ECOTEL® multichannel

GSM / CDMA / 3G gateways for corporations and service providers

Reliable, cost-effective connectivity between fixed and mobile radio networks

The ECOTEL® VTM family of gateways is designed for reliable, cost-effective routing between GSM, CDMA, 3G, VoIP, ISDN and the analog fixed network. VTM gateways are optimized for use by large corporations and service providers with a high volume of mobile radio traffic. VTM gateways offer up to 32 GSM or CDMA channels, 30 VoIP channels and 8 PRI interfaces (E1/T1). For bigger applications, you can cascade multiple VTM gateways.
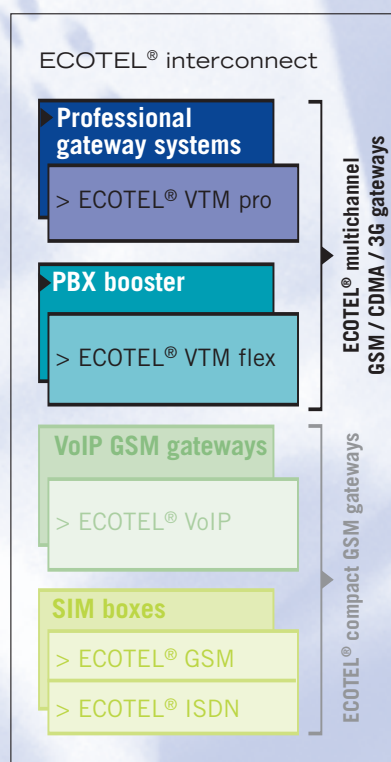
ECOTEL® VTM pro has been designed as a multichannel gateway. The gateway is very useful for cost-effective routing of huge amounts of calls into mobile radio networks.

ECOTEL® VTM flex helps companies to achieve more cost-effective connections between fixed and mobile networks. At the same time, you can use ECOTEL® VTM flex to add new functions to existing telephone systems.

The **ECOTEL® VTM 3G** extension module lets you use ECOTEL® VTM pro and VTM flex for 3G applications.

The **ECOTEL® SIM Card Server** (SCS) allows centralized management of SIM cards for multiple ECOTEL® VTM pro, ECOTEL® VoIP and ECOTEL® ISDN2-2x gateways.

The **ECOTEL® SIM Management Center** (SMC) schedules local SIM cards and/or SIM cards stored in the SCS.

ECOTEL® interconnect

Professional gateway systems
> ECOTEL® VTM pro

PBX booster
> ECOTEL® VTM flex

ECOTEL® multichannel GSM / CDMA / 3G gateways

VoIP GSM gateways
> ECOTEL® VoIP

SIM boxes
> ECOTEL® GSM
> ECOTEL® ISDN

ECOTEL® compact GSM gateways

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Reduce charges, gain functions

Least cost routing (LCR)

Complete mobile integration

PBX booster functionality

Email / SMS bridge

GSM FAX printer option

Backup solution for Internet access via GPRS/3G

ECOTEL® VTM flex for corporate applications

ECOTEL® VTM flex allows corporations to realize effective mobile least cost routing (LCR) into GSM, 3G and VoIP networks. This means the gateway will automatically route outgoing calls into the GSM network via an installed SIM card based on cost. You can install a total of 256 SIM cards and use 32 channels simultaneously. This technique will typically decrease telephone costs for connections between the fixed network and the mobile radio network by 30 to 70 percent. Further savings can be realized with incoming calls from mobile networks. Additionally there is excellent potential for savings in mobile radio costs related to international calls since ECOTEL® VTM flex can route these calls through VoIP tunnels.

The gateway also offers additional flex functions. For example, ECOTEL® VTM flex can connect mobile phones to existing PBXs as virtual extensions and add new features such as computer telephony integration (CTI), interactive voice response (IVR), mailboxes, voice logging and conference calls. Each of the flex functions is activated by purchasing a separate license which means that you pay only for the extra features you need. There is no need to spend a lot of money to upgrade or replace your existing PBX.

Selected flex functions:

- Computer telephony integration (CTI)
- Interactive voice response (IVR)
- Mailboxes
- Voice logging
- Black and whitelists
- Subscriber groups
- Conference calls
- SMS / Email bridge

ECOTEL® VTM flex is also available as a RAID system (RAID = Redundant Array of Independent Disks) with a redundant power supply and an additional hard drive.

Extension for 3G: ECOTEL® VTM 3G

Our VTM gateways are the first 3G gateways on the market: The ECOTEL® VTM G3 extension module can be used with all VTM gateways. Mixed operation of 3G and GSM channels is possible.

