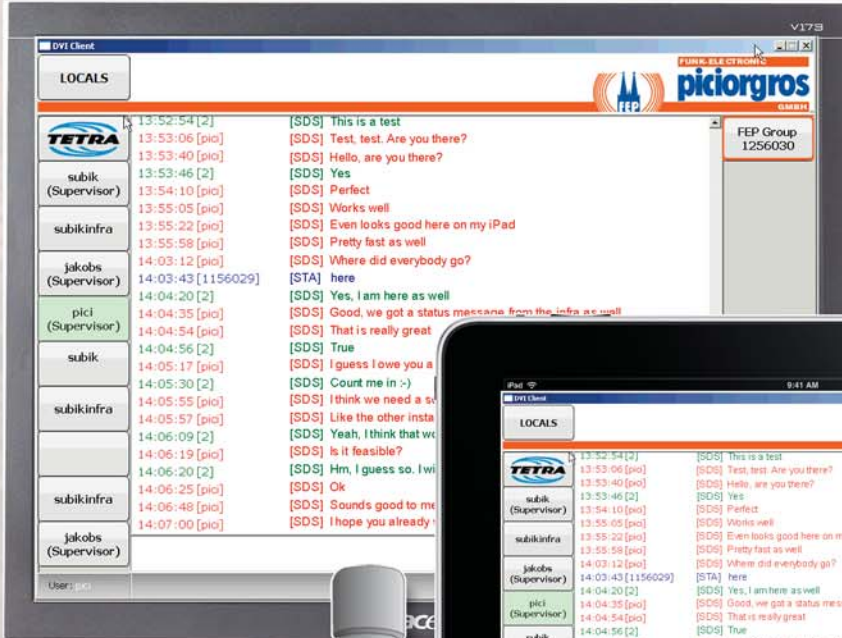




Smart Inter System Interface

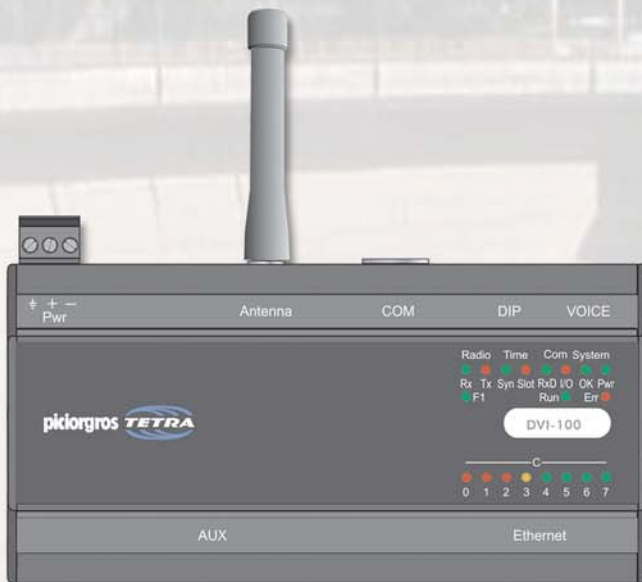
DVI-100



www.TetraModem.com

piciorgrors

Smart Inter System Interface



DVI-100 - The TETRA Voice Bridge (Inter-System-Interface)

