

Mobile Internet access for critical requirements

Mobile Internet access is not special anymore nowadays. In fact other criteria like safety, resistance to climatic conditions, operation temperature and mechanical robustness have become important.

The **alpha[®] route** family of the FMN communications GmbH fulfills all of these characteristics.

Through its modular construction the **alpha[®] route** can be adapted to almost all technical requirements. **alpha[®] route** is the universal solution for broadband supply and distribution in the outdoor area.

The fanless aluminium enclosure meets the safety class IP54 and has various mounting possibilities. The climatic environmental conditions comply with climate class 3k6 (-25°C till +55°C) of DIN EN 60721-3-3. Thus for many applications complex and cost-intensive air-conditioned placing can turn out smaller or be avoided entirely.



Central unit of the **alpha[®] route** is the Mobile Access Router (MAR3200) from Cisco. Here up to 4 Ethernet-Ports RJ-45 10/100 Mbps according specification IEEE 802.3 are available.

alpha[®] route can be adapted and extended individually for nearly every application with various packages specially developed by FMN communications GmbH.

Via the WLAN-Access-Point after standard 802.11g connections in a Wireless LAN 2,4 GHz are enabled.



Grimmelallee 4
99734 Nordhausen

Phone: + 49 (3631) 56-0
Fax: + 49 (3631) 56-3224

Email: info@fmn.de
Internet: www.fmn.de

PRESENTE-INTERNET

Editorial and responsible for the content:
Wolfgang Koslowsky.
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With help of the Multicarrier Modulation OFDM data rates up to 54 Mbit/s can be realized. The Access Point can be configured as Wireless Root Bridge, Wireless Non-Root Bridge or as Wireless Work Group Bridge. Other WLAN-Standards are possible on request.

The **alpha[®] route** can also be assembled with the UMTS modem **alpha[®] UMTS WTM x**.

alpha[®] UMTS WTM x is a HSPA capable module, which allows data rates up to 7,2 Mbit/s download and up to 2,0 Mbit/s upload. If the field strength of the UMTS network is not sufficient the modem changes automatically to the next lower standard.

More assembling possibilities of the **alpha[®] route** are an ADSL2+ modem, a VoIP-module or a Video- server-module.

alpha[®] route has the authorization according to EN 60950-1; EN 55022 and EN 55024 class B as well as the ElektroG.

Application area

alpha[®] route is being used amongst others by a supra-regional water provider for monitoring and telecontrol of the wide allocated and unmanned fountains and pump stations. The measured data and control information which is available in the local Ethernet data networks is being transmitted permanent to a central control room via the wired standard broadband connections on ADSL base. In case of perturbation of the ADSL connection the data is still accessible. As first fall-back a GSM/GPRS/EDGE/UMTS-modem is integrated in the **alpha[®] route**.

For the exceptional case that the ADSL connection and radio network fail at the same time, an analogue 56K-Modem is integrated for transmission of the minimum data via a simple telephone line (POTS).



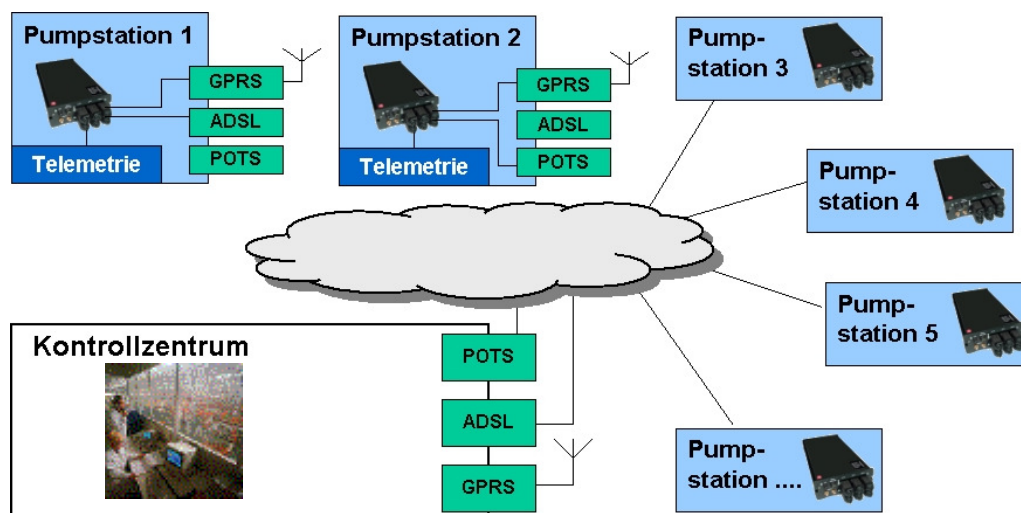
Grimmelallee 4
99734 Nordhausen

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Fax: + 49 (3631) 56-3224

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For applications where wired transmission routes are not available, the ADSL and 56k Modem do not apply.

The **alpha[®] route** only equipped with UMTS and WLAN is ideal for WLAN Internet access in travel busses, trains and public traffic vehicles.

Besides video data or service relevant vehicle data can be transmitted to a central control station from a camera, which is installed in the vehicle.

More application possibilities for the **alpha[®] route** are e.g. often in info- and telecommunication terminals situated in public places. To be able to use the telephone function via VoIP in these places, a special assembly - SIP/SITA - for connection of ISDN-Telephones can be integrated in the **alpha[®] route**. This assembly provides the telephone function for numbers, which are not available from the Internet and when the electricity network fails. The integrated WLAN-HotSpot in the **alpha[®] route** allows the use of these info- and telecommunication terminals as Public-HotSpots.

Press contact:

FMN communications GmbH
Holger Heilmann, Günter Bardischewski
Grimmelallee 4
99734 Nordhausen
Phone: +49 (36 31) 56-30 00
Fax: +49 (36 31) 56-32 24
Email: info@fmn.de
Internet: www.fmn.de