



TetraFlex® iOS Client

The TetraFlex® iOS Client is another DAMM soft terminal, thereby completing the series of Android and Windows clients. All DAMM soft terminals are a fully integrated part of the TetraFlex® communication system.

The TetraFlex® iOS Client registers in the TetraFlex® system similar to other TETRA terminals with its own SSI and user number set up in the subscriber register with a profile associated and with defined group(s). The audio communication is based on a RTP protocol in G711 A-Law format.

The TetraFlex® iOS Client will be available from software version 7.74 onwards. The client communicates to all terminal types of the subscriber register including the new unified numbering (from software version 7.70 onwards), allowing call forwarding or simultaneous ringing of different devices.

The TetraFlex® iOS Client uses similar icons and features as already known from the DAMM dispatcher or the other soft terminals. Users may therefore already be used to functionality and operation. Updates to the TetraFlex® iOS Client can simply be downloaded via iTunes. A new available version is indicated in the App Store.*

Functions and features:

The TetraFlex® iOS Client supports the following modes of communication:

- Can make and receive group calls to and from TETRA radios, other soft terminals, DAMM Dispatchers and other compatible units connected to the DAMM TetraFlex® infrastructure**
- Duplex calls to and from TETRA radios, other soft terminals, DAMM Dispatchers and other compatible units connected to the DAMM TetraFlex® infrastructure**
- SDS to and from TETRA radios, other soft terminals, DAMM Dispatchers and other compatible units connected to the DAMM TetraFlex® infrastructure

The TetraFlex® iOS Client as a fully integrated part to the DAMM TetraFlex® system can thereby access all TetraFlex® gateways and be monitored and recorded by the TetraFlex® Voice and Data Log system.

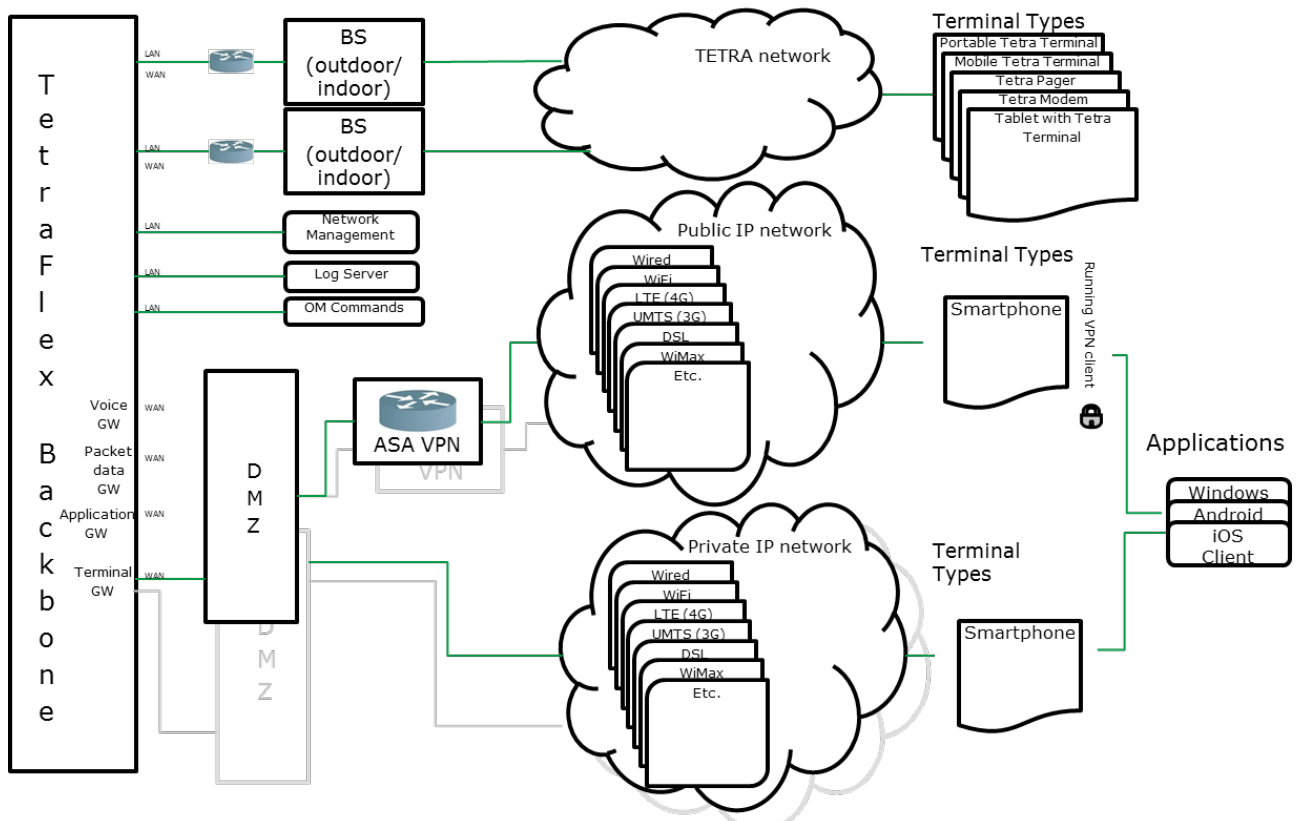
Key features

- Soft terminal for iPhones
- Connect to TetraFlex® infrastructure via LTE or WiFi
- Create and receive group calls to and from TETRA radios, or other soft terminals
- Create and receive duplex calls to and from TETRA radios, or other soft terminals
- Send and receive SDS

