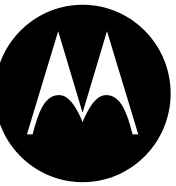# MOTOTRBO™ PORTFOLIO OVERVIEW

PRESENTER NAME | Presenter Title
June 2018

MOTOROLA
SOLUTIONS

INTRODUCING MOTOTRBO

- A comprehensive digital two-way radio solution for professional and commercial communications

- Supports voice, data, text, GNSS, telemetry and apps

- Instantaneous, private and secure communications for the whole organization

- Built on the ETSI DMR standard

- Supports analogue and digital modes of operation

DMR: STANDARDS BASED, FUTURE READY SOLUTIONS
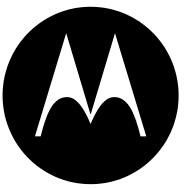
GLOBALLY RECOGNIZED ETSI DIGITAL MOBILE RADIO (DMR) STANDARD

- Widely backed by industry leading radio manufacturers
- Most widely deployed digital two-way radio technology for professional users globally
- Open standard assures long-term viability
  - Tier I: low power, license-free 446MHz band
  - Tier II: licensed conventional high-power communications
  - Tier III: trunking operation

ETSI DMR STANDARD:

TR 102 398 V1.3.1 (2013-01)	General System Design
TS 102 361-1 V2.5.1 (2017-10)	Part 1: DMR Air Interface (AI) protocol
TS 102 361-2 V2.4.1 (2017-10)	Part 2: DMR voice and generic services
TS 102 361-3 V1.3.1 (2017-10)	Part 3: DMR data protocol
TS 102 361-4 V1.9.1 (2017-10)	Part 4: DMR trunking protocol

MOTOTRBO VERTICAL MARKETS

COMMERCIAL USERS

– Retail, Hospitality, Agriculture, Private Security, Manufacturing, Warehousing, Logistics, Construction, Education, Public Transportation, Port/Airports, Mining, Utilities, Petrochemical, Local Government

PUBLIC SAFETY USERS

– Search & Rescue, Fireground, Incident Teams, Local/Municipal Police, Military

MOTOTRBO EVOLUTION

DMR Full Standard Published

First MOTOTRBO Shipments

IP Site Connect

Capacity Plus

Second Generation Devices

Linked Capacity Plus

ATEX Devices

S&S Control Room Solutions

Broadband PTT

Next Gen Repeater

Third Generation Devices

Capacity Max

Portfolio Expansion

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018

Feature additions and enhancements

SL4000, DP4000 DM4000, DP2000 MPT Option Board

SLR 5500

SLR 1000

SL1600

DP3661e, SL2600

SLR 8000

DP4000 Ex

MOTOTRBO Anywhere

DP4000 Ex Ma

DP3000 DM3000 DR3000

DP3441, DP1000 DM1000, DM2000

SmartPTT PLUS, TRBOnet PLUS

SL4000e, DP4000e DM4000e, DP2000e, DP3441e

BENEFITS OF MOTOTRBO

TWO-WAY RADIO BENEFITS

- Instantaneous communication
  - No waiting for dial tone or connection delays

- Rugged, dependable devices
  - Designed for tough environments

- Reliable availability
  - Radio system designed to meet user needs

- Manageable cost of ownership
  - No call charges or subscriptions

- Customised solutions
  - Smart accessories
  - Applications

MOTOTRBO - BETTER BASICS
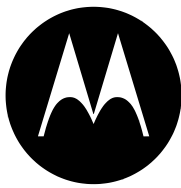
- Enhanced audio quality
  - Hear messages more clearly

- Greater coverage
  - Communicate more reliably over greater area

- Double call capacity
  - Reduced licensing and infrastructure costs
  - Reduced likelihood of missed calls

- Longer battery runtime
  - Radio works when it's needed

- Secure communications
  - Improved system integrity
  - Privacy encryption prevents eavesdropping

MOTOTRBO - ADVANCED CAPABILITY

- **Advanced features**
  - 1-to-1, 1-to-many, 1-to-all calling
  - Caller ID
  - Noise Cancellation
  - Intelligent Audio
  - Lone Worker
  - Mandown
  - Transmit Interrupt
  - Over-the-air programming
  - Voice announcement
  - ...

