M2M Control C350 Professional

The C350 is a invaluable powerful M2M Platform !

- wide and universal I/O interface
  digital and analog I/O, S0 … and I/O extension modules
- versatile interfaces and powerful protocols
  RS-232, RS-485, 1-wire, CAN or MODBUS
- open WAN connectivity
  TCP/IP, GPRS/EDGE
- powerful 32-Bit ARM7 processor platform
- comprehensive memory resources
  for data logging and application
- Powerful IEC 61131 programming environment
  comprehensive function library, multitasking, firmware upload over the air (FOTA)
- GPRS Gateway support on firmware level
  no need for an fixed IP address
- internal battery backup

M2M Control C350

8 Digital Output

8 Digital Input
(4 S0 imp Inputs)

SD-Card Reader
(2 GB)

4 DIP Switches

Power supply
12 ..36V

Status LED'S

LCD Grafic Display
144x32 px

Keypad with 8
pushbuttons

SIM Card Reader

X2:SER2 (RJ45)
Serial Port 2

X1:SER1
Serial Port 1

4 Analog Output
0..10V, 0..20mA

CAN Bus
Interface

1 – Wire Bus
Interface

2 x RS485
(MODBUS)

4 Analog Input
0..10V, 0..20mA

GSM / GPRS
Quad band

Full TCP/IP
Support

Datalogger &
internal Flash Drive

Internal Battery
with UPS - 1900mA

M2M Control C350 – I/O Controller

8 Digital Inputs (opt. S0)
Low: -5 ..3V High: 5V..40V

8 Digital Outputs
max 36Vdc 1,5A

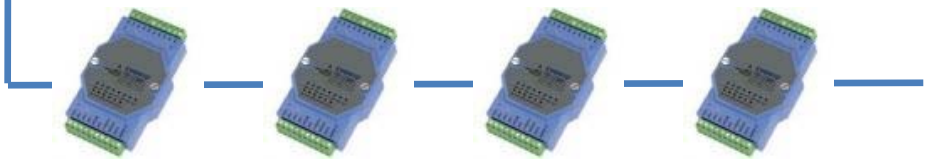
1–Wire Bus Interface

4 DIP Switches

4 Analog Inputs
0..10V, 0..20mA (10 Bit)

RS485 (MODBUS I/O)

4 Analog Outputs
0..10V, 0..20mA (10 Bit)



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M2M Control C350 - Communication

GSM / GPRS
Quad band

CSD Call | Voice Call (DTMF) | SMS PDU | TCP/IP - UDP

Email SMTP | FTP | Telnet | VSMS | RACP 2 | TCP - UDP

RS-232 | CAN 2.B Bus Interface | 1 – Wire Bus Interface | RS485 (MODBUS) | RS-232 (RJ45)

M2M Control C350 – Data Logging & Memory

M2M Control

Data-Logging & Parameter

SD-Card with FAT Filesystem
(2 GB)

512 KB Dataflash
for data logger and
parameters
(optional 8 MB)

512 KB internal Flashdrive
with FAT Filesystem

internal Battery (1900mA)
UPS and energy managment

Application

1 MB RAM
(opt. 2 MB)

2 MB Flash
for application and voice
(optional 8 MB)

8 KB FRAM
for fast memory access

M2M Control C350 - Programming Environment

- **IEC 61131-3 (structured Text)**

- standard programming language in automation and controls (-> PLC's)
  Pascal like; easy to learn; flexible and powerful

- **I**ntegrated **D**evelopment **E**nvironment (IDE)
  PC based tool; includes : project management, editor, compiler, debugger, simulator

- Syntax Highlighting Editor
  Code Wizard, extensive help functions

- Debugger & Simulator

- Multi-Tasking

- Voice messages

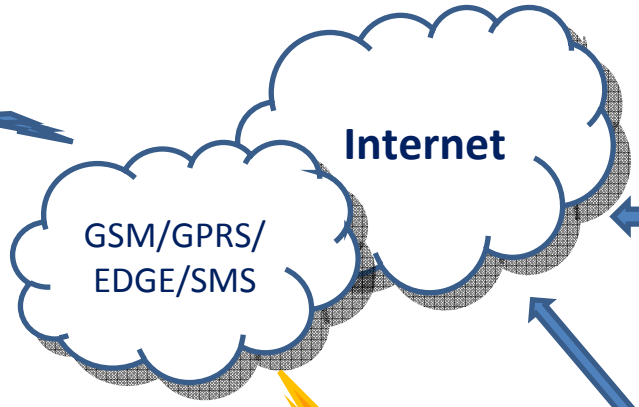
- Comprehensive Documentation and Examples

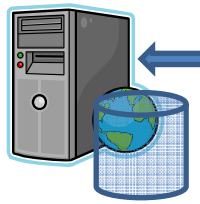
- Remote access and firmware download over the air (FOTA)

```
PROGRAM Send_SMS;
// The next code will only be executed once after the program starts
// Controls power to the GSM module

gsmPower(power := ON);

BEGIN
  // Code from this point until END will be executed repeatedly
  Connected := gsmConnected();

  IF input THEN
    edge_no := edge_no + 1;
    // Send an SMS message
    message_to_send:=strFormat(format:="\1 leading edges detected",
                        v1:=edge_no);
    gsmSendSMS(phonenumber:="+49 1234 5678",
            message:=message_to_send);
  END_IF;
END;

END_PROGRAM;
```

