

M2M SQL Connector - a Turnkey Solution



Acquiring data from the field level to a SQL database



M2M Data Management



5 Steps:

1. Data Acquisition – Measurements

sensors, meters, ...

analog, digital, serial, bus

2. Data Processing

data conditioning, computing, calculations ...

IEC 61131-3

3. Data Logging

local & real time storage ...

flash, FRAM, SD-Card

4. Transmission

secure data transmission ...

GSM / GPRS / TCP/IP

5. Storage

central data storage ...

SQL Database

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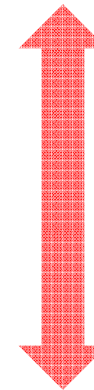
secure data transmission ...

GSM / GPRS / TCP/IP

5. Storage

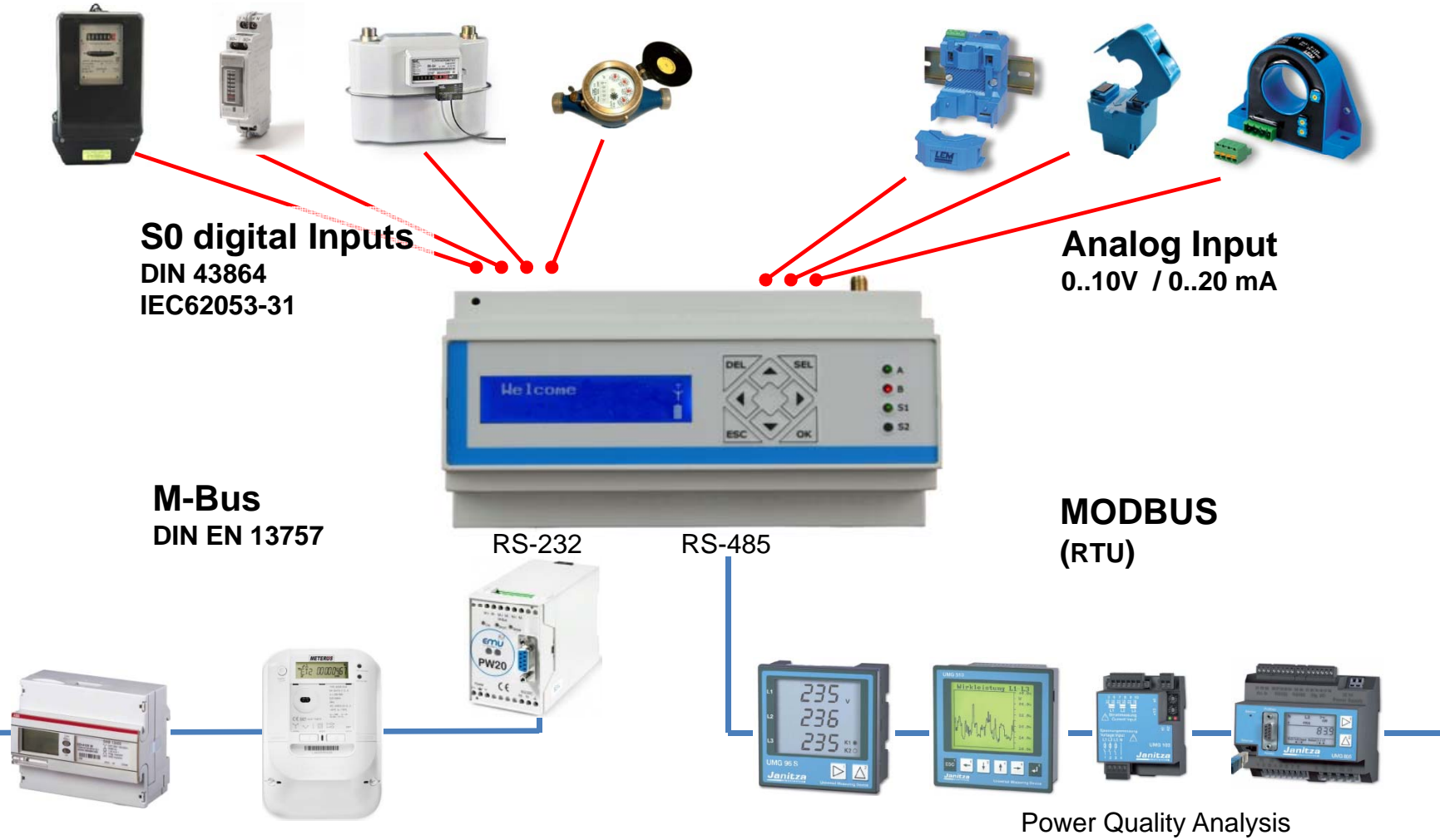
central data storage ...