- **Built-in modem**
  - Supports data applications

- **Location Tracking (option)**
  - Wide-area and indoor location for security and operational efficiency
  - Integrated GPS/GLONASS
  - Bluetooth and iBeacons

- **Text messaging**
  - Non-verbal communication
  - Job ticketing

- **Telemetry**
  - Monitor and operate equipment remotely

- **Diverse applications**
  - Wide Developer community to meet user requirements

MOTOTRBO DURABILITY

- MOTOTRBO radios and accessories are designed to keep operating in extreme conditions

- Every design must pass Motorola Accelerated Lifetime Testing (ALT)
  - Simulates 5 years of hard use
  - Anticipates 15 year design life

- Radios are designed to withstand
  - **Drops**: Multiple 122 cm drops on all sides onto concrete
  - **Low temperatures**: Operation down to -20ºC
  - **Thermal shocks**: Multiple cycles from -57ºC to +80ºC
  - **Impacts**: Multiple 115 g objects dropped from 1m
  - **Water**: Jets of water from all directions for 30 mins
  - **Dust**: 28 hours of fine blown dust
  - **Cable strains**: Multiple 1 minute, 18 kg pulls on accessory cables
  - **Electric shocks**: Up to 15 kV discharges

- Tightly sealed against dust and moisture
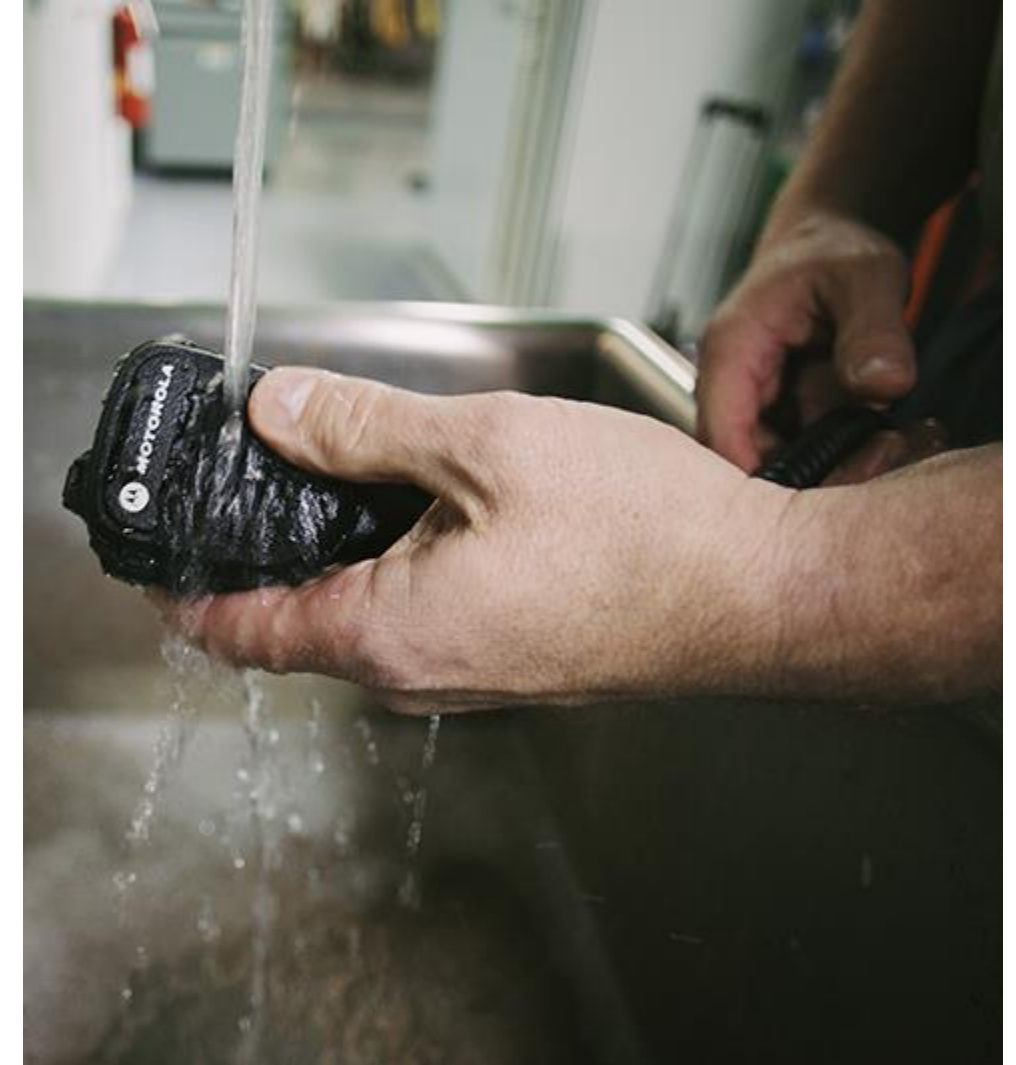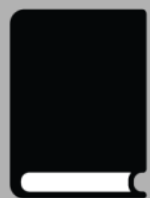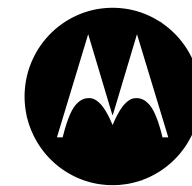
MIGRATION FROM ANALOGUE
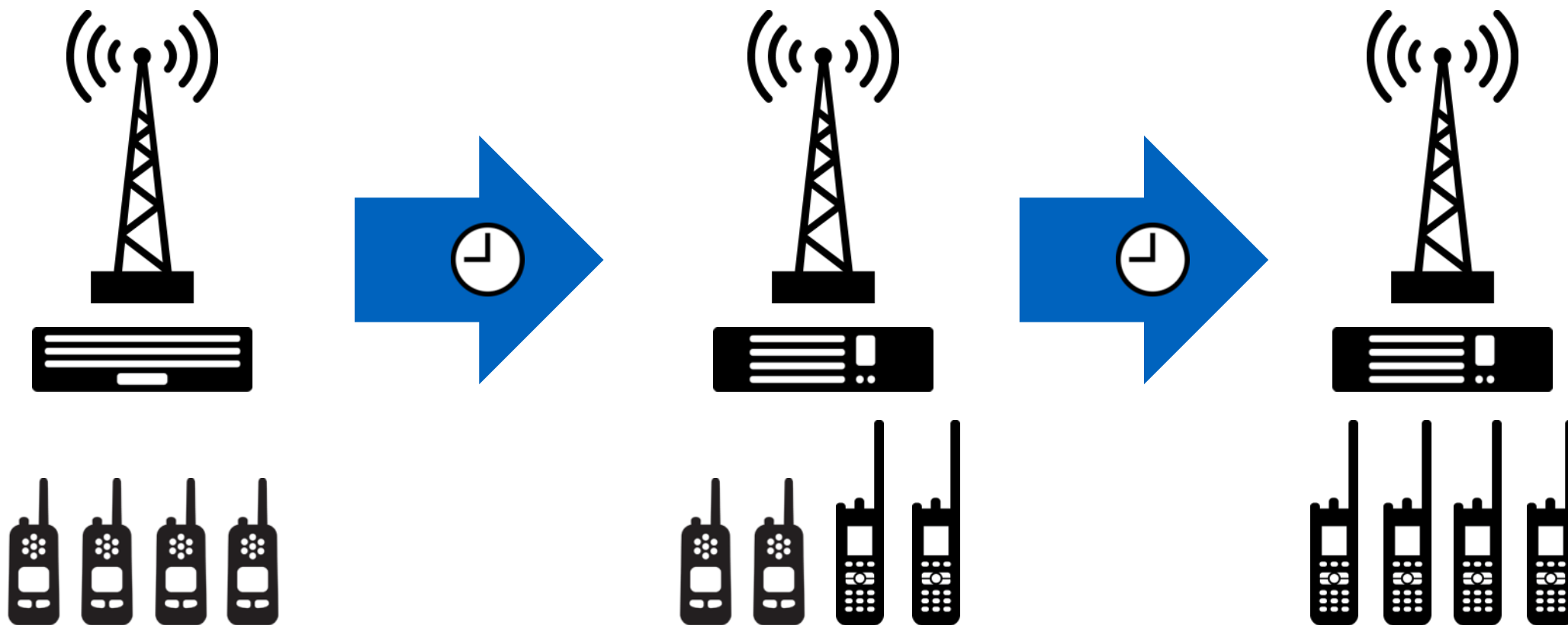
Legacy analogue radios
Legacy analogue system