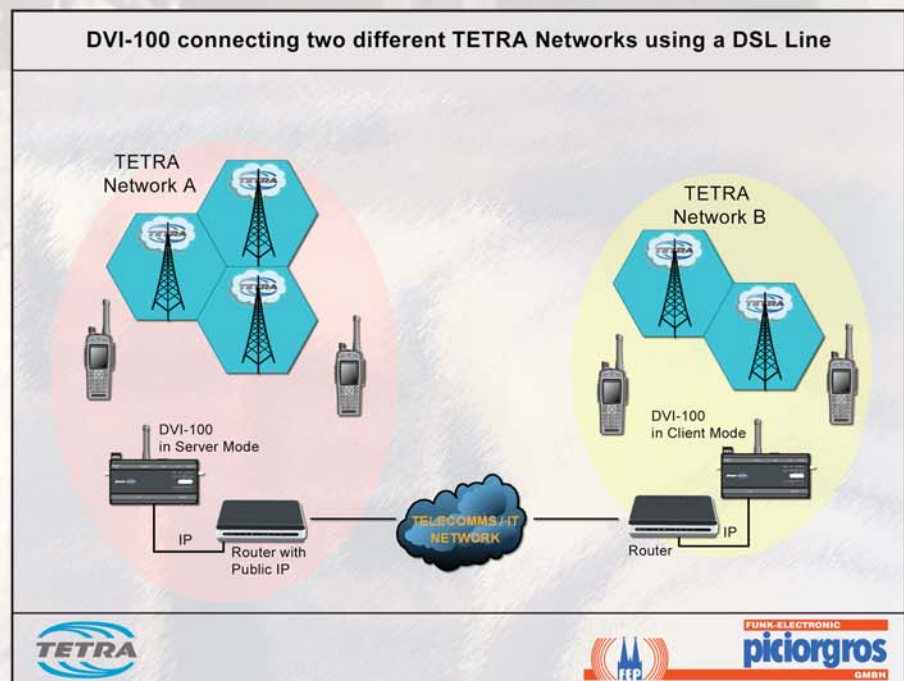
The DVI-100 is designed to interconnect different TETRA networks for voice communication, SDS and Status Messages, regardless of manufacturer, frequency band or geographical location. The device can be logged into any TETRA network in the same way as a TETRA hand terminal. Once registered to the network in DVI-Server mode, it receives the digital ACELP coded voice data of its talk group(s) and transmits it in IP packets to the remotely attached DVI-Clients, iPhone-Clients, iPad-Clients or PC-Clients. During the complete process the digital voice data is not recoded and remains original as TETRA ACELP code, and therefore there will be no loss or reduction of the excellent TETRA voice quality.

There are a number of different options how the DVI-100 can be operated: Back-to-Back using two DVI in two different networks, one DVI directly connected to a TETRA Base Station (SwMi), and in DMO-to-DMO or TMO-to-DMO mode as a TETRA MicroSPOT