SQL Connector

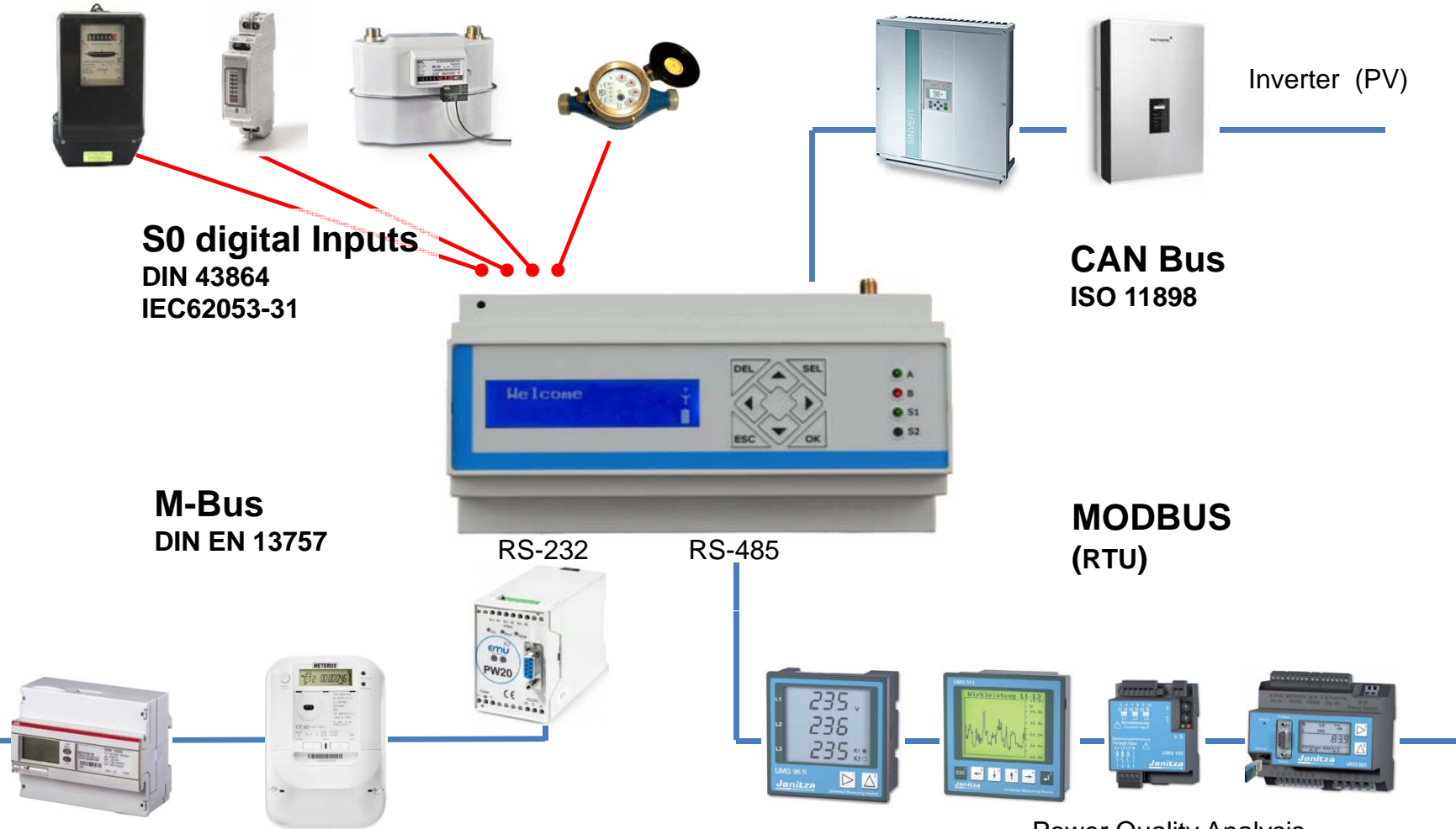


SQL Database

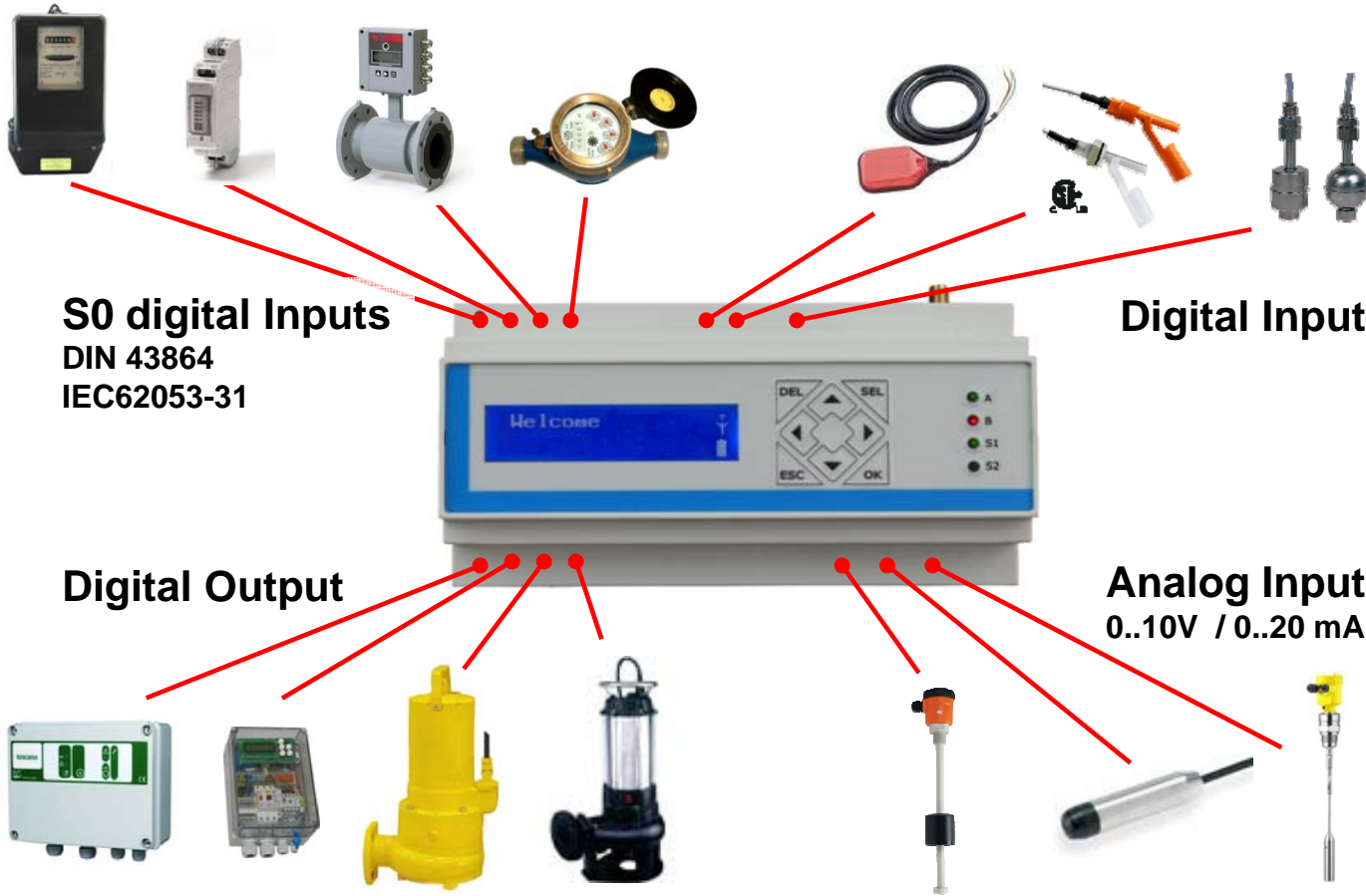
Energy-Data-Acquisition



Energy-Data-Acquisition