Mixed analogue and digital radios
Dynamic Mixed Mode system
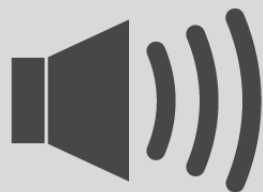
Modern digital radios
Modern digital system
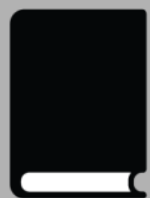
MOTOTRBO BENEFITS
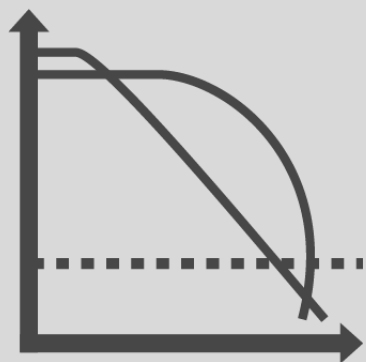
| RANGE	AUDIO	CAPACITY	TALK-TIME	FEATURES	APPS
Intelligible speech over a larger area	Crisp and clear, even in fringe coverage areas	Twice the calling capacity of analogue radio in the same RF channel	Up to 40% longer battery life than analogue radio	Increased opportunity for innovation	Integration with workplace applications

THE MOTOTRBO PORTFOLIO

SYSTEMS

- CAPACITY MAX
- CAPACITY PLUS
- IP SITE CONNECT
- CONVENTIONAL

SUBSCRIBER RADIOS

- ATEX
- HIGH TIER
- MID TIER
- ENTRY TIER

ACCESSORIES

- AUDIO
- CARRY
- WIRELESS
- MOBILE
- ENERGY
- ANTENNAS

APPLICATIONS

- VOICE DISPATCH
- COMMAND & CONTROL
- SYSTEM MONITORING
- TEXT & EMAIL
- LOCATION SERVICES
- WORK ORDER MGT
- INTEROP SOLUTIONS
- SAFETY

SERVICES

- PLAN
- DEPLOY
- SUPPORT

WAVE

- 5000

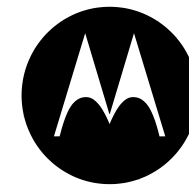# MOTOTRBO SYSTEMS AND INFRASTRUCTURE

MOTOTRBO SYSTEMS
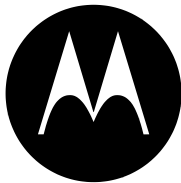
CONVENTIONAL (SINGLE SITE)	IP SITE CONNECT (MULTI-SITE)	CAPACITY PLUS (SINGLE- & MULTI-SITE)	CAPACITY MAX (SINGLE- & MULTI-SITE)
CONVENTIONAL		TRUNKING	
DMR Tier II	DMR Tier II plus additional proprietary features		DMR Tier III plus additional proprietary features
1 SITE	1 – 15 SITES	1 – 15 SITES	1 – 250 SITES
UP TO 200 USERS*	UP TO 200 USERS*	UP TO 1600 USERS/SITE*	UP TO 3000 USERS/SITE*
BASELINE COVERAGE	EXTENDED COVERAGE	COST-EFFECTIVE COVERAGE AND CAPACITY	COVERAGE, CAPACITY AND CONTROL

*Maximum capacity, based on standardized call model

DIRECT MODE

BASIC COMMUNICATIONS

- Direct radio-to-radio communications

- Limited range, basic feature-set

- Good for small operations
  - Radios must always be within range of each other

- Only requires a single 12.5kHz channel
  - Additional channels can be provisioned

- Supports MOTOTRBO Dual Capacity Direct Mode
  - Allows two independent calls on a single channel

- Supports voice, data, text, telemetry

- Supports Applications (Control station implementation only)

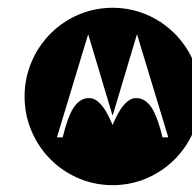- Individual channels can be configured for analogue operation

SINGLE LOCATION

FEW USERS

SINGLE SITE CONVENTIONAL

BASELINE COVERAGE AND CAPACITY

- Radio communications through a repeater

- Baseline range and feature-set

- Ideal for small to medium operations:
  - Single building, small campus or factory

- Repeater improves communication quality:
  - Improved error correction and interference management
  - Higher power and sensitivity

- Supports Applications
  - Control station or MNIS repeater interface

- Dynamic Mixed Mode allows integration of analogue radios

- Extended Range Direct Mode
  - Increased coverage using repeater, even when limited to a single frequency
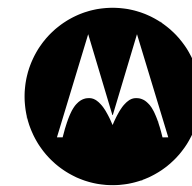
SINGLE SITE

