

ECOTEL®interconnect Model VTMpro

GSM/3G Gateway system for carrier-class applications

4your mobile
communication

- Integration into a carrier network by SS7 or VoIP
- Connection to a carrier network for dial-up applications
- Last mile connection via GSM/3G
- Least Cost Routing for termination of mobile calls
- Mobile backup solutions
- VPN connection of two corporate networks
- International roaming via powerful Least Cost Router
- GSM/3G connectivity for objects in motion (e.g. river cruise ships, trains)
- Text message to email conversion

The **VTMpro** system is part of the ECOTEL®interconnect product line. It allows to terminate calls and transmit SMS messages directly from fixed into mobile networks and vice versa.

Customers can take full advantage of the more favourable mobile to mobile rates. In comparison to common methods, phone costs from fixed to mobile and vice versa can be reduced by up to 70%.

Due to the advanced integration of all basic functions into one system, installation and

operating costs are remarkably low (e.g. comfortable change of the SIM cards by PCMCIA-SLOT-technology). The system also optimizes the utilization of capacity of the GSM/3G resources. Therefore it uses two redundant GSM/3G channels.

In any case VTMpro offers carrier class standard with optional SS7 signaling and additional network management.

Furthermore enterprises can use VTMpro as a multifunctional platform for several customizable applications.



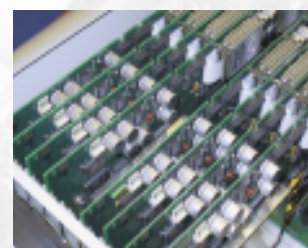
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Up to 32 GSM-channels in one 19" rack-mount industrial PC



TECHNICAL OVERVIEW

Interfaces/Supported Protocol	<p>PRI: Q.931, DSS1, NI, SS7-ISUP* (optional), E1/T1, TE/NT, CRC4/Double Frame</p> <p>BRI: Q.931, DSS1, TE/NT, Point-to-Point, Point-to-Multipoint (optional)</p> <p>VoIP: H.323 signaling; G.711, G.729 (optional); SIP* (option)</p> <p>GSM:</p> <ul style="list-style-type: none"> • Dual band (900/1800 MHz) • Triband (900/1800/1900 MHz or 850/1800/1900) • 1 antenna per 16 channels or 1 antenna per 32 channels • 2 SIM cards per GSM channel (optionally 4, 8 or SIM Card Server) <p>3G:</p> <ul style="list-style-type: none"> • Support of UMTS/WCDMA networks • 1 antenna per 16 channels • Each expansion has to be equipped with 8 Motorola A835 mobiles (the A835 is not included in the shipment)
Expansion Levels	<ul style="list-style-type: none"> • Modular expansion in steps of 4 x GSM channels or 8 x UMTS channels • Up to 32 x GSM or 3G channels, 4 x PRI, 4 x BRI, and 1 x IP interface per chassis • Several VT MultiChannel chassis per site (cascadable via PRI cables)
Signaling	<p>Alert tone detection: – Generation of ALERT/CALL PROGRESS (user free)</p> <p>Announcement recognition and programmable options: – Generation of PROGRESS/CALL PROGRESS (in-band) (default)</p> <p>– Generation of RELEASE with configurable cause value</p> <p>– Generation of CONNECT (when call is accepted)</p> <p>Busy signal recognition: – Generation of DISCONNECT/RELEASE</p>
Features	<ul style="list-style-type: none"> • Mobile channel groups with various terminal configuration strategies • Conversion of overlap sending → enblock sending • Generation of charging information • Call Detail Records (CDR) • Least-Cost-Routing (LCR) • Alternative routing • Monitoring of time quotas for each GSM channel • Monitoring and rerouting in case of GSM channel failure • Evaluation and alteration of destination number • Routing variations CLIP/CLIR • GSM statistic functions • Field strength measurement • Option for installation of 3G and GSM channels • SS7-ISUP* protocol (optional) • LINUX based gateway platform • Mail/SMS converter is implemented as script
Management	<p>One Access software for all interfaces:</p> <ul style="list-style-type: none"> • One configuration for all GSM/3G-channels • Remote management access via IP • Monitoring, management and configuration via remote maintenance • Remote management software available in Windows and LINUX version • Integrated trouble-shooting tools • Automatic fault alarm notification • Configuration and maintenance during operation
Specifications	<p>Chassis: 19" rack-mount industry PC</p> <p>Dimensions: 4 U (555 x 440 x 177 mm) for VTM + 2 U per 8 3G channels</p> <p>Weight: 20 kg for VTM + 8kg per 8 3G channels</p> <p>Humidity: 70% non condensing</p> <p>Temperature: 35 °C</p> <p>Power consumption: 100 W + 1 W per GSM channel + 2 W per UMTS channel</p> <p>Fuse: 16 A</p>



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