Pump Monitoring & Control



M2M Data Management



Data Acquisition



Data Logging



Transmission



Storage



S0 Input, M-Bus, MODBUS,
CAN, analog Input

512 KB / 8MB Dataflash
internal Datalogger

512 KB / 8MB int. Flashdrive
with FAT Filesystem

SD-Card 2 GB
FAT Filesystem, CSV Files

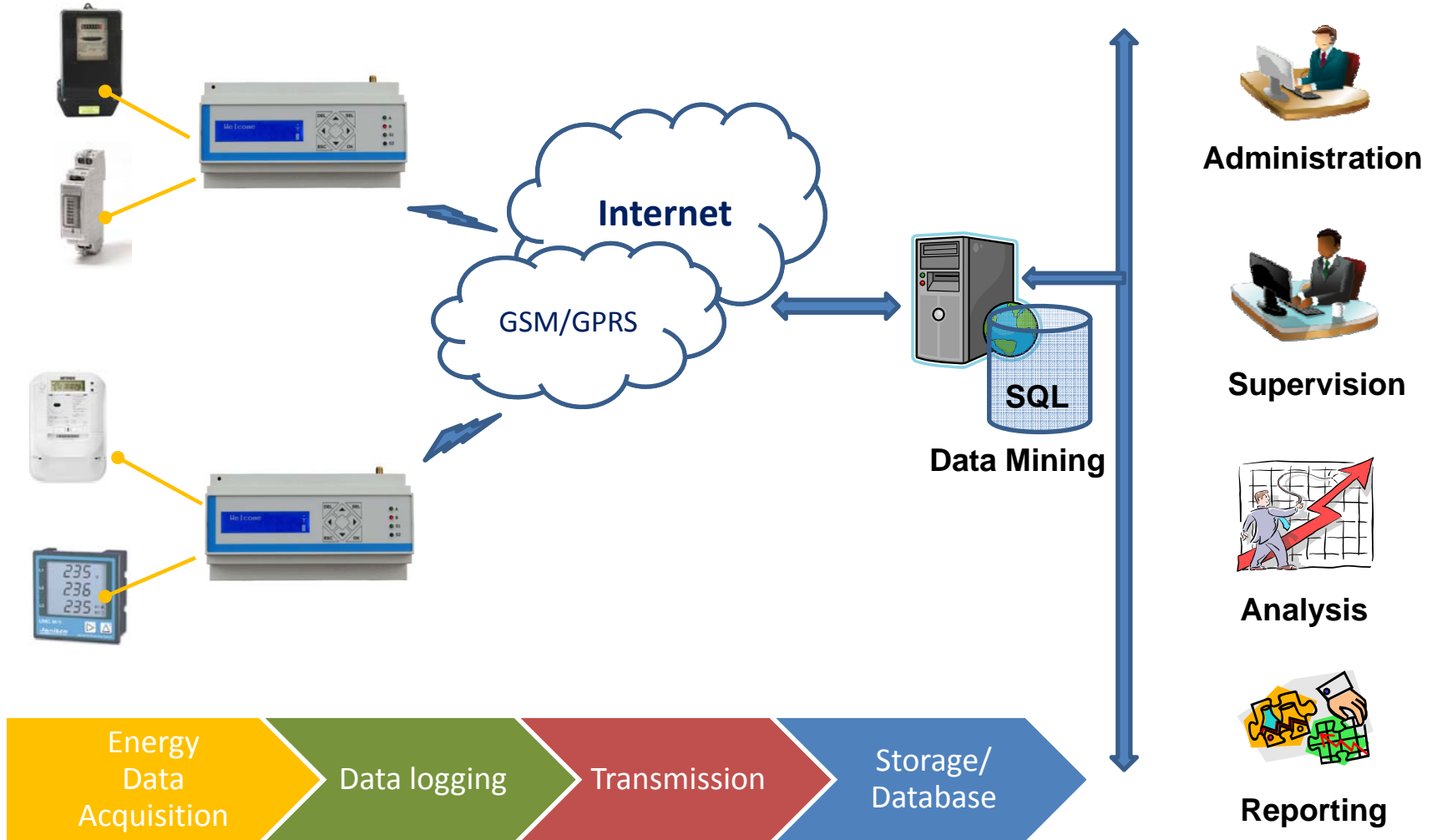
GSM / GPRS