UP TO 200 USERS*

*Maximum capacity, based on standardized call model
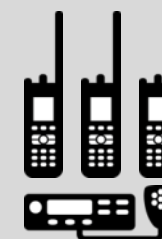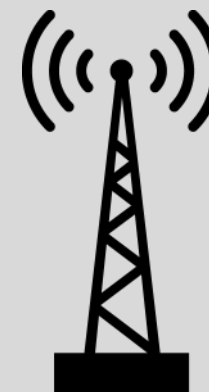
MOTOTRBO SLR REPEATERS

- The heart of your MOTOTRBO system

- Provides a wide umbrella of communications coverage
  - Error correction increases range, reliability and quality

- MNIS data interface allows direct connection of Applications

- Dynamic Mixed Mode integrates analogue and digital radios

- SLR 5500 supports medium / high power applications:
  - 1-50 W continuous duty (VHF, UHF, 300MHz)

- SLR 8000 supports high power applications:
  - 1-100 W continuous duty (VHF, UHF)

- SLR 1000 supports low power outdoor applications:
  - 1-10 W continuous duty (UHF)
  - Designed for ease of installation, inside or out (IP65 rated)

SLR 5500 (VHF, UHF, 300MHz)

SLR 8000 (VHF, UHF)

SLR 1000 (UHF)
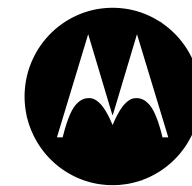
MOTOTRBO SLR REPEATERS

- Next-generation repeater platform

- High performance
  - 10W (SLR 1000), 50W (SLR 5500), 100W (SLR 8000), 10W (SLR 1000)
    - Up to 100% duty cycle
  - High receiver sensitivity, high reliability
  - Compatible with all MOTOTRBO system types

- High efficiency
  - Slim and compact
  - Low power consumption
  - Excellent serviceability

- Installation options
  - Freestanding / rack mount: SLR 5500, SLR 8000
 - Pole or wall mount: SLR 1000

IP SITE CONNECT

COST-EFFECTIVE COVERAGE

- Coverage solution using multiple repeaters linked over IP

- Ideal for:
  - Connecting multiple separate facilities
  - Providing good coverage in difficult terrain
  - Deploying a multi-frequency-band system

- Users can communicate seamlessly across sites

- Radios can roam between sites without changing channels

- Offers similar capacity to single site conventional system

- IPv4 interconnect, supports operation over VPN
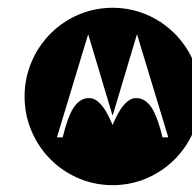
- RDAC tool allows remote management of repeaters

UP TO 15 SITES

UP TO 200 USERS*

*Maximum capacity, based on standardized call model
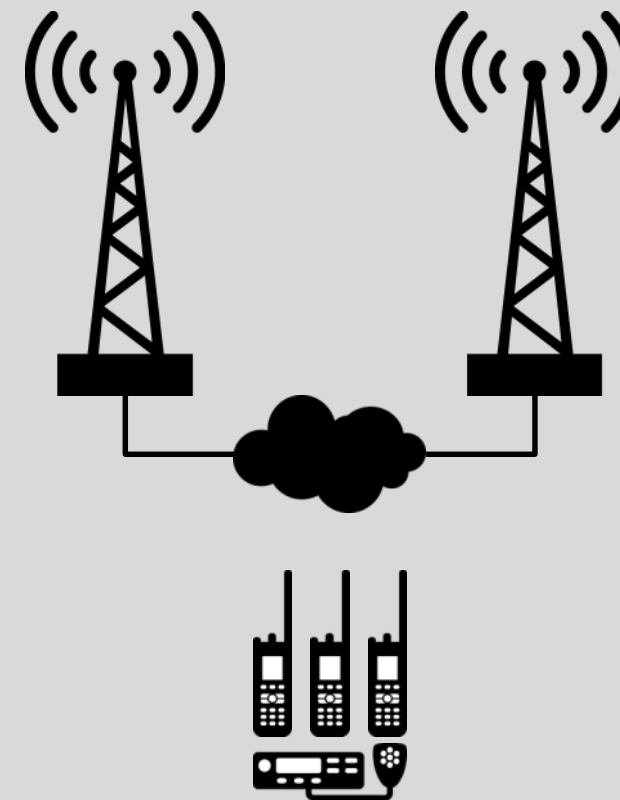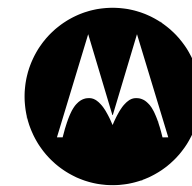
MOTOTRBO DYNAMIC TRUNKING