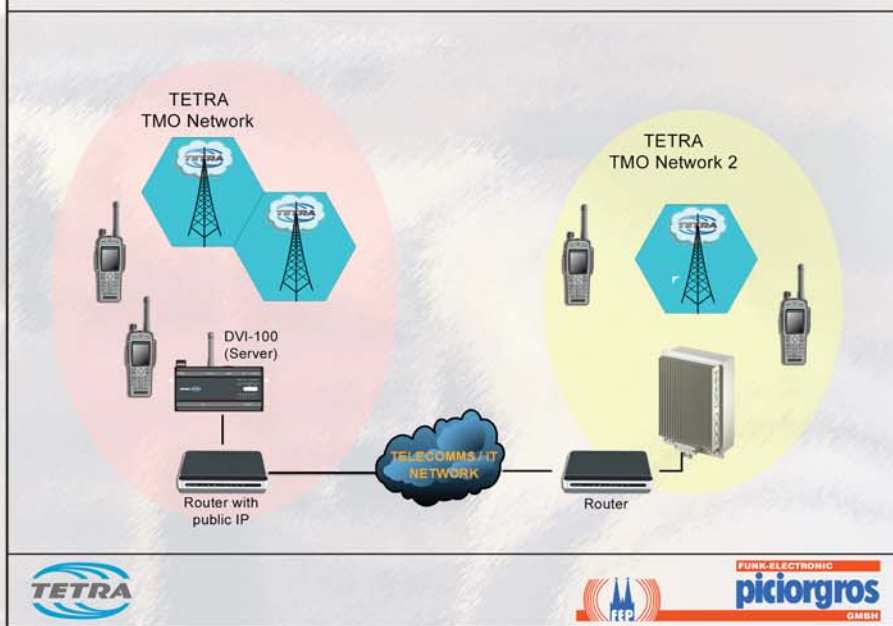
Back-to-Back Operation

In Back-to-Back operation, two DVI-100 (one in Server-Mode and one in Client-Mode) are connected directly by IP to each other. The IP link can be a simple IP-cable, a GSM network, Microwave, Satellite (tested with Thuraya Satellite link and the Thuraya IP Modem) or a router linking through the Internet. But the Back-to-Back operation is not limited to one DVI-Client only – up to ten Clients can be operated at the same time, meaning that 11 TETRA Networks can be connected to each other at the same time. Nevertheless, only one (group) call is possible at the same time.

The setup of the Back-to-Back Mode is done very quickly in just a few seconds, and group calls can be accomplished between the different networks without the need of any settings (except the DVI registration) on the TETRA SwMi.



DVI-100 connecting a TMO Network to a different Manufacturer BS



Direct connection to TETRA SwMi

When a fast deployable mobile TETRA Base Station is needed for special forces or to cover extreme situations, the DVI-100 is the ideal link to the main TETRA network. In this case the mobile SwMi can be linked for example with a Thuraya IP Satellite modem (or via GSM) to the main TETRA network. The Damm and ETELM TETRA infrastructures already provide the Open-PTX protocol and can directly act as DVI Clients, in that case no DVI-100 Client is needed.

PC, iPhone and iPad

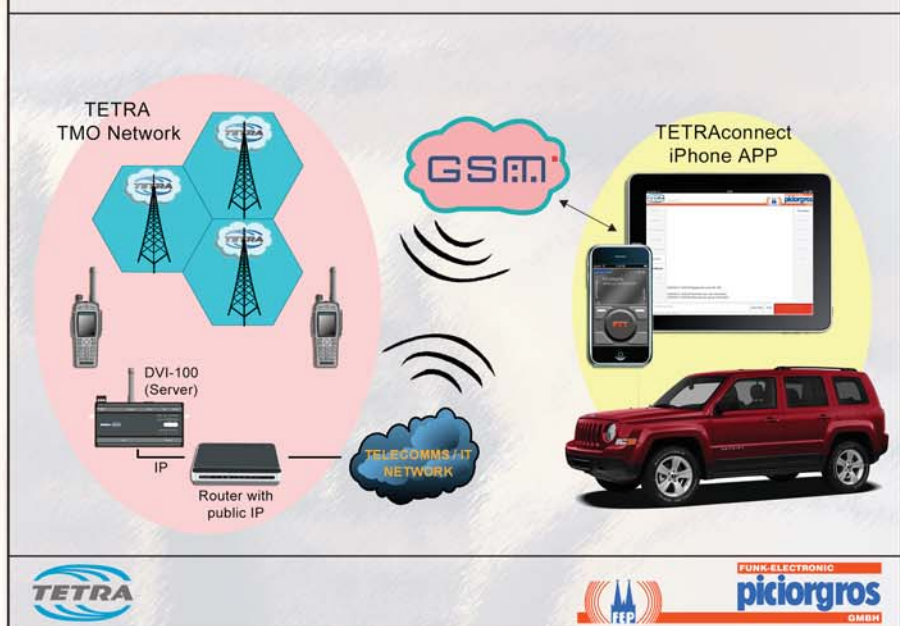
Clients

The DVI-100 Server can be linked to other DVI-100 Client devices, but also to a PC, iPhone or iPad (or as described above to a TETRA SwMi when the Open-PTX protocol is supported). In total up to ten different clients (even different client types) can be served at the same time. Incoming voice calls will be received by all clients at the same time. Also when speaking from one of the clients, all other clients will hear the voice call.