Email SMTP	FTP	VSMS	TCP/IP UDP
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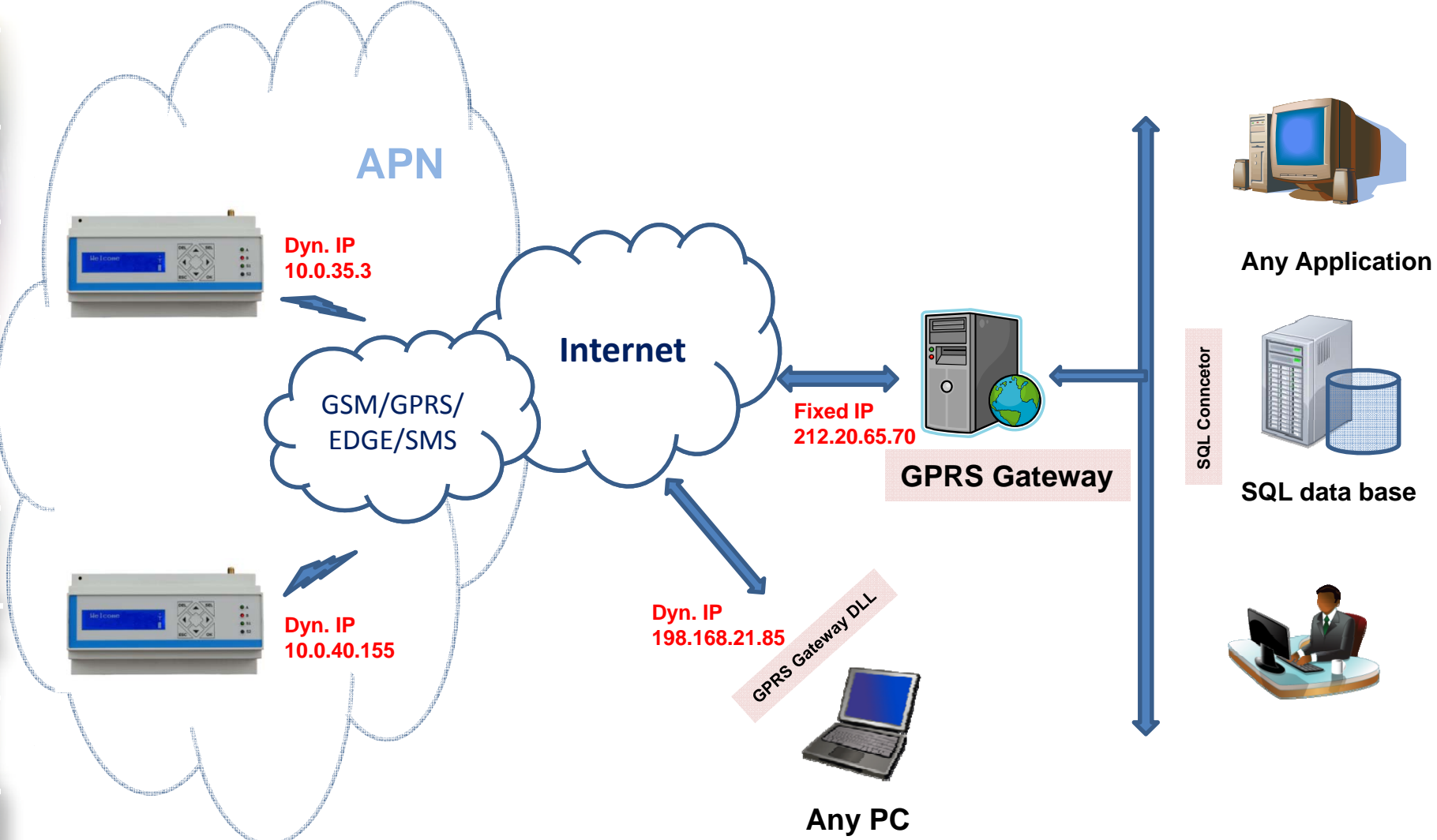
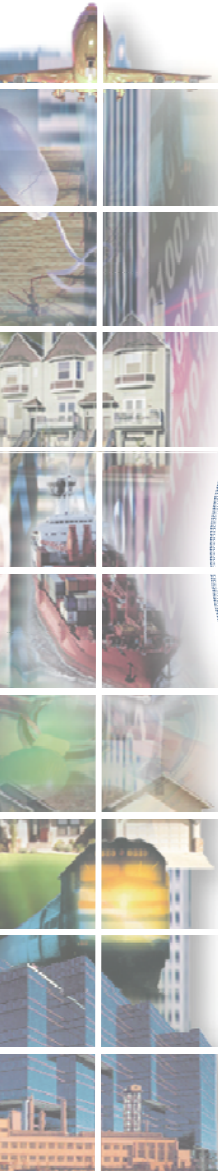
SQL Database

