TETRA THROUGH THE CHANNEL (TTC) TETRA UPDATES AND STRATEGY 2023

DANIEL SCOTNEY - June 2023







DANIEL SCOTNEY TETRA Channel UK, Ireland & Nordics DIRECTOR OF SALES TETRA CHANNEL EUROPE



MARTIN FUERST DIRECTOR OF SALES EASTERN EUROPE & POLAND



MARKO CURKOVIC TETRA Channel EE, Poland & Baltics



SVEN LANGE TETRA Channel DACHL



DIMETRA SMALL SYSTEMS WORLDWIDE SHIPMENTS 60M SALES (DEVICES AND SYSTEMS) IN 2022

LEGACY SYSTEMS (DIPM+DIPC)



DIMETRA EXPRESS





CONFIGURATION OPTIONS



DIMETRA EXPRESS MTS4 TETRA SYSTEM

- The Express Server is integrated in the MTS Cabinet
- 1-3 Base Radios (As the DIMETRA Express server takes a base radio slot)

DIMETRA EXPRESS MTS2 TETRA SYSTEM

- The Express Server is integrated in the MTS Cabinet
- 1 Base Radio (As the DIMETRA Express server takes a base radio slot)

DIMETRA EXPRESS MTS1 TETRA SYSTEM

- Modular configuration MTS1 + Standalone Express Server.
- Can be mounted outdoors with the right housing
- 1 Base Radio (or 2 base radios in dual mode)

DIMETRA EXPRESS STANDALONE TETRA SYSTEM

- Allows reuse of base stations
- Refresh of existing DIMETRA IP Compact or DIMETRA IP Micro



CONFIGURATION OPTIONS WHEN TO POSITION DIMETRA EXPRESS Vs DIMETRA X CORE







	DIMETRA EXPRESS	DIMETRA X CORE	DIMETRA X CORE DEPLOYABLE
COVERAGE	10+ sites, single zone	1 - 5000+ sites, multi zone	1 - 120+ sites. Multi zone
CAPACITY	50 – 4000+ users	100 - 1M+ users	100 - 40k+ users
RESILIENCE	Link level redundancy, local / geographic redundancy	Site, link, edge, zone level, local / geographic redundancy	Customised resilience
SECURITY	Clear authentication, air interface encryption	Mission-critical security	Mission-critical security, customised security
PARTITIONING	Single user organisation	Multiple user organisations	Multiple user organisations
DEPLOYMENT	Flexible	Highly configurable	Fully customisable
APPLICATION	Enterprise & local	Public safety regional & nationwide	Military, defence & peacekeeping

M

ENSURE YOUR NETWORK IS CYBER-SECURE

DIMETRA EXPRESS IS A SECURE NETWORK THAT PROTECTS AGAINST UNAUTHORISED USERS, SNOOPERS AND HACKERS

- Layered defence architecture
- Air Interface Encryption encrypts over the air communications and signalling between radios and base stations
- Authentication
- Cyber Security
- Firewall

16720

9 2

CHE ARE

SE

- OS hardening
- Regular software updates include
- OS security patches
- Regular, fully tested antivirus updates

Ŷ

*Access to this service is dependent on the customer having a valid software maintenance license applied to the system, i.e. a service contract.



SET UP IN MINUTES

- Get up and running quickly
- DIMETRA Express integrates the switch and base radios into your existing IT network using a single IP address
- Simple browser-based installer
- Bulk upload of multiple subscriber radios
- Approximately 15 minutes
 from start to finish



BROWSER-BASED SYSTEM HEALTH MONITOR

- Tracks the health of your system
- · Monitors status of servers, base stations
- Enables faults to be identified so corrective action can be taken
- For more detailed reporting fault forwarding API enables a third party solution to be connected for extended fault management