Easy Integration

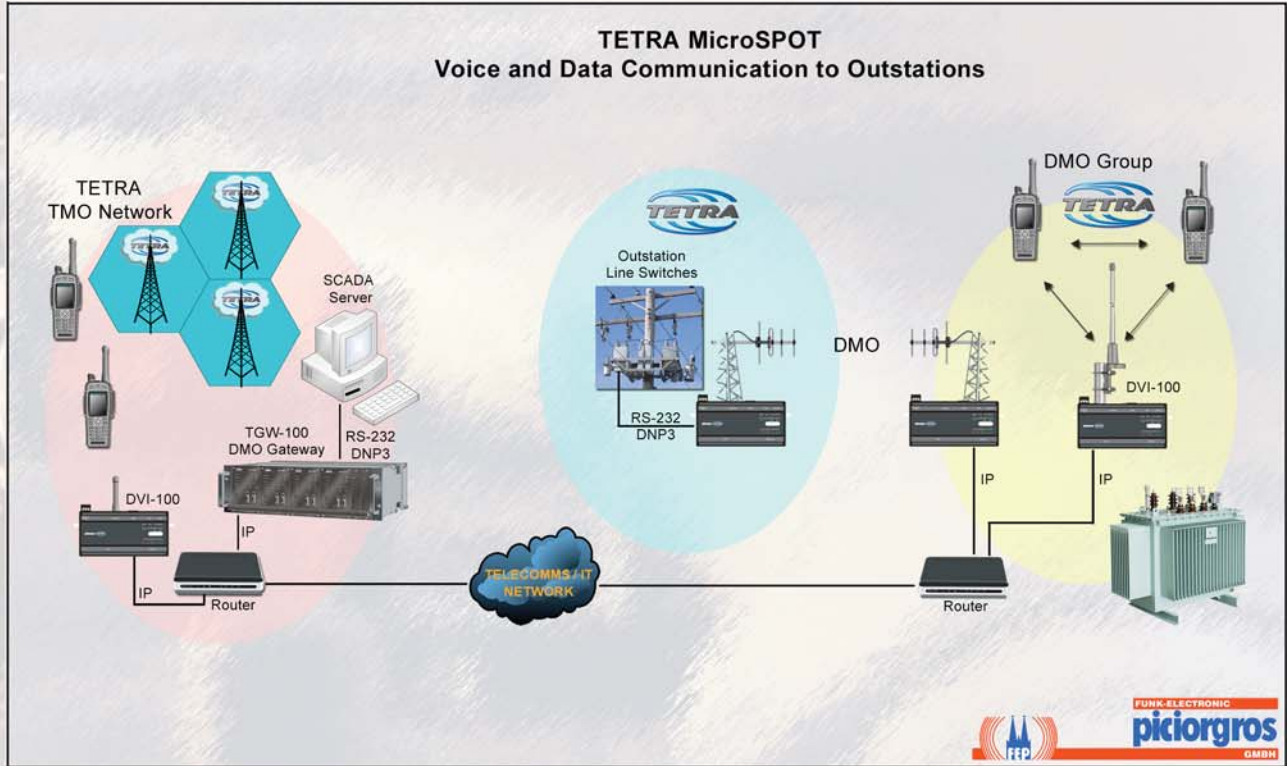
The DVI-100 Server is attached to a TETRA Network in the same way as a regular TETRA hand portable, and it can be a member of up to 25 talk groups. When it receives a voice call, rather than decoding the digitally coded ACELP data stream into analog audio and feeding it to the loudspeaker, it is sent as a digital (UDP) data stream to up to 10 DVI-100 Client devices

DVI-100 connecting TETRA via GSM to non TETRA-covered regions





TETRA MicroSPOT



DVI-100 configuration as TETRA MicroSPOT (DMO-Mode operation)

Sites like transformer stations, oil wells and vessels which are outside of a TETRA network and not reachable, can be linked to the network with a DVI-100 TETRA MicroSPOT operating in DMO-Mode. The link to the main network can be any telecomm IP connection or via Satellite IP (tested with Thuraya IP).

The DVI-100 operates on 300 and 400 MHz frequencies with 3 Watt RF power, and on 800 MHz with 1 Watt. When using an omni directional gain antenna on a tower, coverage of up to many km is possible.



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