M2M Data Management

M2M Control



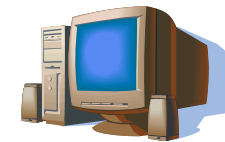
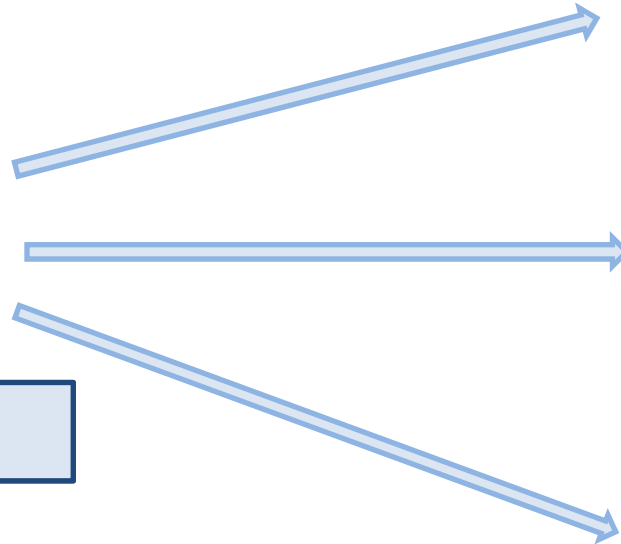
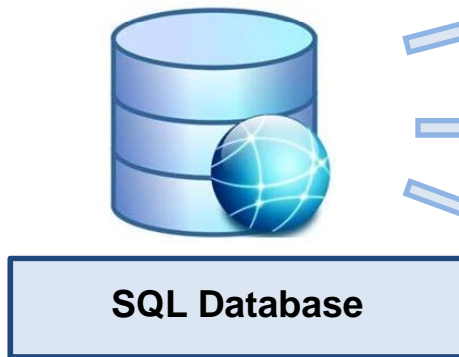
M2M GPRS Gateway



Backend Applications



Your business



Any Application



Reporting / SQL Tools
DreamReport, Crystal Reports ...



