement for Environment

- Operating temperature: 0 - 60°C
- Relative humidity: 5%- 90%, non-condensing.

Dimension

- 122mmx185mm

Accessories

- AC-C-L 50-pin flat cable (L: length)
- A-TCB-GO GO card terminal board
- A-BR-GO internal expansion board