DAMM TetraFlex® PTT

DAMM TetraFlex PTT is a smartphone application for secure business-critical communication across TETRA, DMR and Analog technologies – utilizing LTE or Wi-Fi. It is a low-cost alternative to expensive TETRA radios and is ideal for coverage extension.

DAMM TetraFlex® PTT 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; DAMM PTT is a purely IP-based solution that operates independently of any radio infrastructure.

DAMM PTT 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.

DAMM TetraFlex PTT includes features like:
• Push-to-talk group calls between other PTT apps, TETRA, DMR & analog terminals and dispatchers
• Push-to-talk to bridged PMR systems connected via DAMM TetraFlex Group Bridge
• PTT key on touch screen or via headset or Bluetooth button
• Individual simplex and duplex calls between other PTT apps, TETRA, DMR and analog 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 and DMR terminals, dispatchers and other compatible devices
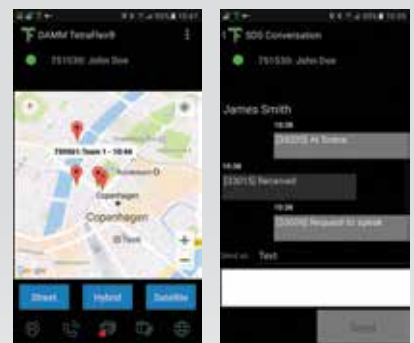• Image transfer to and from other soft terminals and DAMM Dispatchers

DAMM PTT registers itself via any IP network, such as Wi-Fi or 3/4G networks, to the DAMM TetraFlex Terminal Gateway.

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

You can arrange the order of the groups on the main Group screen and choose whether the PTT button should call the last active group or the main designated PTT group. Groups can be muted/unmuted at any 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.

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

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

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

Available for Android and iOS

DAMM

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Key specifications

SDS and positioning

With DAMM PTT it is possible to send and receive secured SDS text messages between smartphones, TETRA & DMR terminals and control room applications such as dispatchers.

DAMM PTT can be configured to send GPS position data at selected intervals. These data can be viewed by other apps within the same organization, the DAMM TetraFlex Dispatcher or any control room application.

Picture, video and data transfer

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

This can be done in a safe way, 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 network

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 are set up to ensure authentication of any smartphone connection. This authentication can be performed by either the smartphone or the DAMM TetraFlex network or both – like 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 public IP networks DAMM recommends using a 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. DAMM PTT can be configured to initiate the VPN client automatically on startup.

The highly 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	Requirement / Recommendation
DAMM TetraFlex PTT 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	Tested on multiple Android and iOS devices, please contact DAMM for the current list of devices
Air interface	Wi-Fi, UMTS (3G) or LTE (4G)
Minimum bandwidth requirement (per simplex call, per direction)	ACELP/TETRA: 12Kbit/s G.711 A-law: 69Kbit/s
Gateway Node/Terminal Gateway	Intel Xeon, Quad core, 2.40GHz, 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