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APPLICATION NOTE No. 006		
Automation and inputs/outputs remote management of gas pumps		
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Description

1. Automation of gas pumps

The NetCube in embedded version is installed in petrol stations and additionally connected to Ethernet to a serial display, a credit card reader, a numeric keyboard and a serial printer. The serial display outputs instructions to the customer (choose type of fuel, etc.). The credit card reader and the serial keyboard are used for payment. The serial printer prints the receipts.

2. Digital input/output server (GPIO server)

The NetCube TCP server service waits for external connection. Once connected, the remote client sends commands like „GET INPUT“ or „SET OUTPUT“ in order to read or control all NetCube inputs/outputs. Furthermore the client can be notified by the NetCube of any change on a few selected inputs (without needing to poll continuously).

A central computer manages all equipment via network. The serial ports are made available via the virtual COM port driver or directly with a simple TCP socket.

Logical behaviour (pseudo-code)

```

Start server socket
Loop
  Wait for new connection
  While connection active
    Read order # timeout if no order received in 2 secs
    Check inputs status
    Notify input change if one input of the notification list has changed
    If timeout reached
      Restart loop
    End if
    If order = GET-INPUT
      Send input value
    Else if order = SET-OUTPUT
      Set output to desired value
    Else if order = ASK-NOTIFICATION
      Modify the notification list
    End if
  End while
End loop

```

Overview of the installation

