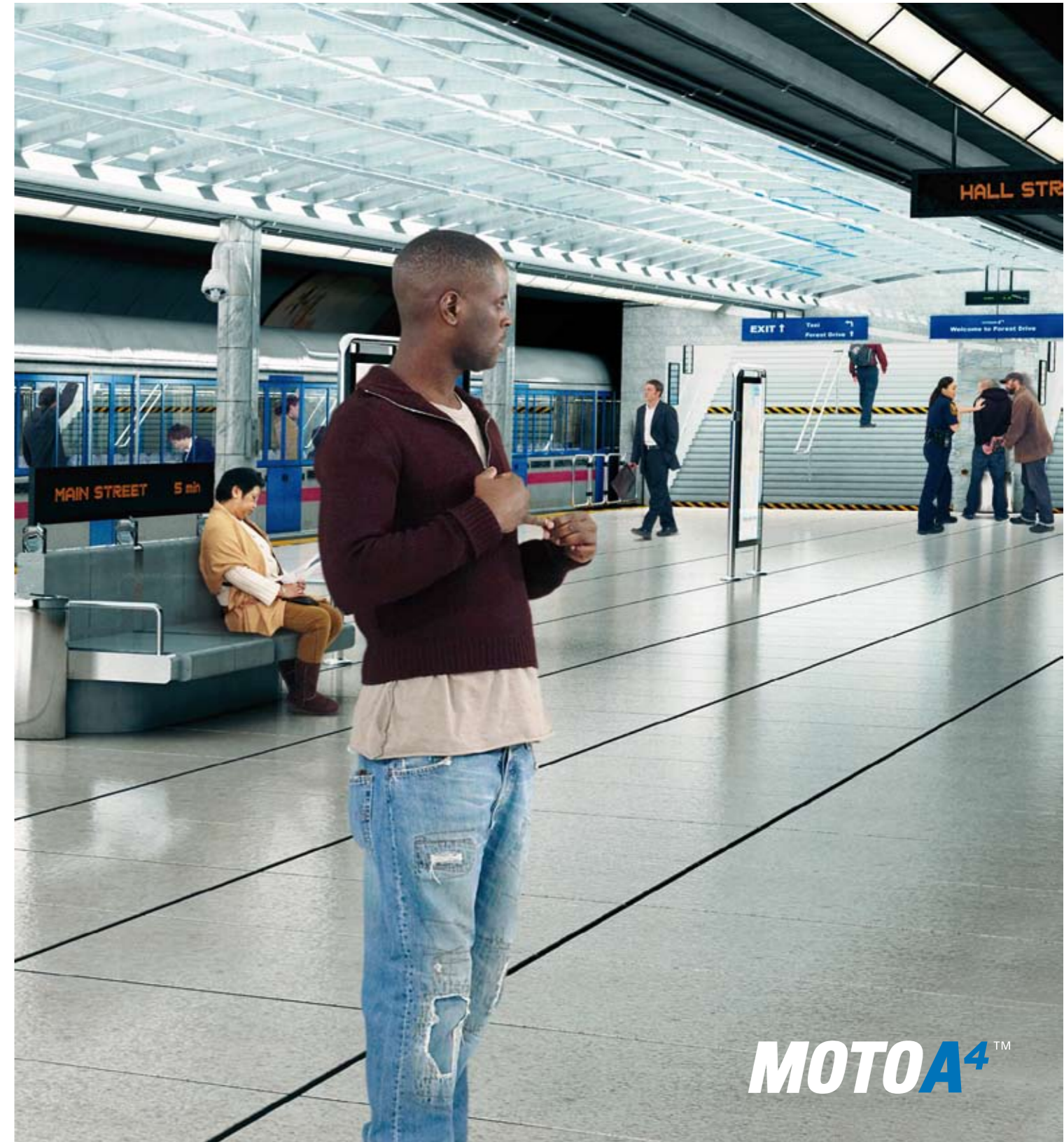# MOTOROLA TETRA SURVEILLANCE PORTFOLIO

Motorola Discreet TCR1000 Covert Radio

For more information please contact your local Motorola Authorised Dealer or Distributor

MOTOROLA

www.motorola.com/tetra

MOTOA⁴ ™

MOTOROLA'S TOTAL SURVEILLANCE SOLUTION

Providing effective solutions for the surveillance operation is not just a matter of a hiding TETRA radios, it requires a thought-through end-to-end system which will ensure the effectiveness of the operation and the safety of the officers.