- Innovative pooling of radio channel resources
  - All radios occupy a "rest channel"
  - When a new call starts, it uses the rest channel
  - All radios not included in the call go to a new "rest channel"

- Flexible and efficient
  - No separate controller is needed
  - System is easy to plan and deploy
  - A repeater failure only affects capacity, not connectivity
  - Capacity is added simply by adding repeaters

- Exclusive to MOTOTRBO systems
 - Implemented on Capacity Plus single and multi-site

CAPACITY PLUS

COVERAGE AND CAPACITY

- Single and multi-site capacity and coverage solution
  - Multi-site previously called **Linked Capacity Plus**

- Dynamic trunking, multiple sites linked over IP

- Ideal for a large business with multiple facilities

- High coverage and capacity:
  - Up to 15 sites
  - Up to 8 voice and data repeaters per site
  - Up to 12 additional data-only repeaters per site
  - Max 12 total repeaters per site (20 for single site)

- No controller required, just linked repeaters

- IPv4 interconnect, supports operation over VPN
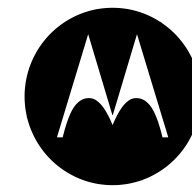
- Wireline integration option for WAVE

## UP TO 15 SITES

UP TO 1600 USERS PER SITE*

*Maximum capacity, based on standardized call model
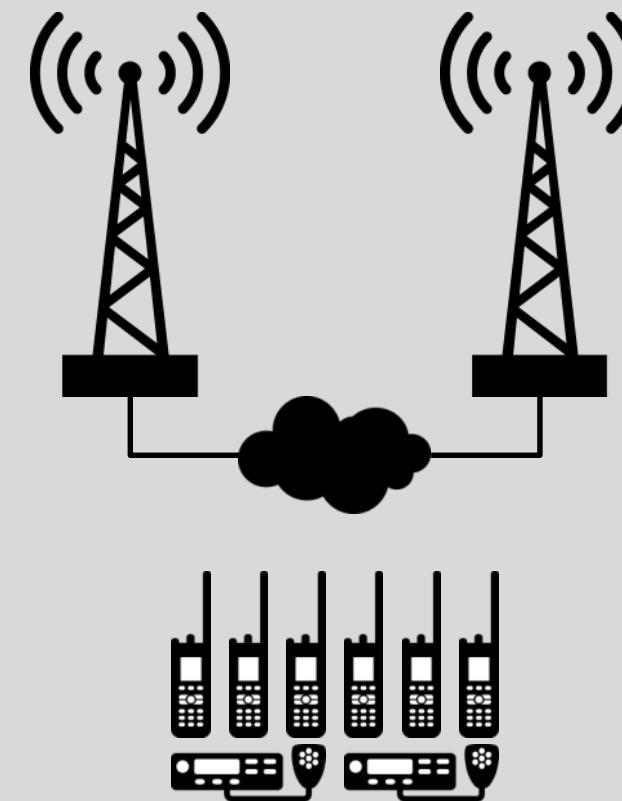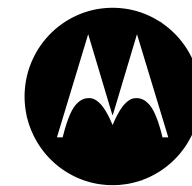
DIGITAL VOTING

COVERAGE ENHANCEMENT

- System coverage is generally limited by radio "talk-back" range rather than repeater "talk-out" range

- Digital Voting introduces extra receive-only repeaters:
  - The "Master Repeater" analyzes the signals received from the "Satellite Repeaters" and selects (votes) on which one to repeat

- Coverage is improved without the cost of extra transmitter frequencies

- Satellite sites are lower cost to implement, as they need less power, fewer antennas and lower bandwidth connections