V System Health	LM Statutics & R	ieports 🛃 Users & Talkgroups	Ø System Settings		+
Ell System					
I Status:		In. Call Activity:	2 minutes 🖌 🛩	Advanced ON	~ @
Severity	Element	5 Covered Calls			
Normal	DCS	Adve Cats			
Normal	zc				
Normal	891				
Normal	SDR				
Normal	UCS				
Normal	ZDS				
Normal	PDG				
Normal	Amvirus				
Normal	itta				_
Normal	ATR				
Registered Ra Affiliated Takg					
'R' Base Station	4				+
_					

BROWSER-BASED RADIO CONTROL MANAGER APPLICATION

- · Easily see what is happening in a radio fleet
 - Check emergency alarms
 - Monitor device status
 - Temporarily disable ("Stun") a radio
 - Remove a radio from the system
 - Add or remove talkgroups
 - Create or schedule reports
 - Revive recovered radios that had been temporarily disabled



DIMETRA EXPRESS INFRASTRUCTURE SERVICES

AT-A-GLANCE

SERVICES	WARRANTY	ESSENTIAL	ADVANCED	
Network Updates				
24x7x365 Remote Technical Support - Critical Faults (Priority 1)				
8x5* Remote Technical Support				
Self-installed Security Update Services				
Self-installed Software Updates				
1-Year Hardware Repair				

NOTE:

*9am-5pm GMT, Mon-Fri excluding public holidays.

The service duration for DIMETRA Express Warranty and Essential is 3 years, and the Advanced Service package has a duration of 6 years.

You can purchase the following as options with any of the support packages:

- Extended Hardware Repair
- Hardware Repair with Advanced Replacement
- 2 or 3 day On-Site Technical Support



X

DIMETRA Express Online Training

DIMETRA Express Instructor LED Training



DIMETRA EXPRESS: MIGRATION





DIMETRA EXPRESS - MIGRATION DIMETRA MICRO SMOOTH MIGRATION AND SITE UPDATES DIMETRA EXPRESS 2.3 DIMETRA COMPACT DIMETRA EXPRESS LEGACY

M

SUA - MOTOROLA SOLUTIONS UPDATE PROGRAM



WHY YOU NEED TO MIGRATE YOUR EXISTING DIMETRA SYSTEM

MOTOROLA ANNOUNCED THE END OF LIFE OF DIMETRA IP COMPACT AND DIMETRA IP MICRO IN MAY 2018

All Support for DIPM and DIPC ended December 2021

- Higher cost of maintaining your network
- Your server is at risk of cyber attack
- In the event a core server failure your network fails
- Lead times for replacement parts are extremely high
- Upgrade now to ensure continuity of service

MIGRATE EASILY FROM YOUR EXISTING DIMETRA SYSTEM

Simply replace your existing $\ensuremath{\mathsf{DIMETRA}}$ core with the standalone $\ensuremath{\mathsf{DIMETRA}}$ Express server

- Preserves the investment in your existing Radio Access Network (RAN)
- Can be scheduled during a regular service visit
- No unplanned downtime
- Onsite technical support for ease of migration
- Full operator training
- Up and running smoothly







TAKE INSTANTANEOUS COMMUNICATIONS FURTHER WITH NETWORK-INDEPENDENT BROADBAND PUSH-TO-TALK

ТΜ

Daniel Scotney

EMEA Sales



WAVE PTX LMR INTEROPERABILITY ADVANTAGE OF WIRELINE INTEGRATION



LTE / WI-FI NETWORK

SOLUTION BENEFITS

- Stay connected when outside your LMR coverage areas
- Bring non-radio users into the conversation
- Leverage existing devices that you already own
- Communications without compromise

FEATURES SUPPORTED

- Group calls & private calls
- Alias & Called ID
- Emergency receive functionality*
- Single gateway, multiple concurrent conversations

SYSTEMS SUPPORTED USING WIRELINE INTEGRATION

- **MOTOTRBO IP Site Connect**
- **MOTOTRBO Capacity Max**
- **MOTOTRBO Capacity Plus**
- **DIMETRA Express**
- All other systems supported via ROIP Gateway (Donor Radio)