By designing communications with the end user in mind, Motorola sets the standard for highly secure radio communications systems demanded by Government agencies around the world. Technology That's Second Nature™ means that surveillance officers can focus on the Mission, not on the technology.

With the recent introduction of the ultra-thin, fully featured TETRA TCR1000 covert terminal, Motorola further applies it's extensive experience of TETRA terminal design to the covert operations arena. The TCR1000 packs a fully featured Secure End to End TETRA terminal into a package weighing less than 165gms and only 165 x 17 x 35mm. The TCR1000 offers a wide range of accessories to customise the wearing solution.

The TCR1000 covert radio has fast toggle between TMO and DMO, an officer can immediately brake out of a DMO call to make a TMO call. Tones and Whisper mode enables officers to more safely communicate in situations where they are exposed.

This innovative radio is not a solution on its own and Motorola has worked to provide surveillance solutions for foot and vehicle based users. Surveillance requirements for different types of vehicles are satisfied by the MTM800E. This has a wide number of options for fitting including dash, remote, motorcycle and desktop units. Where gateways or repeaters are needed then the CM5000 is available to meet these needs.

During potentially stressful or dangerous covert surveillance operations the officers must have absolute confidence in their communications equipment. All Motorola terminals are designed from first concept to meet Motorola's Accelerated Life Testing (ALT) which exceeds the exacting MIL 810C/D/E and ETS standards.

To ensure uncompromised secure communications Motorola has developed End to End security solutions which feature the highest level of security deployed on TETRA networks. All terminals support full End to End encryption making use of Over the Air Rekeying (OTAR). This ensures that the management of encryption keys are taken out of the hands of the operators leaving them to get on with their task.

E2EE

End to End Encription

The CM5000 Gateway function links a group of officers in a local talk group (Direct Mode Operation) with the command centre (using Trunked Mode Operation), using the higher power available in a vehicle radio. The repeater function improves the links between radios in a DMO talk group. This could be vital to improve connections to surveillance officers in buildings or enclosed car parks.

Command and Control
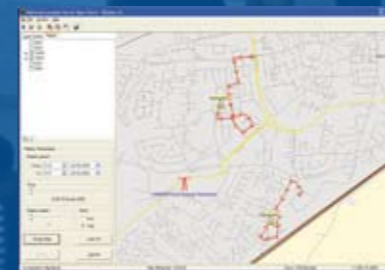
Location

Coordination

Dispatching

Operational Intelligence

Recording

MCC 7500 Console

GPS location with MotoLocator

Networks
Motorola Dimetra IP and Dimetra Compact IP base station and switch portfolio scale from small to national systems. Features have been added over many years to ensure that the highest levels of functionality, security, and capacity are available.

Command and Control
In the past covert teams have operated in an isolated communications situation. This was limited by the range of the covert terminals. With the advent of national TETRA systems communications can be seamless over the area of coverage. This allows the management of covert teams to be centralised. To this end Motorola has developed secure console solutions for its Dimetra IP systems. This provides confidence that communications remain secure from the operative on the ground to the manager in the command centre.

Terminal Management
Integrated Terminal Management is a powerful means to quickly configure a set of radios with templates and other special features in readiness for a surveillance operation.

Software Features
Dynamic control of talk groups (DENA) ensures that the senior officers can react to a fast changing surveillance situation whilst maintaining maximum operational effectiveness.

Officer safety is a paramount concern, the Ambience Listening feature enables the command centre to open and then keep an audio link from the radio open, even if it is then switched-off. This is a vital facility if the officer is in a dangerous situation and is unable to respond to prompts or messages.