- Supported by Digital Conventional Single Site, IP Site Connect and Capacity Plus (single- and multi-site)
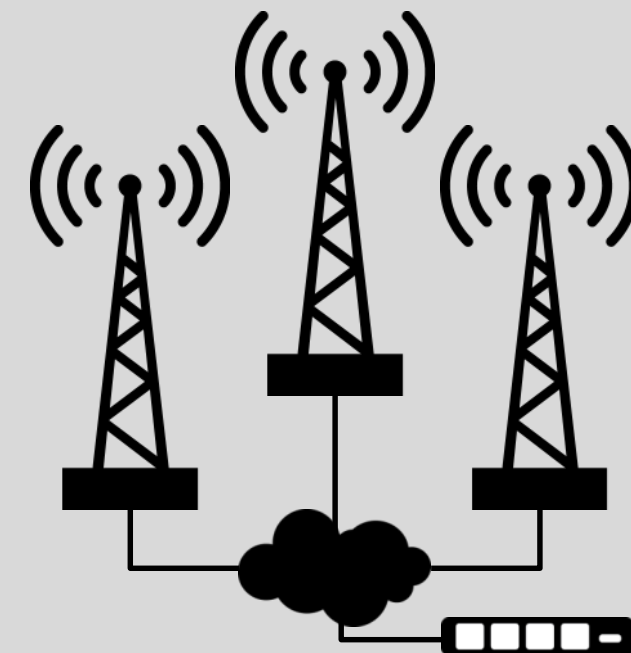
Master Repeater

Satellite Repeater
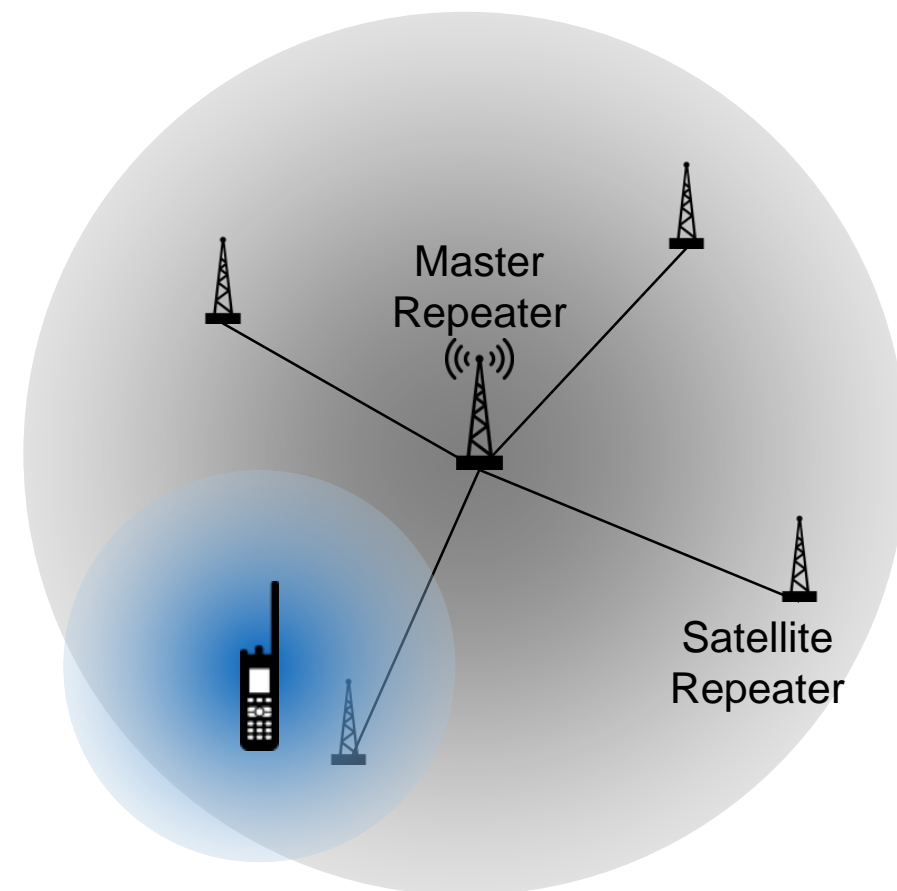
CAPACITY MAX

CAPACITY, COVERAGE AND CONTROL

- Next-generation single- and multi-site trunking solution

- Full trunking, system linked over IP
  - Dedicated trunking channel on every site
  - Centralised control server
  - Centralised fault and performance management
  - Optimised routing for signalling and traffic

- Ideal for a large business with multiple facilities

- High coverage and capacity:
  - Up to 250 sites
  - Up to 15 voice and data repeaters per site
  - Up to 6 additional data-only repeaters per site
  - Redundancy for any repeater is supported