MULTI TENANT GATEWAY HARDWARE MINIMUM SPECIFICATIONS - TIER 1 (10 talkpaths)

Minimum Requirement

- Processor family Intel 9th generation Core i5 (recommended i5-8500T/9500T
- Process cores 4/6 core with 2.2 Ghz
- RAM 8GB DDR4
- Storage 250GB SSD
- Networking 1 NIC
- Remote management Remote desktop connectivity
- Support As per customer requirement
- Software requirement (customer to provide license keys only)
 - Windows 10 Pro OS

MSI recommendation : HP PRODESK 400 G5 DESKTOP MINI

Note : For Tier 1 hardware, the OS is required to be pre-installed by customer before initiating configuration request to MSI. Note: Hardware monitoring is Customer's responsibility

Note: This hardware is recommended for iPSite Connect and Dimetra Express Interop.





DCX9000 For dimetra™ EXPRESS



VOICE

Utilises extensive DIMETRA dispatch capabilities and ensures a reliable connection – from any location.

- Voice calls group and private
- Emergency calls
- Ambiance Listening calls
- Multiselect transmissions
- Group patching
- Motorola or any commercially available audio accessories
- Voice logs

DCX9000	View all subscribers Coordinates (dd.mm.as) Vietae Map	= ■ / / k k ■ + ■	LINDANAN	Welcome: operator (Adminis Lot 109 WebConsc
PTT D001 Private Call 10.4		D002 Telcom1 10 56.01 1382021 ₩ - (50) 📞 € 🐠 1 2 3 🖨	PTT D003 Telcom3 19.55.01 13/9/2021	MIELGROUPS. D003-Telcond Institute
PTT 10004 Telcom2 10 55 01	1382021 € ∲ 1 2 3 € PT	0005 Telcom11 10 55 01 13₩2021 (r - (50)	PTT D006 Telcom15 10 55 01 1382021 c - (50) C C 0 1 2 3 -	D005-Telcom01 (197/9016) D005-Telcom11 (197/9016) D006-Telcom15 (197/9016) D006-Telcom20 (197/9016) D017-Telcom20 (197/9016)
PTT D007 Telcom18 10:54: operator - (5 📞		Telcom20 10:54:15 13/8/2021	PTT D009 Telcom21 10 54 15 136/2021 operator - (5 📞 📢 🌒 1 2 3 🜩	D002-Telcom1 (18771016) D005-Telcom11 (18771027) D010-Telcom23 (1877608)
ртт D010 Telcom23 10:561 я - (50) 🔍	PT 13/0/2021	Telcom22 1926 22 13/82/021	PTT D012 Telcom24 10:53:58 13802021 operator - (5 📞 📢 🌒 1 2 3 🜩	0018-Telcom28 (1677804) 0018-Telcom30 (1677804) 0020-Telcom32 (1677804) 0023-Telcom36 (1677805)
PTT D013 Telcom25 10.35: Telcom25		Telcom26 to 35.27 13/62021	PTT D015 Telcom27 10 53 58 1392321 operator - (5 📞 📢 🐠 1 2 3 🖨	D025-Telcom38 (1877805) D026-Telcom38 (1877805) D028-Telcom41 (1877805) D012-Telcom24 (1877805)
PTT D016 Telcom28 10.561 ir - (50)	rt 1382/2021 ◀ 🐏 1 2 3 🜩 PT	D017 Telcom29 10 54:00 13/82021	PTT D018 Telcom30 10:55:01 126/2021 # - (50)	D015-Telcorn27 (1677803) D015-Telcorn27 (1677803) D023-Telcorn38 (1677805) D028-Telcorn39 (1677805)
PTT D019 Telcom31 t0:35: Telcom31	PT	D020 Telcom32 to s5 et 13/62021 r - (50) € € € 1 2 3 €	PTT D021 Telcom33 10 35 37 15492021	D029-Telcom42 (1877008) PATCH GROUPS: (drag any resource for new path
PTT D022 Telcom34 10.361 Telcom34	PT	D023 Telcom36 t0,55:01 13/6/2021 ₩ - (50)	PTT D024 Telcom37 10.36.03 13/82/021 Telcom37 🔪 📢 🌒 1 2 3 🖨	D008-Tekcom20 (1677608) D009-Tekcom21 (1677608) D007-Tekcom18 (1677604)
ртт D025 Telcom38 10.561 ж - (50) 📞	PT 130/2021	T D026 Telcom39 to 55-01 13/62021 17 - (50) 📞 € 🚸 1 2 3 🚔	PTT D027 Telcom40 10 36 65 1342/021 Telcom40 🔪 4 🐠 1 2 3 🖨	D003-Telcom3 (19779318) D004-Telcom2 (19779317) D002-Telcom1 (19779316) D005-Telcom11 (19779327)
PTT D028 Telcom41 10.551 xr - (50)	PT 138/2021	T D029 Telcom42 to s3.58 13/8/2021		D006-Telcom15(1677801)
35			EVENTS Communications Panel	