Collecting evidence for prosecution is aided by the Logging Recorder feature. The system can log and record the calls made on the radio so the actual conversation as well as the time and date information.

Many other features are supported which optimize the network for speed and capacity, make the communication task easy and intuitive for the end user, and provide advanced control functions such as location to optimise the operation and maintain officer safety.

Technology That's Second Nature™

TCR1000 COVERT RADIO

TCR1000 DISCREET ACCESSORIES, MATCHED TO THE SURVEILLANCE MISSION

DISCREET TETRA IN SURVEILLANCE OPERATIONS

The need to conceal a TETRA radio under all types of clothing has been the requirement of Surveillance officers for some time. Motorola listened carefully to these officers and used their observations to:

- **Design the world's thinnest TETRA radio**
- **Design a simple and innovative user interface**
- **Accept no compromises in performance, full power and up to 8 hour battery life (5/35/60)**
- **Design a very simple but powerful user interface matched to surveillance operations**
- **Design an accessory portfolio to enhance performance increase ease of use**

The Discreet TCR1000 is the ideal solution to ensure secure communications in surveillance covert type operations allowing officers to blend right into the crowd. Motorola's TCR1000 Tetra radio delivers high quality communication in a light and discreet package for those critical undercover applications.

There are no compromises in the design of the TCR1000. Motorola worked closely with police forces to ensure that it is intuitive and simple to operate, truly Technology that's Second Nature. The Discreet TCR1000 incorporates control features specifically matched to the needs of officers in Covert operations, and is engineered to be easily hidden inside light clothing. Features available on conventional Motorola radios such as Ambience Listening are available on the Discreet TCR 1000. A unique portfolio of Covert accessories complement the Discreet TCR1000 and offer additional flexible options for undercover officers. This radio operates at 1 Watt and the option for a body mounted antenna ensures excellent coverage and maintains the discreetness of the radio.

Key Features:
- Part of Motorola's highly capable and industry leading TETRA Radio portfolio
- Secure Communication for safety and protection of information
- TMO TETRA Class 2 / 3 Air Interface Encryption (SCK, CCK, DCK, GCK, and customer specific)
- End-End Encryption
- 1W, Class 4 Tx Power
- Whisper mode for discrete use
- Communication tones for speech-free operation
- Integrated GPS option that allows users to be located in need of assistance
- Wide range of covert accessories to give officers flexibility in the way the radio can be worn
- Connection to extension battery for increased operational life
- Uses the same standard battery as cellular handsets
- CPS-Lite facility for changing the talk groups with a TETRA PDA
- Unique body worn double-loop antenna option increases range
- Semi rigid antenna, adds flexibility in terms of how the radio can be worn
- Configurable alert tones keeps users informed

Motorola's TCR1000 Covert TETRA terminal provides undercover officers with a communications tool specially designed for their security, comfort and intuitive use in all situations. Motorola also offers a wide range of accessories to support other portable solutions to meet the varying operational needs of surveillance officers – flexible, rugged and ready to go at a moments notice.

Body Worn Accessory Options: Designed to ensure secure and discrete placement of your radio. Vests and harnesses are made of lightweight breathable fabrics and are available in different sizes and colors to meet your specific covert officer needs. Pockets are specifically sized to securely store your radio, extended battery module and microphones for enhanced communication flexibility.

Audio Accessories: Wireless small and comfortable earpieces of various colour skins ensure discrete communications and comfort even when wearing for extended periods. Inductive patch and inductive loops provide flexible options to the user for transmitting and receiving discrete communications.

Antennas: A variety of antenna solutions are available. They are optimized for on-body use to ensure you get the coverage you need. Antennas are either flexible or rigid. The most innovative dual-loop antenna increases range and fits easily and discreetly into the Covert vest.

Batteries and Charging Solutions: Undercover and surveillance officers have unique needs which the TCR1000 portfolio of battery and charging solutions have been designed to meet Both the vehicular and indoor battery charging solutions will be essential for the user who relies on constant communication while on the move. The additional extended battery option ensures that officers can handle extra long shifts and heavy communication needs.

