

ECOTEL[®] compact



GSM gateways with up to 8 GSM channels (VoIP, ISDN, analog)

Cost-effective connectivity between fixed networks, VoIP and mobile networks (GSM)

Companies are spending a lot of money on telephone charges. This is why VIERLING developed the ECOTEL[®] GSM gateways.

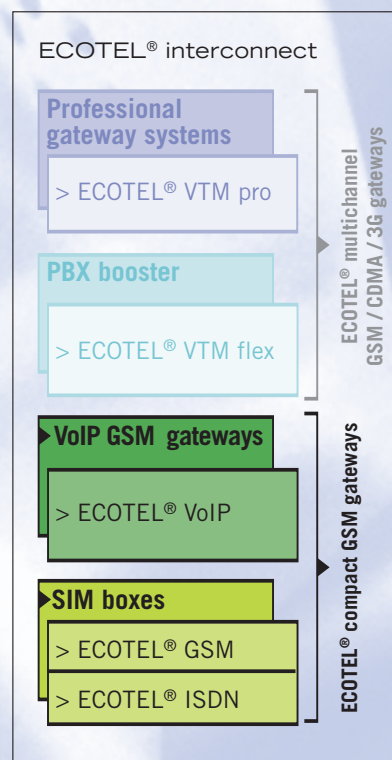
The ECOTEL[®] ISDN, ECOTEL[®] GSM and ECOTEL[®] VoIP gateways are designed specifically for use in small and medium-sized companies. The gateways allow reliable, cost-effective connectivity between GSM, VoIP, ISDN and the analog landline network.

Using these gateways, companies can reduce their phone expenses by up to 70 percent using least cost routing (LCR). This makes for fast amortization.

ECOTEL[®] VoIP - The VoIP GSM gateway for connectivity between IP, ISDN and GSM

ECOTEL[®] ISDN - The GSM gateway for digital communications (ISDN)

ECOTEL[®] GSM - The GSM gateway for analog connections





ISDN / analog

Voice, Data, Fax, SMS ...

For small and medium-sized companies

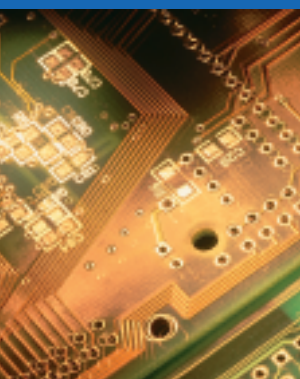
For companies with a large volume of mobile radio traffic

Connection of mobile sites (office containers, ships, RVs, emergency vehicles, etc.)

Last mile concept / Wireless local loop (WLL)

Business continuity

Internet via GSM/GPRS



ECOTEL® ISDN

The ECOTEL® ISDN gateway uses the installed SIM cards to set up cost-effective connections between ISDN and GSM networks (GSM 850/900/1800/1900/R). The use of least cost routing helps companies to reduce their phone costs by up to 70 percent.

You can operate ECOTEL® ISDN in a mobile or stationary environment and connect it to existing PBXs. The gateway can handle telephone calls as well as a variety of office applications including fax, networking, Internet and email. This offers a solid basis for connection of complete mobile offices as well as wireless local loop and business continuity applications.

ECOTEL® GSM

ECOTEL® GSM allows reliable, cost-effective connections between the analog land-line network and GSM networks (GSM 900/1800/1900). Least cost routing again helps to reduce telephone costs.

You can operate the gateway in a mobile or stationary environment. Possible applications range from situations where there is no fixed-network connection all the way through connection of complete PBXs. ECOTEL® GSM can be connected simultaneously to the outside lines and extensions of the PBX. In each of these cases, it will enable cost-effective interconnection of analog phones and fax machines with GSM mobile radio networks.

The connection on the extension side allows external callers to select the desired extension. If the caller does not dial an extension, he or she will be automatically connected to a default extension.



ECOTEL® ISDN2-1x with up to 4 GSM channels



ECOTEL® ISDN2-2x with up to 8 GSM channels and intelligent local SIM management

Possible connections:

- Connection to an internal extension of a PBX (TE)
- Connection to an outside line of a PBX (NT)
- Direct connection of several telephones (NT, additional power supply required)
- Use as a least cost router (TE/NT) in the outside line of a PBX

ECOTEL® GSM only:

- Direct connection of a fax machine, inclusive fax switch



ECOTEL® GSM

... endless possibilities with or without fixed network



VoIP

ECOTEL® VoIP

ECOTEL® VoIP connects IP, ISDN and GSM networks. Potential applications include classic least cost routing with connection to an existing IP or ISDN PBX all the way through implementation of mobile offices and distributed solutions. It is possible to configure multiple ECOTEL® VoIP via LAN by using a centralized software solution.

