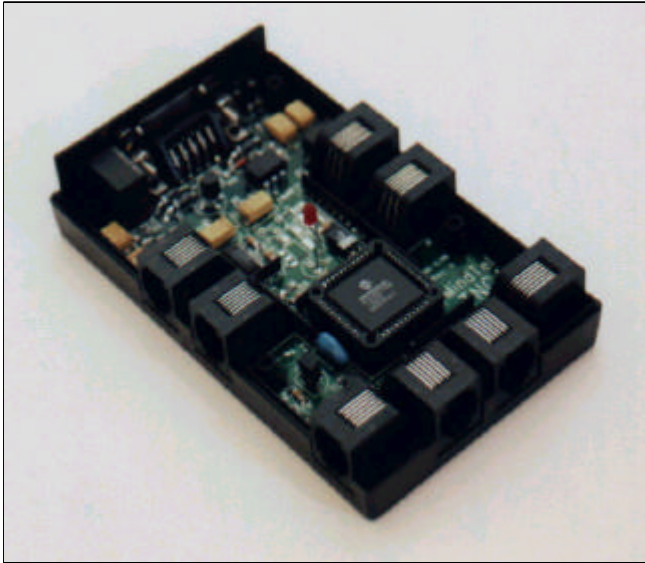


TNG-4



TNG-4 is a Microchip PIC microcontroller based data device. TNG-4 is interfaced to a PC via any ordinary serial port. TNG-4 comes in two flavors: streaming I/O and command mode I/O. In streaming mode data and configuration information is continuously exchanged between the host and TNG-4. In command mode, the host computer initiates data exchange by sending a command sequence to TNG-4.

Features:

- Each TNG-4 comes with a 6-foot 9-pin serial cable (MF) and an external AC-DC (wall wart) power supply (6 VDC @ 500mA).
- Bidirectional RS-232 communications at 19.2k baud. Faster or slower baud rates are possible (300-56k baud) by special request*.
- Compatible with any software that can initialize and communicate through an RS-232 serial connection (uses RX, TX, RTS, DTR, and ground). This includes NeatTools (downloadable freeware), LabView, C, C++, Visual Basic, etc. Example code is available.
- TNG-4 is electrically isolated (>500 V) from the attached host when powered via an external power source.
- The external power source can be any DC voltage source from 5.5 to 12 volts DC. TNG-4 has a built-in, self-resetting 0.5A fuse. A 6 VDC, 500 mA external supply is provided with TNG-4. TNG-4 can be modified to run at less than 5 volts by special request.
- TNG-4 can be powered directly from the serial port. Attached sensors and other devices cannot draw more than 6 mA, and TNG-4 is not electrically isolated when powered this way.

- Sensors and devices are attached to TNG-4 via 6-conductor modular connectors. Each I/O connector has four data pin, a power pin (+5 VDC), and a ground pin.
- 8 ADC channels, typically at 8-bits resolution (0-5V). Resolution can be increased to 10 or 12 bits by selecting an alternative* PIC microcontroller (44-pin PLCC package).
- Four 8-bit DAC channels (0-4.096V).
- 16 lines (Two 8-bit ports) of TTL-compatible digital I/O. Each line can be independently configured as an input or an output. Each digital I/O line is capable of sourcing or sinking up to 18 mA when TNG-4 is externally powered.
- One SPI-compatible I/O port. SPI is a simple clocked serial communications protocol. This port allows SPI data in and out, clock line, and a select line. Multiple SPI-based devices can be connected using an optional SPI-multiplexer device, or some creative wiring. By using an optional SPI to RS-232 converter circuit, an RS-232 serial device can be interfaced to TNG-4 though the SPI port.
- Test button and LED indicate that TNG-4 is powered and operating.

I/O Summary:

Analog Input Channels	8	8-bits (10/12-bits optional)	0-5V
Analog Output Channels	8	8-bits	0-4.096V
Digital I/O Channels	16	Individually configurable	TTL
SPI I/O	1	Fast Serial I/O	

* “special requests” , “alternative” microcontrollers, and “optional” incur additional charges.