Least Cost Routing on a large scale

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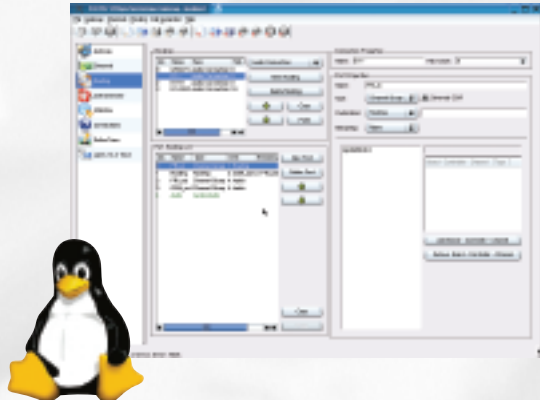
Integration into a service provider network

Integration via VoIP

Least cost routing

Last mile connections / wireless local loop (WLL)

Business continuity

Linux-based

Script-enabled

ECOTEL® VTM pro - the next generation multichannel gateway*

ECOTEL® VTM pro allows domestic and international long-distance network operators, local network operators and prepaid card operators to cost-effectively route mobile radio calls on a large scale. The gateway supports various mobile radio networks. Service providers with an IP backbone can use ECOTEL® VTM pro in conjunction with a VoIP gateway. With its optimized SS7 signaling, ECOTEL® VTM pro meets professional standards.

Besides saving money through optimum exploitation of price differences, ECOTEL® VTM pro is also useful for implementing last-mile solutions. The gateway provides a fast, cost-effective connection between subscribers (ISDN and analog) and carrier networks.

Additionally carriers and organizations with high security requirements can use ECOTEL® VTM pro to create back-up solutions for business continuity during landline failures. ECOTEL® VTM pro is connected directly in front of the telephone system or the switch. In case the landline fails, all of the communication such as telephone calls, faxes, Internet and email can be transported via GSM, 3G and GPRS.

ECOTEL® VTM pro is based on Linux which makes it easy to implement extensions, additional applications and customer-specific adaptations.

ECOTEL® SIM Card Server (SCS) and ECOTEL® SIM Management Center (SMC)

With ECOTEL® SCS, you no longer have to operate SIM cards locally in ECOTEL® VTM pro, ECOTEL® VoIP or ECOTEL® ISDN2-2x. You can now install and use the cards at a central site. All gateways can access the SIM cards via the IP network and assign them to the different GSM channels. This assignment can be static or dynamic depending on a certain time schedule. Changing prepaid cards in ECOTEL® VTM SCS and other maintenance work can be performed from a central site. Excellent theft prevention is

ensured. Using the SIM card server, basically any ECOTEL® VTM pro, ECOTEL® VoIP or ECOTEL® ISDN2-2x that is connected can use each SIM card in the server via all of the GSM channels. The SIM cards stored in the SCS or a local gateway are scheduled by the ECOTEL® SIM Management Center.

*When using mobile radio gateways for carrier applications (termination), you are solely responsible for compliance with all applicable country-specific laws and regulations.

Always the right solution:
ECOTEL® multichannel

TECHNICAL SPECIFICATIONS

Feature	VTM flex	VTM pro
Applications	Corporate networks	Corporate networks, service provider networks, business continuity
Special options	mailbox, IVR, conferencing, groups, queues, whitelist, blacklist	flexible routing options, data capable, SIM Card Server interface, enhanced SIM switching options, functions expandable by user via scripts
PRI (E1/T1)	up to 6	up to 8
BRI (S0)	up to 20	
GSM	up to 32	up to 32
CDMA		up to 32
VoIP	up to 24	up to 30
GSM900/1800	●	●
GSM850/1900	●	●
GSM-R	●	●
3G	●	●
GSM Codecs	FR, HR, EFR, AMR	FR, HR, EFR, AMR
2 backup GSM channels	●	●
VoIP standard	H.323	H.323
VoIP Codecs	G.723.1, G.728, G.711	G.711, G.726, G.729, ...
Option Echo Compensation	●	
Height	4U	4U
SIM8	●	●
SIM32	●	●
SIM Emulation		
EDSS1	●	●
SS7		●
NI2		●
Remote Management via IP or ISDN	●	●
Missed Call List		●

ECOTEL® VTM 3G

Interfaces
PRI, BRI, VoIP, GSM, 3G

Expansion levels
- Modular expansion in steps of 4 x GSM channels or 8 x 3G channels
- Up to 32 GSM oder 3G channels, 3/4 x PRI and 1 x 24/30 VoIP channels
- Several chassis per site (cascadable via E1)

Specifications
Chassis: 19" Rack industrial PC
Dimensions: VTM 4U (555 x 440 x 177 mm) + 2U per 8 3G channels
Weight: VTM 20 kg + 8 kg per 8 3G channels

ECOTEL® SIM Card Server

ECOTEL® SCS Base Package
- Complete Package for 30 or 225 SIM cards
- including ECOTEL® SCS manager
- including 1 ECOTEL® SCS sub rack

ECOTEL® SCS sub rack
- Extension unit for 225 additional SIM cards
- For 15 ECOTEL® SCS SIM Array 15

ECOTEL® SCS SIM Array 15
- SIM card board for up to 15 SIM cards

ECOTEL® SCS emulation board
- PCMCIA card for SIM emulation

Maximum configuration
1 ECOTEL® SCS Base Package
4 additional ECOTEL® SCS Extension Units

ECOTEL® SIM Management Center

Consists of
- SIM Management Center software
- Industrial PC

Direct mode
- SMC controls local SIM cards

SCS mode
- SMC distributes SIM cards stored in the SCS
- SMC controls several SCS units

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