* Be aware, when updating your TetraFlex® iOS client, to ensure that your TetraFlex® system is also running the latest version

** Voice type calls and video streaming require broadband network with Quality of Service (QoS), sufficient bandwidth and adequate coverage

System overview



The system overview shows the connection and communication possibilities. The smartphone can be connected either via a public or private IP system to the TetraFlex® backbone. At least for the public IP network DAMM recommends using ASA routers to establish a secure and encrypted VPN tunnel to each device. Routers, networks and connections can be built redundant. A minimal configuration for a private IP network can be made by just connecting the WAN connection on the TetraFlex® backbone to a WiFi access point.

Application client registration

Having stable and reliable coverage from broadband network such as WiMax, WiFi, 3G or LTE, the smartphone with the TetraFlex® iOS Client will register itself automatically to the broadband TetraFlex® terminal gateway.

10 clients can be connected to each radio node; up to 100 clients can be connected to each gateway node. DAMM recommends for public networks to register via secured IP connectivity using encrypted SSL tunneling protocol communication reaching the DMZ zone and ASA/AnyConnect Cisco Firewall Router of the home TetraFlex® network. The TetraFlex® iOS Client can store up to 9 different iOS Client profiles enabling you to connect with different subscriber numbers, different settings or to different TetraFlex® systems.

Security

An important and vital subject of such operations and user cases is the possibility of enhanced security. The TetraFlex® network and TetraFlex® iOS Client ensures any smartphone connection to be

authenticated either by the smartphone or by the TetraFlex® network or even mutual similar as for standard TETRA terminals. The high secured AES256bit encryption algorithm method can be used in combination with the user PIN code to access the connection and to protect your integrity and communication on the IP backbone layer.

SDS and positioning

Using the TetraFlex® iOS Client, being member of the defined TETRA system, you have access to receive and to send SDS messages. The TetraFlex® iOS Client allows you also to send GPS position data permanently, on request or never. In the latter, assuming you have GPS reach and coverage, your position will be messaged to the TetraFlex® control room and fleet management GUI in the TetraFlex® Dispatcher or any third party fleet management application.

Voice communication

Utilizing the full integration of the terminals into the TetraFlex® system, it is perfectly well possible to listen and talk into group calls as well initiating or receiving full duplex individual calls. Thanks to the implementation it is even possible to listen to two audio streams at the same time. Priority hereby can be set to individual or group calls. Up to 8 different groups can be simultaneously scanned. Group calls can be muted/unmuted at any time.

Individual calls can be established by typing user number, ISSI or unified number of the other party. The availability of the called terminal will be directly indicated, for example with greyed symbol if unavailable. Symbols will inform the calling party which kind of device is being called.

Coverage extension for non-critical operation

TetraFlex® iOS Client allows users a theoretical worldwide extension of their home network, keeping in mind that especially on voice and video operation, public networks might cause some difficulties, which therefore should not be used for critical applications but are perfectly well for non-critical communication.

Usage case examples

1. Global coverage extension for voice calls - for commuting workers between two sites as well people in far-away offices
2. Ideal for managers who do not want to carry several devices with them when entering meetings
3. Improving company phone system. SIP numbers available on desk telephones, smartphones and TETRA terminals
4. Share status information and location update across a nationwide network, e.g. fleet management, taxi companies, train/metro installations or others

Requirements

TetraFlex® iOS Client	Requirements/recommendations
TetraFlex® iOS Client	One TetraFlex® Terminal Gateway License per user
Hardware requirements	iPhone, iPad
Software requirements	iOS version 8.1 or higher
Air interface	WiFi, UMTS (3G) or LTE (4G)
Minimum bandwidth requirement for the IP network	136kbit/s for 2 audio streams (2 groups or 1 duplex call)
Hardware recommendations for the IP backbone	Cisco ASA router 5505 or 5512
Software recommendations	Any connect from Cisco
So far tested and approved terminals	iPhone 5S & 5C, iPhone 6 & 6S

Specifications

TetraFlex® Android Client	Value
Number of connections per node	Up to 10 (on gateway nodes up to 100)*
Number of parallel voice streams	2 streams (2 groups or 1 duplex call)
Number of parallel scanned groups	Up to 8
Number of definable profiles	1 to 9
Number of gateways per profile	1 to 2
Number of stored last dialed numbers	Up to 30
Authentication	Yes

* Depending of the number of TetraFlex® Terminal Gateways located in the node dongle used for other applications e.g. for group bridge

Gateway node minimum hardware requirements

Processor:	Intel Xeon; Quad core; 2,40GHz; 10MB Cache
Hard drives	1 x 256GB HDD
RAM	4GB RDIMM, 1333MHz
Ethernet	2 x Gigabit Ethernet ports
Operating system	Windows 7

Ordering

Item number	Description
TF-ST-IC	TetraFlex® iOS Client license, per client**

** Containing the TF-DL-N10-TERM GW TetraFlex® Terminal Gateway license