TEXT

Share business-critical information as events unfold with workgroups and other stakeholders right from the dispatch console.

- Short Data Messages (SDS) over TETRA incoming and outgoing
- Instant messaging (sent via Telegram Messenger) supporting:
 - \circ Chats
 - Multimedia messages
 - Supports any file type



This is a zoomed view for instructional purpose.

TRACK

Enable your team to communicate with vehicles and teams in-map quickly and easily.

- Automatic Vehicle Location (AVL) and mapping
- Monitor defined areas for safety and operational efficiency improvements.
- Real-time display of GPS position of TETRA terminals on a Web Map Service (WMS) such as OpenStreetMap.
- Click the map icon to establish an individual call via TETRA.
- Acquire GPS coordinates at regular intervals and track radio users.
- Create predefined geographical areas by drawing fences on the map (Geofencing).
- Apply rules to radios that can enter/exit geofences.



This is a zoomed view for instructional purpose.

RECORD

Instantly replay voice logs to confirm businesscritical information when coordinating or reviewing a response.

- Search and playback voice calls.
- Calls and call-related data recorded with Archiving Interface Server (AIS).
- Recorded audio is decoded and converted to analogue for playback.
- Download as MP3 or WAV files requires a security fingerprint.

x 9000								manu (Adminis
RADIO	PLAYBACK REPORTS		GPS REPORTS					
			II 0:00/0:01		۲	1		
				Unit64_33620015.v -20 10:46:55.368 anu	(BV			
Format					_	Voice files		
WEB PDF DOC ODT XLS >	XML	Date		Participants	٠	File name 4	Duration (s) 9	Tecnol. 0
Filters	3	0-12-2021 10:46	-55	G: t303 I:manu		t303_Unit64_33620018.wav	2*	TETRA
Start date:	3	0-12-2021 10:46	:55	G: t310 I:manu		t310_Unit64_33620016.mav	2"	TETRA
20/12/2021 00:00	3	0-12-2021 10:46	:55	G: t309 I:manu		t309_Unit64_33620014.mav	2"	TETRA
End date:	3	0-12-2021 10:46	:55	G: t307 I:manu		t307_Unit64_33620017.mav	2"	TETRA
20/12/2021 23:59	■ ±6	20-12-2021 10:	46:55	G: t305 1:manu		t305_Unit64_33620015.mav	2"	TETRA
Peor	3	0-12-2021 10:46	:55	G: t308 I:manu		t308_Unit64_33620011.mav	2*	TETRA
1/3 of 110 recordings	2	0-12-2021 10:46	-55	G: t311 I:manu		t311_Unit64_33620010.wav	2"	TETRA
Radio alias/Talkgroup name:	1	0-12-2021 10:46	:55	G: t404 I:manu		t404_Unit64_33620012.wav	2*	TETRA
	2	0-12-2021 10:46	:55	G: t312 I:manu		t312_Unit64_33620013.wav	2*	TETRA
Ouration (sec) > than:	1	0-12-2021 10:46	:55	G: t302 I:manu		t302_Unit64_33620009.wav	2"	TETRA
	3	0-12-2021 10:46	:52	G: t303 I:manu		t303_Unit64_33620008.wav	2*	TETRA
Search	2	0-12-2021 10:46	:52	G: t310 I:manu		t310_Unit64_33620006.wav	2"	TETRA
	3	0-12-2021 10:46	:52	G: t307 I:manu		t307_Unit64_33620007.mav	2*	TETRA
	2	0-12-2021 10:46	:52	G: t305 I:manu		t305_Unit64_33620005.wav	2*	TETRA
	2	0-12-2021 10:46	:52	G: t309 I:manu		t309_Unit64_33620004.mav	2"	TETRA
	2	0-12-2021 10:46	:52	G: t404 I:manu		t404_Unit64_33620002.wav	2*	TETRA
	2	0-12-2021 10:46	:52	G: t312 I:manu		t312_Unit64_33620003.wav	2"	TETRA
	2	0-12-2021 10:46	:52	G: t308 I:manu		t308_Unit64_33620001.wav	2*	TETRA
	2	0-12-2021 10:46	-52	G: t311 I:manu		t311 Unit64 33620000.wav	2"	TETRA