CPS Lite software on the MTC100 TETRA PDA allows in-field configuration of the TCR1000 and modification of the Talkgroup Favourites list using a simple user interface

Supporting Software
- CPS: Customer Programming SW
- CPS Lite: Talkgroup Management SW

actual size

ACCESSORIES, THE KEY TO EFFECTIVE SURVEILLANCE

Surveillance operations vary considerably and the equipment for communication must be flexible, rugged, and ready to go at a moments notice. Officers already in the field may be called upon to participate at short notice in surveillance duties, whilst others have time to prepare. Accessories which help to conceal conventional radios will help officers to join surveillance operations at short notice. Vehicle mounting kits can be used in unmarked cars, vans or motorcycles. Motorola has a constantly expanding range of accessories for use with both conventional radios such as the MTP850 handheld and the MTM800E mobile radios. In addition the TCR1000 Discreet Covert radio has been introduced with a full range of antenna, power, and concealment accessories to enhance its flexibility for surveillance operations.

Examples of accessories

Covert Antenna GPS Antenna Visor Microphone Remote PTT 5W Small Loudspeaker

MOBILE RADIO ACCESSORIES

Surveillance Accessories for Mobile portfolio MTM800 Enhanced

Motorola has a wide variety of solutions to conceal the radio in the vehicle or on the Motorcycle. The accessory portfolio offers a complimentary solution range to keep the officer undercover. This means accessories such as covert antennas, microphones, push-to-talk devices, loudspeakers, inductive loop system and control accessories are able to be installed quickly and discretely in as many positions as required.

In a vehicle, remote mount configurations allow you to store the base of the unit in the trunk and have the control head discretely mounted in the radio dash. A visor microphone and a foot Push-to-talk can be discretely installed and give officers an easy and safe hands-free communication solution.

Discrete options are available for motorcycle officers as well. Remote mounting kits allow the officer to store the base of the unit easily in a secure trunk on the back of the motorcycle. Officers are equipped with discrete fist size microphones and can communicate easily and securely.

Examples of surveillance accessories

PORTABLE RADIO ACCESSORIES

Surveillance Accessories for the Portable portfolio MTH800 and MTP850

Along with the industry-leading TCR1000 covert solution, Motorola offers a suite of surveillance accessories to help conceal the Tetra MTH800 or MTP850 portable. One, two or three-wire surveillance kits allow officers to transmit and receive communications securely and discretely. A variety of wireless earpiece-neck loop combinations or wired discrete earpieces are designed to be comfortable even when extended wear is required.

Motorola is a leader in innovation and provides a suite of accessories and complementary solutions that meet the demanding and variable requirements of our surveillance audience. Whether in a vehicle or on a motorcycle, on foot as an undercover officer or simply need to communicate in a discrete manner, Motorola provides the accessories to support you.

Motorola works closely with world leading partners such as Sonic to constantly expand the range of accessories.

MTS4 Tetra BTS

MC75

MW810 (12" Screen)

Point to Point Technology

Mesh Technology

WiMax Technology

MOTOROLA SURVEILLANCE SOLUTIONS - TETRA AND A LOT MORE...

As well as TETRA radios and infrastructure the MOTOA4 portfolio includes associated technologies that can be used for in secure communications. These include taskworker devices, rugged computers, high speed radio links, MESH networks, and WiMax technology. Motorola is very well placed to bring and integrated a wide range of technologies to meet the needs of mission critical operators.

MOTOA4™ Mission Critical Communications Portfolio
For nearly 80 years, Motorola continues to be the recognized leader in providing wireless communications networks, devices, applications and services. We have installed more than 350 TETRA networks worldwide and are responsible for over a quarter of the world's TETRA systems. Only Motorola enables its customers to confidently take the next step in mission critical communications, beyond the basics, to the most reliable and innovative wireless solutions available. Motorola is the trusted name in mission critical networks.

To learn more about the MOTOA4 mission critical communications portfolio, visit us at **www.motorola.com/TETRA** today and experience Technology that's Second Nature™.

MOTOA4™