M2M Networking

M2M Control

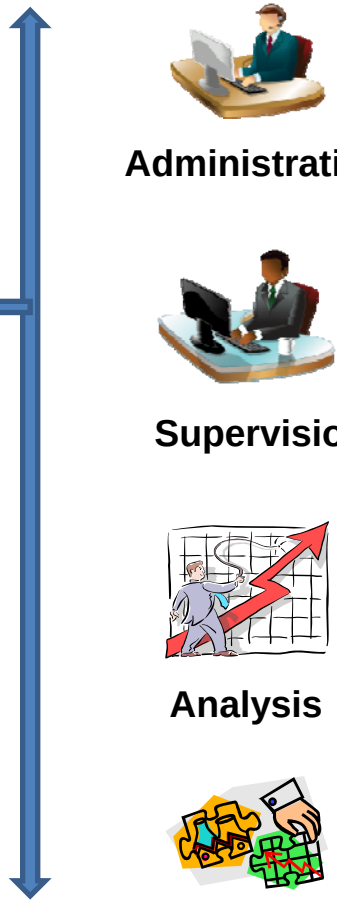




Data Mining

Maintenance

Alarming



Administration

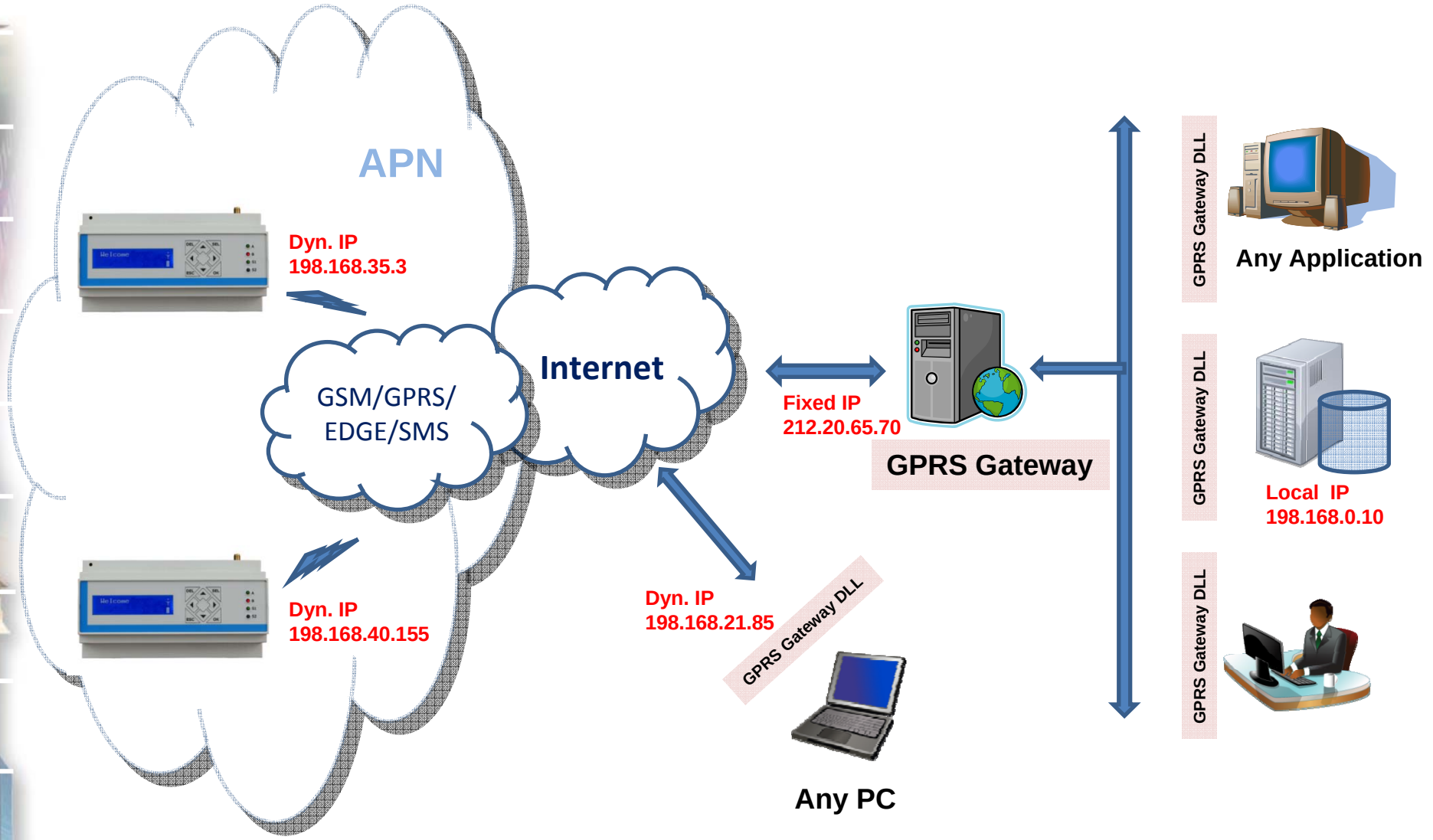
Supervision

Analysis

Reporting

M2M GPRS Gateway

M2M Control



M2M Control C350 - Accessories

- **MODBUS I/O Moules**
  divers I/O interfaces; fully transparent to the application; excellent value

- **VGA Camera**
  taking color pictures in standard JPEG format

- **1-Wire Temperature Sensor**
  excellent value

- **1-Wire ID Button Reader**
  Identification; Access Control

- **Antennas**