CYBERSECURITY FEATURES:



DCX9000 Server

ISO 27001 Security Policies Applied:

- Information Security Policy
- Security Incident Management
 Policy
- IT Security Policy
- Information Classification Policy
- Service Availability Plan
- Corporate Security Architecture



Accredited in Software Engineering, Quality Requirements and Software Product Evaluation

ISO-25010 compliance in all aspects which include:

- Functional Suitability
- Performance efficiency
- Compatibility
- Usability
- Reliability
- Security
- Maintainability
- Portability

ENS

Complies with the cybersecurity requirements of the ENS

This includes the following:

- Equipment protection
- Communications Protection
- Protection of Information Media
- Protection of computer applications
- Data protection
- Protection of services



DIMETRA EXPRESS PACKAGE DEAL



Get your customers talking at a very competitive price Buy the Complete Package for less than the Portable Radios alone Package includes DIMETRA Express Server - MTS2 Base Station and MTP8550Ex or MXP600 Portable Radios

FLEXIBLE PACKAGE COMBINATIONS

PACKAGE 1 €79,880 | **\$80,000** | £69,168

Integrated MTS2 Base Station and **DIMETRA Express Server**



PACKAGE 2 €55,916 | **\$56,000** | £48,418

> Integrated MTS2 Base Station and **DIMETRA Express Server**



PACKAGE 3 €82,277 | **\$82,400** | £71,243

Standalone **DIMETRA Express Server** and MTS2 Base Station



PACKAGE 4 €58,313 | **\$58,400** | £50,493

Standalone **DIMETRA Express Server** and MTS2 Base Station



incl. antenna, battery, Belt Clip, Travel

Limited time offer of highly competitive price for DIMETRA Express Accredited Partners. Offer closes 31st December, 2023

T1 partners and Distributors can place as many package orders as required during this period

PACKAGE DEALS

HOW TO BUY

- Fill out the online form here
- Select your package and RF band
- You will be sent a confirmation email
- Send the email to the Ordering team dimexp@motorolasolutions.com

After you submit this laur proceed with your order.	nch pack form, EMEA order management tea	m will contact you to
* Required	Switch account	۵
Email *		
Your email		
Submitter Name * Must enter your name		
Your answer		
Channel Partnership Re Must identify your relatio	elation * nship as Distributor or T1 Partner	
Distributor T1 Partner		
Next	Page 1 of 4	Clear for



THANK YOU



MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. © 2023 Motorola Solutions, Inc. All rights reserved.