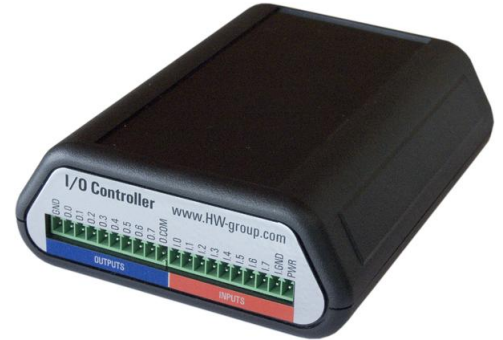**HW**group

I/O Controller

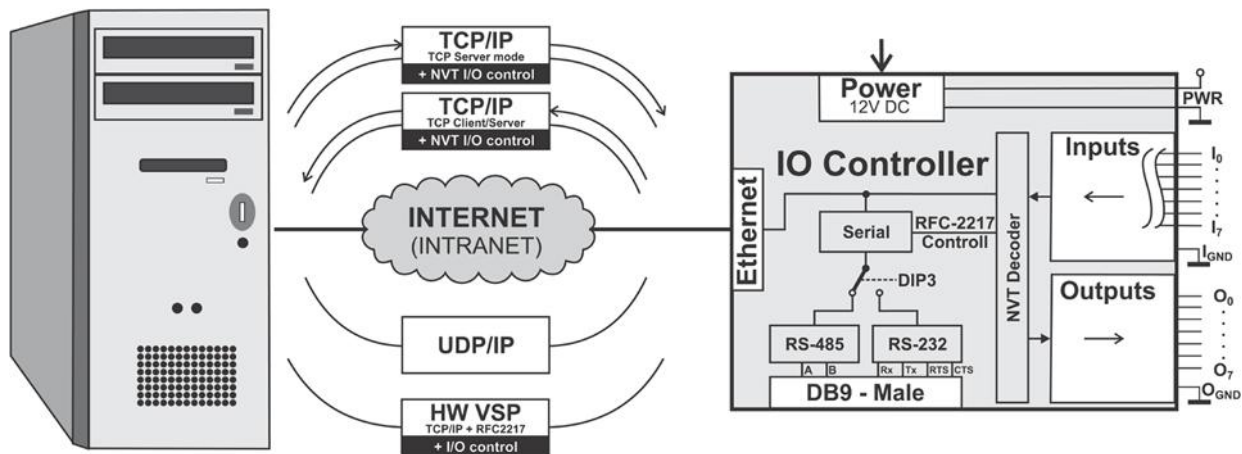## *RS-232, 8 bin. inputs, 8x bin. outputs - Ethernet converter*

I/O Controller allows remote control of binary inputs, outputs and a RS-232 serial line over Ethernet. Two boxes can be connected to each other thus prolonging the inputs, outputs and serial line over Ethernet.

A typical application controlles several relays and RS-232 line over Ethernet. An advanced application is for example a small "terminal" capable of connecting a bar code reader, LCD display, setup buttons and diagnostic LEDs

Application examples

- Card readers, RFID
- Mechanical contacts measuring
- Remote relay control
- Verifying input's state

- External inputs into network management systems
- UPS control
- Industrial machines
- Bar code readers

- Ethernet signalization
- CNC machines
- Security alarms
- Technology management

Basic features

- **1x RS-232** or **RS-485 serial port** accessible over Ethernet
- **Two devices** can extend ("tunnel") a serial port and I/Os over Ethernet
- **8 optocoupled binary inputs** 7 – 24V
- **8 binary outputs** (common ground Darlington transistors) up to 50V / 100 mA
- **Virtual Serial Port driver** for Windows – for example **COM 5** in your PC, easy and simple!
- **Many free software examples** for various programming languages - MS Visual Basic, Control Web, Delphi, Borland C++, JAVA, PHP and others...

Technical specifications

Binary Outputs	
+ Output type	8x Darlington transistors with common ground
+ Max. output Voltage	up to DC 50V
+ Max. output Current	up to 500 mA / 1 pin max. total Power = 1W / 1 pin or 2.25W all pins
+ Inductive loads suppression	8x integral suppression diodes for inductive loads - COMMON pin
+ Power up init value	Power up init value is on the output up to 1ms after power-up
+ SW control	Binary outputs are controlled over NVT protocol through TCP/IP

Binary Inputs	
+ Input type	Binary optocoupled
+ Log. 0 Input Voltage and Current	0 .. 3V
+ Log. 1 Input Voltage and Current	from 5V / 5mA to 20V / 25mA
+ Max. input Voltage and Current	up to 40V / 50 mA / 1 second
+ Isolation Voltage	max. 50V
+ Sampling period	10 ms
+ SW control	Binary inputs are controlled over NVT protocol through TCP/IP

Serial port RS-232	
+ Data bits	7 or 8 or 9
+ Stop bits, Parity	1 or 2, None / Odd / Even / Mark / Space parity
+ Baud rates	50..115.2 kBd – entire range, step = 50 Bd
+ Data flow control	XON/XOFF, CTS/RTS, None
+ Interface	1x DB9M (RxD,TxD,RTS,CTS,GND)
+ Used RS-232 signals	RxD,TxD,RTS,CTS, (DTR output – defined voltage level only)

Ethernet port	
+ Interface	RJ45 (10BASE-T) – 10 Mbit or 10/100 Mbit network compatible only!
+ Compatibility	Ethernet: Version 2.0/IEEE 802.3
+ Supported protocols	IP: ARP, TCP + NVT (Network Virtual Terminal)
+ TCP connection closing	Data - timeout 50s (with NVT - ACK/NOP support)

Environment	
+ Operating temperature	-10 to 60 °C / 10 to 85 %
+ Storage temperature / Humidity	-20 to 85 °C / 5 to 95 %

Physical parameters	
+ Power supply requirements	8-24V / Typical current consumption 200 mA DC

Functional parameters	
Device SETUP configuration options	- over any RS-232 terminal - over TCP/IP using any telnet terminal on the TCP/IP 99 port - basic network parameters via UDP using the Hercules SETUP utility
Diagnostic LEDs	- Power - Link & Activity