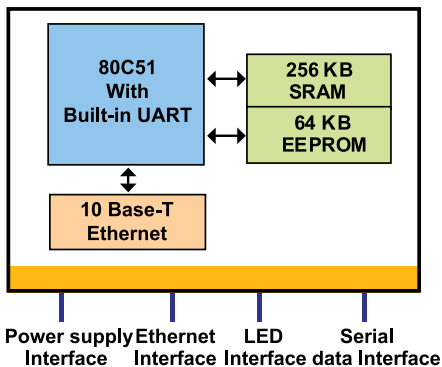# Embedded Device Server with built-in UART, NEMO10

Features

- Single-chip DIL type network enabler for on-board installation
- Compact size, 45mm x 45mm x 18.5mm
- Built-in UART for device interface, data transfer rate up to 115Kbps
- Supports 10Base-T Ethernet interface
- Supports ARP, IP/ICMP, TCP, Telnet, DHCP and PPPoE
- Management by Telnet or console port or HelloDevice Manager
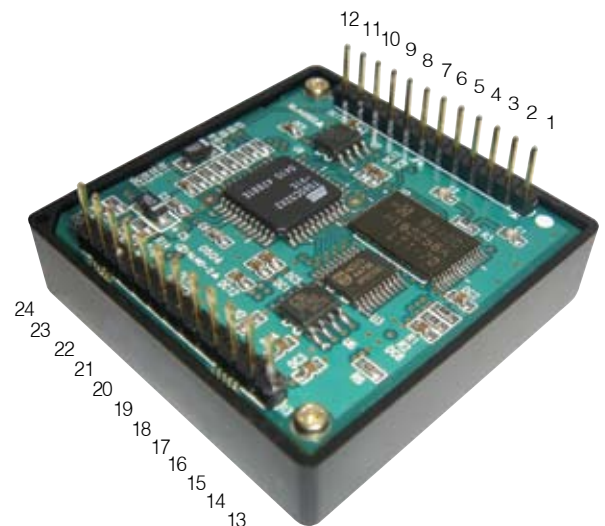- +5V input, 0.3W low power consumption

The NEMO10 is a cost-effective and easy-to-use single-chip network enabler module for system integrators and manufacturers who need a way to rapidly make their devices network-ready at a minimal transition cost. The NEMO10 is designed for integration into user devices by on-board installation. On one end, the NEMO10 is connected to the device via built-in UART interface. On the other end, it is connected to the Ethernet RJ45 connector on the board. Within the single-chip DIL package, the NEMO10 has its own TCP/IP-Ready microprocessor, UART for serial interface and built-in 10Base-T Ethernet controller that handle the entire communication between devices over Ethernet.

Bundled with Serial/IP, COM Port redirector from Tactical Software, the NEMO10 supports reliable serial-TCP communication with users' devices for existing users' serial applications. The Windows-based configuration software, HelloDevice Manager, simplifies initial installation and management.

Block diagram

- 80C51 With Built-in UART
- 256 KB SRAM
- 64 KB EEPROM
- 10 Base-T Ethernet

Power supply Interface | Ethernet Interface | LED Interface | Serial data Interface

Dimensions and Pin Assignment Information

Pin No.	Description	Pin No.	Description
1	GND	13	Vcc
2	Reset	14	Console/Data switch
3	LED (Ethernet Tx)	15	Serial DSR
4	LED (Ethernet Rx)	16	Serial CTS
5	LED (Ethernet Link/Collision)	17	Serial DTR
6	Ethernet Tx-	18	Serial RTS
7	Ethernet Tx+	19	Serial Rx
8	Ethernet Rx+	20	Serial Tx
9	Ethernet Rx-	21	Factory Reset switch
10	Vcc	22	GND
11	LED (Ready)	23	LED (Serial Tx)
12	LED (Ethernet Act)	24	LED (Serial Rx)

(45mm x 45mm x 18.5mm, 24 pin DIL package, 2.54 mm pitch)

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Embedded Device Server with built-in UART, NEMO10

Specifications

Hardware
- 8-bit microprocessor
- 32KB SRAM, 64KB EEPROM

External Interface pins
- 24-pin Dual In Line Interface for UART, Ethernet, LED and Power

Serial Interface
- Built-in UART
- Serial speeds 1200bps to 115Kbps
- Flow Control: Hardware RTS/CTS
- Signals: Rx, Tx, RTS, CTS, DTR, DSR, GND
- Parameters
  · Parity: None, Even, Odd
  · Data Bits: 7, 8
  · Stop Bits: 1, 2

Network Interfaces
- 10 Base-T Ethernet
- Supports static and dynamic IP address

Protocols
- ARP, IP/ICMP, TCP server and client, Telnet, DHCP client, PPPoE

Security
- User ID & Password

Management
- Telnet or HelloDevice™ Manager or Serial Console

Power
- 5V DC±10%, 60mA@5VDC

Environmental
- Operating temperature: 0˚C ~ 50˚C
- Storage temperature: -20˚C ~ 66˚C
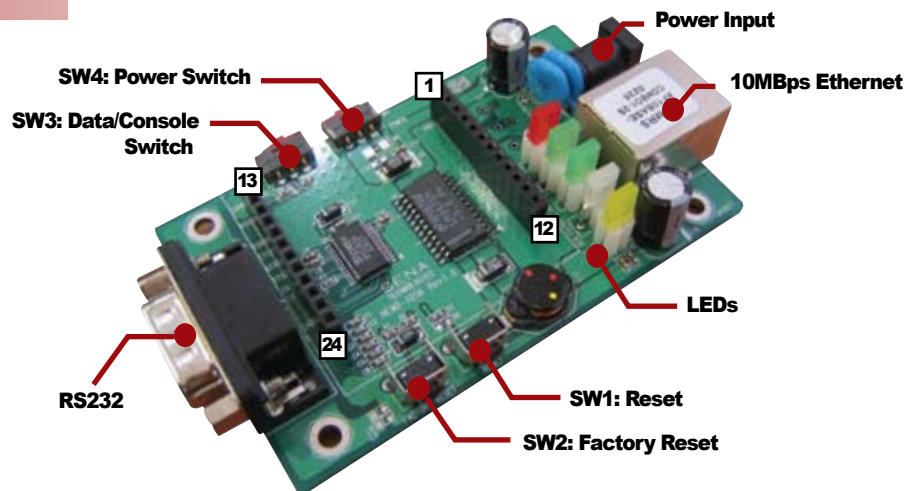- Humidity: 90% Non-condensing

Physical properties
- Dimension (L x W x H)
  45 x 45 x 18.5 (mm)
  1.8 x 1.8 x 0.7 (in.)
- Weight: 20g

Warranty
- 1-year limited warranty

NEMO10 Starter Kit

The NEMO10 Starter Kit includes the evaluation board with the sample circuitry for the NEMO10 interface,power,Ethernet, LED, switches for user device development.

Ordering Information

NEMO10   10Base-T serial device server module
NEMO10-SK   Starter kit for the NEMO10

Includes
- NEMO10 module
- Demo board
- External 110V or 230V power supply
- Serial console/data cable

**For more information,
please visit us at http://www.senaindustrial.com**

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