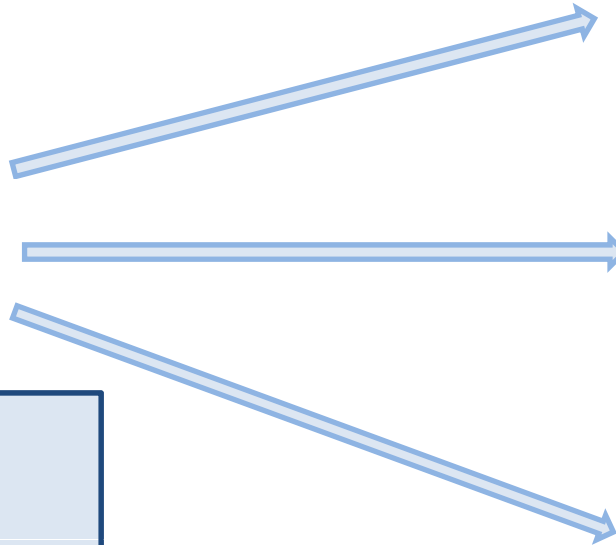
Web - Portal

Business Intelligence Tools

M2M Control



SQL Database
CSV Files
XML



Web-Portal

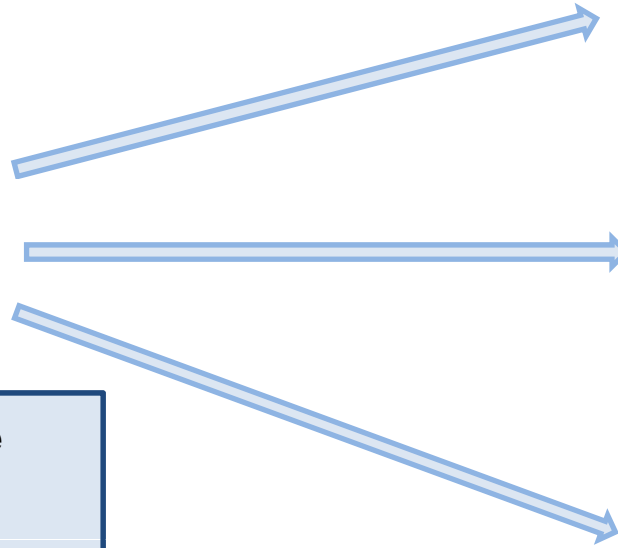
M2M Control



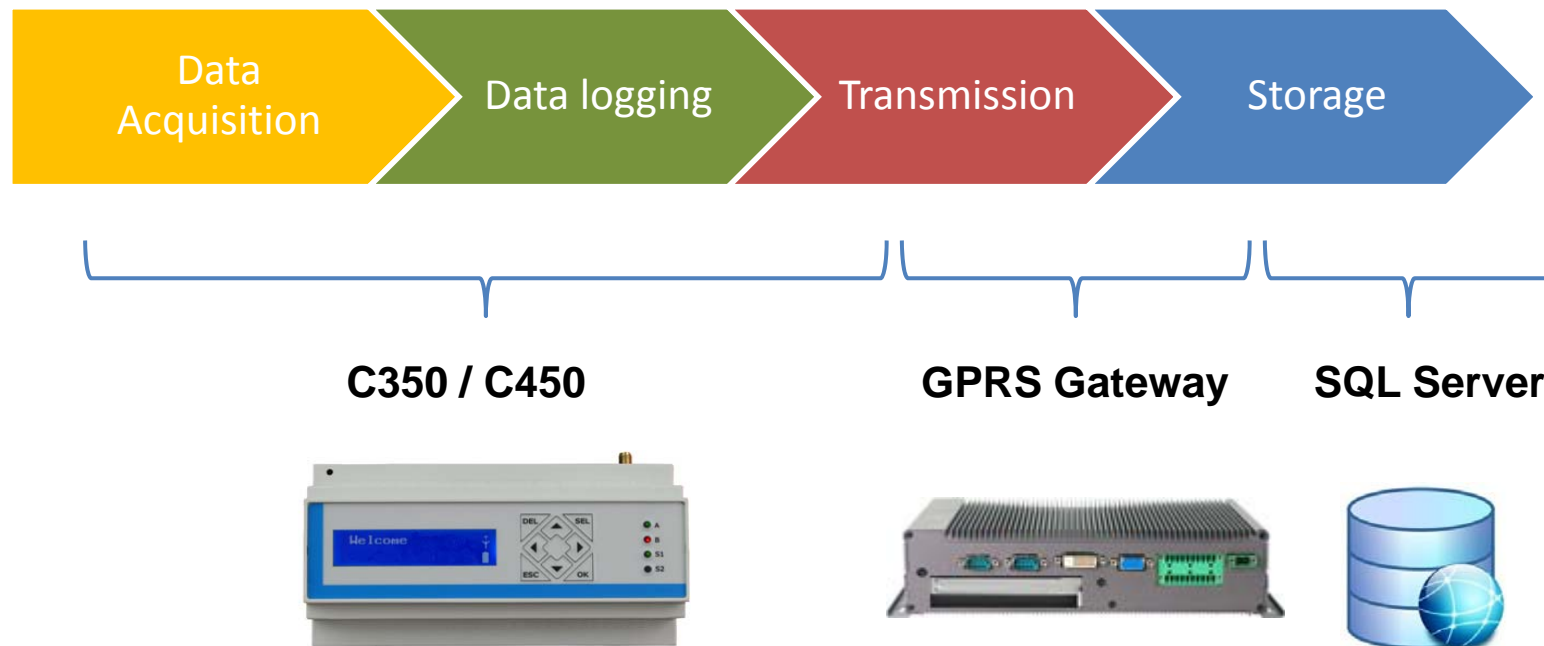
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Abteilung 2	Abteilung 2	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
Abteilung 3	Abteilung 3	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
Abteilung 4	Abteilung 4	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
Abteilung 5	Abteilung 5	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
Abteilung 6	Abteilung 6	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
Abteilung 7	Abteilung 7	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
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Abteilung 9	Abteilung 9	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	
Abteilung 10	Abteilung 10	18.12.2009 10:15:10	193.10.2010 10:15:10	Dalvik-Intercom	Störung	



SQL Database
CSV Files
XML



Data-Acquisition - Solution



Suited Modules



C350



- Display
- SD-Card
- CAN Bus
- Battery 1900 mAh

C310



- price optimized model
- Battery 700 mAh

C450



- IP67 Housing
- MicroSD-Card
- Battery 1900 mAh
- 24V und 230V Power Supply

Data-Acquisition

Summery

- M2M Control modules offer manifold interfaces to acquire energy data
50 Inputs, M-Bus, MODBUS, RS-485, CAN, analog inputs
- M2M Control modules have powerful data logging facilities
internal data logger, internal flash file system, SD-Card with FAT file system (up to 2 GB)
- M2M Control modules are power fail safe
internal battery with charger, UPS functionality, power management
- M2M Control modules offer a secure GSM / GPRS based communication
TCP/IP, encryption, autentication, dynamic and fixed IP addresses
 - multiple services to transmit energy data
SMS, Email FTP, XML, SQL
 - **writing data directly to a hosted based SQL data bases**
MySQL, MS SQL
- M2M Control modules providing a powerful data processing by
an IEC 6113-31 based programming environment
comprehensive function library, multitasking, firmware upload over the air (FOTA)