The number of GSM channels is scalable up to a total of eight. The GSM modules are compatible with all types of GSM networks (GSM 850/900/1800/1900/R). ECOTEL® VoIP is capable of routing up to eight concurrent IP calls to GSM.

The gateway can be operated in an IP network and on the ISDN basic rate interface (BRI). It uses the session initiation protocol (SIP) and can simultaneously manage up to eight VoIP channels in parallel. All commonly available codecs are supported.

Two BRI interfaces are provided for ISDN connections. These interfaces can be configured in NT or in TE mode. Using an S₀ (BRI) interface, it is possible to connect ECOTEL® VoIP to either an extension or an outside line of an ISDN PBX or directly to an ISDN BRI.

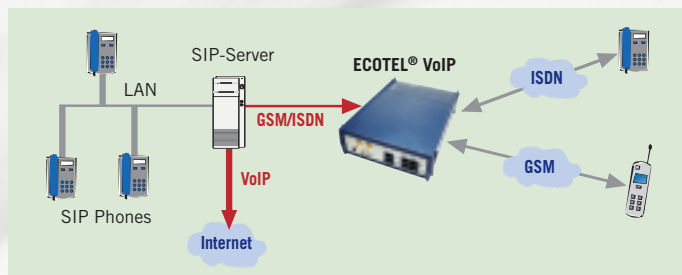
Interconnection between VoIP, ISDN and GSM

8 channels (VoIP and GSM each), 4 channels ISDN

Distributed applications

SIP-based

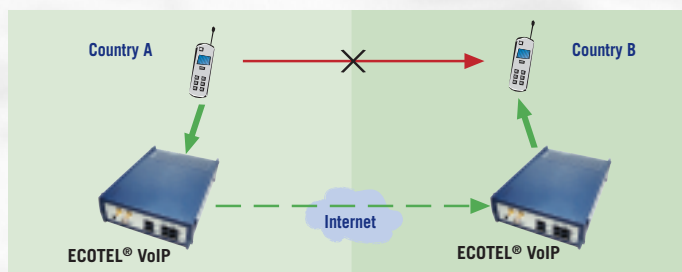
With intelligent SIM management and SIM Card Server integration



Corporate user (IP only)



ECOTEL® VoIP



International connections




Possible connections:

- Connection to an internal extension of a PBX (TE)
- Connection to an outside line of a PBX (NT)
- Direct connection of several telephones (NT, additional power supply required)
- Use as a least cost router (TE/NT) in the outside line of a PBX

Always the right solution: ECOTEL[®] compact



TECHNICAL SPECIFICATIONS

	ECOTEL [®] GSM	ECOTEL [®] ISDN	ECOTEL [®] VoIP
			
Connection as	internal extension and / or trunk line	BRI as TE or NT	SIP server within LAN or WAN
Features:			
GSM	900/1800/1900	850/900/1800/1900/R	850/900/1800/1900/R
Fixed network channels	1	2 x BRI	2 x BRI
GSM channels	1	1**, 2**, 4, 8*	2-8
Protocols: a/b / DSS1 / VoIP (optional)	●/-/-	-/●/-	-/●/●
Least Cost Routing (LCR)	●	●	●
Generation of charging information	●	●	●
IVR	●	●	●
Data and fax transmission: analog fax/PC-fax/PC-data	●/●/●	-/●/●	-/●/●
Configuration via Windows software	●	●	●
Management access / remote access for remote administration, configuration and download	V.24/GSM	(V.24**)/Ethernet/GSM	USB/Ethernet/GSM
Short Message Service (SMS) via PC (optional Software)	●	●	●
Callback functions (CLIP, SMS, ...)		●	●
Monitoring time quotas of mobile network channels	●	●	●
Monitoring and rerouting in case of mobile network failure		●	●
Evaluation and modification of the destination call number		●	●
Time dependend routing		●	●
SIM switching		●*	●
SIM Card Server connection		●*	●
MNP (Nquire Mobile Number Portability)		●	●
Alternative routing		●	●
Call Detail Records (CDR)		●	●
Remote maintenance, management and configuration		●	●
Integrated fault detection		●	●
IP connection		●	●
Easy system and antenna installation due to highly integrated system		●	●
Integrated antenna splitter (GSM channels: antenna)		1:4	1:4
VoIP protocol			SIP
Codecs			G.711 G.726 and G.727 G.729/Annex A G.723.1
Echo cancellation	●		G.168-2000
VAD (Voice Activity Detection)			G.729B for G.729 coders
CNG (Comfort Noise Generation)			G723.1A for G.723.1 coders
PCM Companding			A-law/μ-law

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*ECOTEL[®] ISDN2-2x only **ECOTEL[®] ISDN2-1x only Technical changes reserved 07/06-V-0