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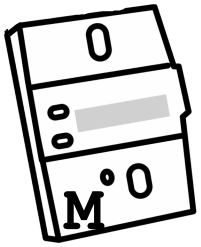
Connecting Devices

PSTN2GPRS Converter Presentation for Wireless Carriers

BridgeD130

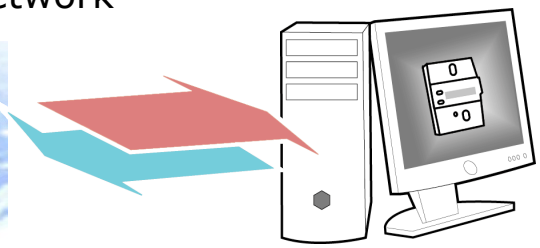
Scenario

Legacy Device with Integrated Modem



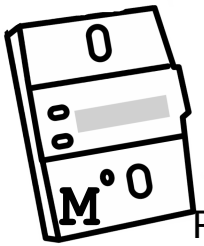
RJ11 Cable

Analog PSTN Network



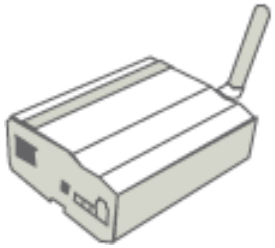
Central Server

Legacy Device with Integrated Modem

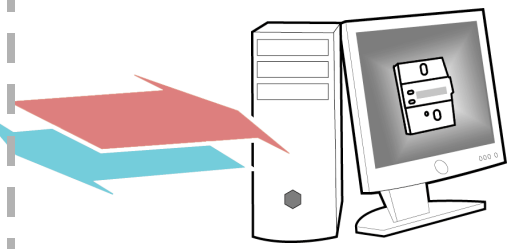


RJ11 Cable

BridgeD130



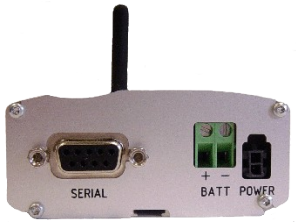
GSM/GPRS Network



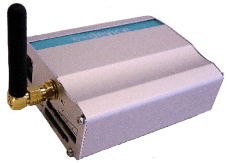
Central Server

Description

- Autonomous Terminal (Box) offering the following interfaces
  - RJ11 : PSTN emulation, FXS, POTS
  - SMA : GSM/GPRS antenna
  - SIM Card Holder
  - DB9 : serial port for configuration
  - LEDs, power supply



- Several hardware formats adapted to different environments
  - Commercial : metal casing
  - Industrial : DIN-rail casing
  - Outdoor : IP65 water-resistant package



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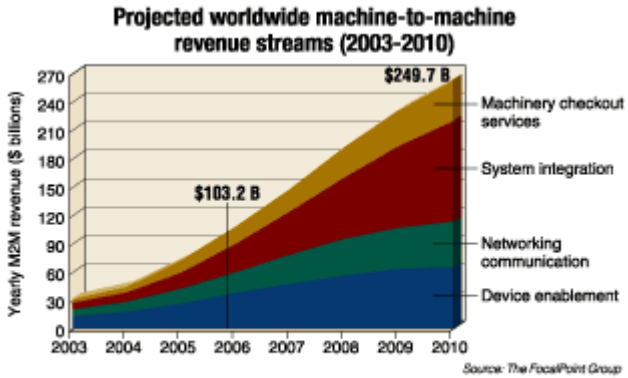
Market

- Machine-to-Machine, M2M
- Devices already connected through analog modem
  - Metering, Industrial Control
  - Office equipment, Home automation
  - Alarm, Monitoring
  - Mobile Construction Site, Mobile Office
  - Set-Top Box, POS, Telemedicine…



Some analysts say the machine-to-machine market is expected to balloon to $250 billion by 2010.

