DAMM TetraFlex® PTT App

The DAMM TetraFlex PTT App is a smartphone application for secure business critical communication - utilizing LTE or WiFi

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The DAMM® PTT App is developed, owned and maintained by DAMM Cellular Systems. It is a vendor and technology independent soft terminal, tailored for secure and private communication.

No radio gateways are required; the DAMM PTT App is a purely IP based solution that operates independent of any radio infrastructure.

The DAMM PTT App can be fully integrated into a DAMM system, and can thereby be used with all DAMM TetraFlex Gateways and applications, like the Voice and Data Log system or Dispatcher.

The DAMM PTT App includes features like:

- Push-to-talk group-calls between other PTT apps, TETRA terminals and dispatchers
- Push-to-talk to bridged PMR systems connected via DAMM TetraFlex Group Bridge
- PTT-key on touch screen or via headset button
- Individual simplex and duplex calls between other PTT apps, TETRA Terminals or dispatchers
- Duplex calls to telephones connected via DAMM TetraFlex Voice Gateway
- Optimized bandwidth consumption using ACELP/TETRA voice codec
- Video Streaming to other PTT apps or DAMM Dispatchers
- SDS text messaging between PTT apps, Tetra terminals, dispatchers and other compatible devices
- Image transfer to and from other soft terminals and DAMM Dispatchers

The DAMM PTT App registers itself via any IP network, such as Wi-Fi or 3/4G networks,

to the DAMM TetraFlex Terminal Gateway.

Voice communication

The DAMM PTT App makes it possible to listen to and talk in group calls, as well initiate or receive full individual duplex calls. Up to 7 different talk-groups may be scanned simultaneously, and it is possible listen to two audio streams at the same time.

Individual calls can be established by typing the user number, ISSI or unified number of the called party. The phonebook updates directly from the subscriber register.

Group calls can be muted/unmuted at any time and priority can be set between individual and group calls.

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The DAMM PTT App is fully integrated into the DAMM TetraFlex solution, supporting the TETRA feature set and security standards.

DAMM PTT App

Key features:
- Push-to-talk, group communication
- Text messaging
- Image/video transfer
- GPS positioning

Using wireless IP networks like:
- Wi-Fi
- 3G/4G networks

The DAMM PTT App is available for Android and iOS

SDS and positioning

With the DAMM PTT App, it's possible to send and receive secured SDS text messages between smartphones, TETRA terminals, and control room applications such as dispatchers.

The DAMM PTT App can be configured to send GPS position data—which can be viewed by other Apps within the same organization, the DAMM TetraFlex Dispatcher, or any control room application—in selected intervals.

Picture, video and data transfer

Utilizing the smartphone's camera and broadband connection, it is possible transfer images and live video to the DAMM TetraFlex control and dispatch management system.

This can be done in a safely, taking advantage of the encrypted and secured IP connection to the TetraFlex Gateway Node.

Use-case examples:
- Coverage extension for voice calls, which is ideal for workers commuting between sites and employees in remote offices
- Low-cost alternative to expensive TETRA terminals for non-critical usage
- Picture and video transmission for improved workflow
- Easy sharing of status information and fleet management across a nationwide networks

Security

An important and vital subject of business critical communication is the possibility of enhanced security.

The DAMM TetraFlex network and the DAMM PTT App ensures any smartphone connection must be authenticated either by the smartphone or by the DAMM TetraFlex network or even mutual, similar as for standard TETRA terminals.

A minimal configuration for a private IP network can be made by just connecting the Terminal Gateway to a Wi-Fi access point, but for a public IP networks DAMM recommends using secure and encrypted VPN tunnel to each device.

This can be obtained by using a Cisco ASA AnyConnect Firewall Router together with Secure Mobile Client. The DAMM PTT App can be configured to initiate the VPN client automatically at start up.

The high-secured AES256 bit encryption algorithm method can be used in combination with the user PIN code to access the connection and to protect integrity and communication.

DAMM TetraFlex PPT App	Requirement / Recommendation
DAMM TetraFlex PTT App license	One DAMM TetraFlex Terminal Gateway License per user
Smartphone requirements	Android based Smartphones: Android version 4.2 or above Apple iPhone: iOS version 10 or above
So far tested and approved terminals	Android: Samsung Galaxy S6 iOS: iPhone 5, SE, 6, 6+
Air interface	Wi-Fi, UMTS (3G) or LTE (4G)
Minimum bandwidth requirement (per simplex call, per direction)	ACELP/TETRA: 12 Kbit/s G.711 A-law: 69 Kbit/s
Gateway Node/Terminal Gateway	Intel Xeon, Quad core, 2.40 GHz, 256GB HDD, 4GB RAM, 2 x Gigabit Ethernet ports Windows 10, Windows Server 2008 R2 with SP1, Windows Server 2012
Firewall recommendations	Cisco ASA router 5500 series
VPN client recommendations	Cisco Any Connect Secure Mobile Client

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