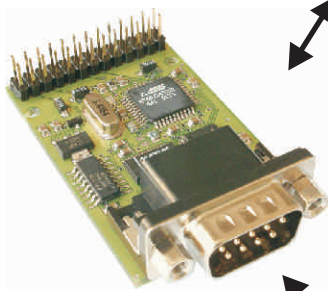# i-easy pro - PPP-TCP/IP Module

A typical i-easy GPRS application

application serial port
monitoring remote analogue and digital signals,
e.g. - reading remote meters
- monitoring mains power, temperature, ...
- alarm / service reporting
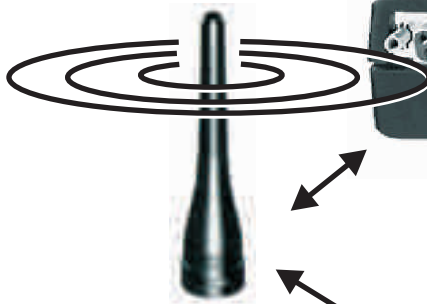- security applications

i-easy pro
representing the internet node,
handling all proprocessing and protocol issues

GPRS Modem (MC35)
sending the data via GPRS radio connection
to a remote server

Internet
or VPN

Server (FTP, e-mail, ...)

This might be handled by
a specialized ISP (internet service provider)
with data-size minimized server protocolls

Monitoring and Control

A typical i-easy GPRS application

Please note that GPRS (General Packet Radio Service) allows a permanent connection (like a flatrate) where only the data-volume is related to your costs, not the connection duration.

You use a tunneling protocol (PPP) to access the GPRS network. This is a closed network in itself with own radio to internet gateway servers.

While a GPRS connection estabilishes (PPP-dialup) the i-easy module receives its own IP address (mostly dynamically form the GPRS provider).
The GPRS provider, which is in general a GSM service company, handles the full traffic and provides gateways to the wire-based internet, where your server handles the data on TCP/IP base (for example FTP) in the internet / VPN .

The problem is reduced to the PPP and TCP/IP protocoll (sending IP packets), no additonal DHCP server is needed.

Proceedings for the i-easy pro ftp upload demonstration - dialup and network connections:

Init and Call process:

[i-easy pro cold start]
[MC35 cold start]

```
1.) MC35 <- i-easy (ATH,  AT+CPIN=pincode .... )
2.) MC35 <-> i-easy ( PPP dialup with password)
3.) i-easy gets IP Address and IP Gateway config from GPRS server
4.) i-easy sends an e-mail ("successfull GPRS dialin")
```

Endless Loop:
```
{
5.) i-easy waits for serial port traffic
6.)      gets a complete line (CR/LF or maximum of 255 Byte)
7.)      establishes an FTP server connection to a fixed IP
8.)      sends the serial port data to a text-file
}
```