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Customer's Needs

- Reduce the telecom cost for both devices and central server
- Add mobility capabilities to fixed devices
- Ease the installation process (cables, PBXs, prefix…)
- Solve billing problems when the device uses an already existing phone line
- Prolong devices lifetime despite new networks constraints (analog modem not guaranteed on VoIP, VoDSL)
- Get rid of proprietary software with expensive maintenance contract
- Unify the architecture to support heterogeneous fleet of devices (wired/wireless, transparent/IP)
- Cover areas where PSTN is not affordable

Customer's Benefits

- Lower Telecom Billing
  - Eliminate the analog phone line subscription cost for the devices
  - Eliminate several analog phone line subscription on the central server
  - Benefit from flexible GPRS data rates, volume discount
- Simplify the central server architecture, save exploitation cost
  - No more modems rack
  - Flexibility with Internet link : ramping-up through bandwidth change, backup, redundancy…
  - Standard TCP/IP tools and software for easier management / evolution
- Extends the lifetime of existing devices
- Extends the communication capabilities of the devices
  - Mobility
  - Coverage
  - Plug&Play (no wires)

Wireless Carrier's Benefits

- Replacing phone line subscriptions by wireless subscription for devices: migrating a whole market share to wireless
- No competitive product, unique packaged solution (converter + network + server module)
- Short sales cycle
  - The ROI can be analysed quickly by the end-user
  - Smooth integration within existing architecture
- Quick evaluation and installation process
  - No changes required on the devices
  - No changes required on the central server
  - Compatibility of eligible devices can be assessed through a simple modem call of the equipment to eDevice test number
- Strong added value branding in the B2B sector

Target

- The product targets two typical customer configuration :
  - *Transparent Modem* : the device directly calls a modem on the central server to transfer data

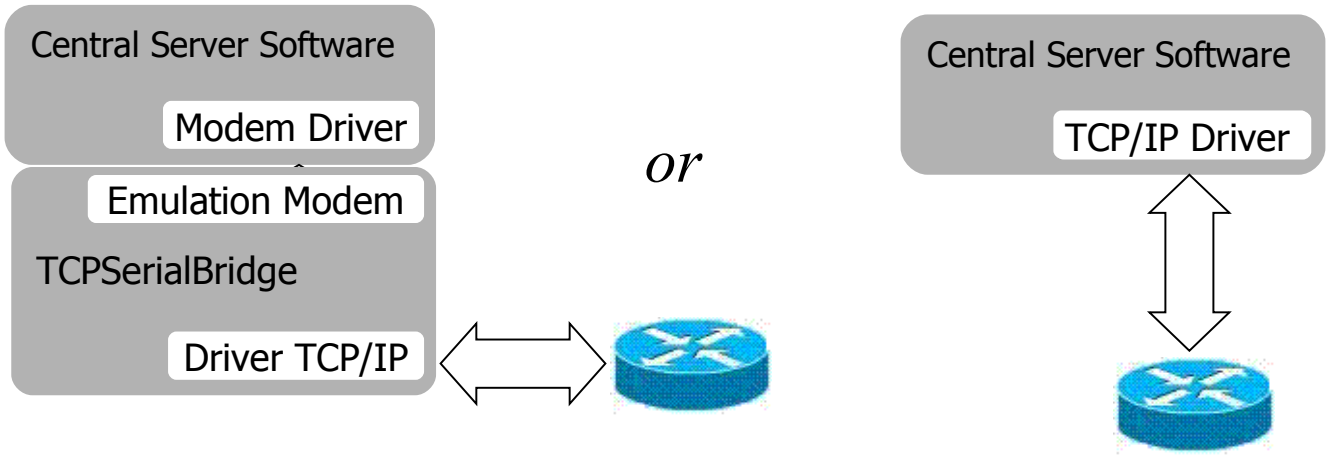
  - *ISP Modem* : the device connects to a standard Internet Service Provider to transfer data through TCP/IP to the central server (hosted on the Internet)

Processing

- The BridgeD130 offers 3 operating modes :
  - *Transparent Modem* : the BridgeD130 extracts data (analog demodulation) and sends them to a TCP tunnel to the central server
  - *ISP Modem* : the BridgeD130 acts as an ISP and attributes an IP address to the device. All the TCP/IP frames issued by the device are sent over the GPRS network
  - *GSM* Gateway : all the PSTN calls to/from the device are changed into GSM Data calls
- In all the cases, the BridgeD130 emulates the PSTN network by generating rings, dial tone, power (Foreign eXchange Subscriber interface)

Central Server Impact

- For the *ISP Modem* configurations, no changes are required on the central server
- For the *Transparent Modem* configurations, the central server must be adapted :
  - For central server software running on Windows OS, the customer simply installs the eDevice TCPSerialBridge software
  - Alternatively the customer modifies the central server communication layer by adding a TCP/IP connector (Winsock-like) instead of the modem driver



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Thank You for Your Attention

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