- High security, high resiliency

- IP interconnect, with optional VPN
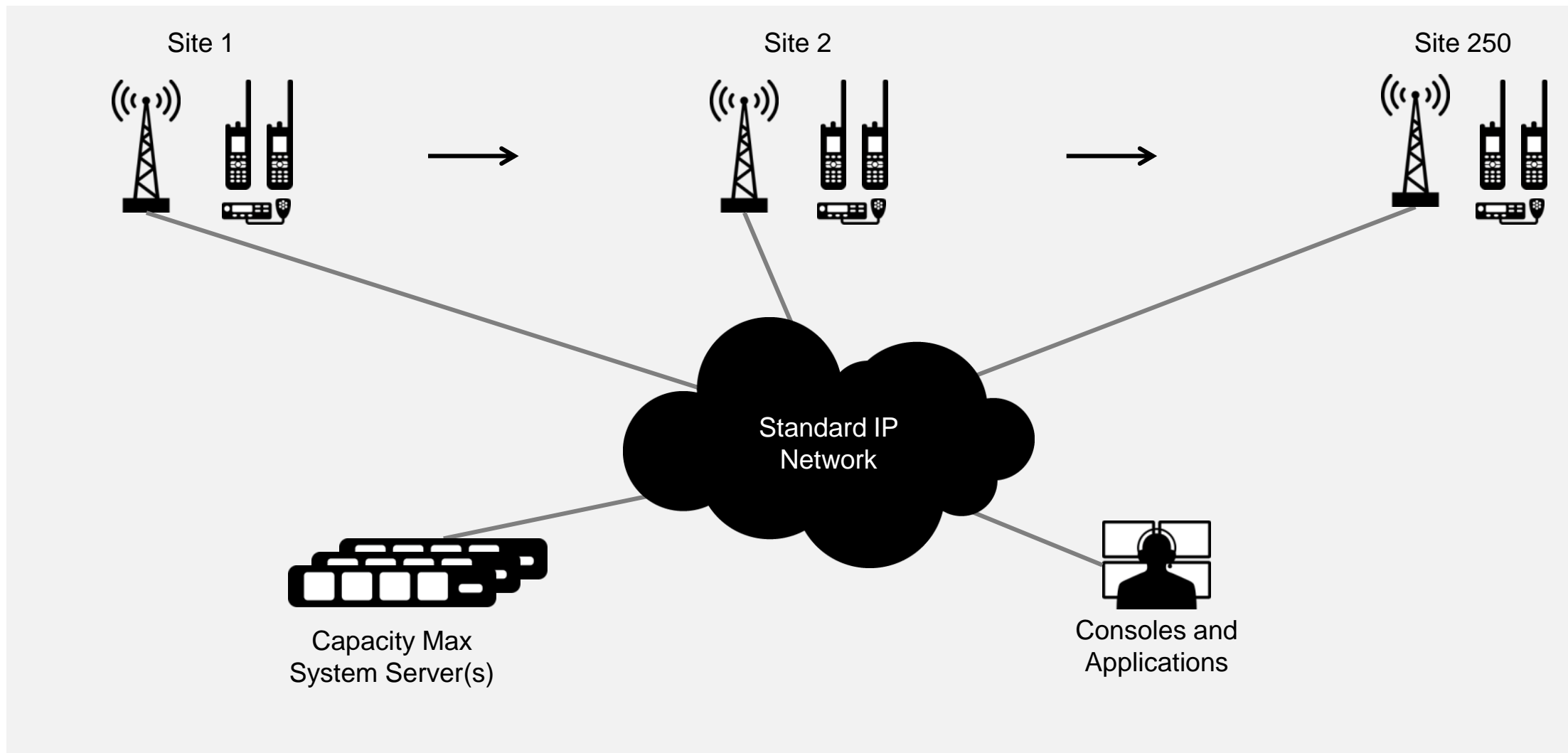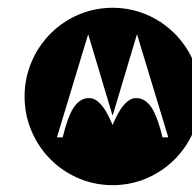
- DMR Tier III mode of operation

UP TO 250 SITES

UP TO 3000 USERS PER SITE*

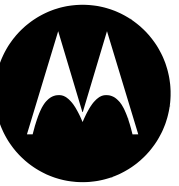*Maximum capacity, based on standardized call model

CAPACITY MAX ARCHITECTURE

Site 1

Site 2

Site 250

Standard IP Network

Capacity Max System Server(s)

Consoles and Applications

*Maximum capacity, based on standardized call model

MOTOTRBO SUBSCRIBER DEVICES

MOTOTRBO DEVICES PORTFOLIO

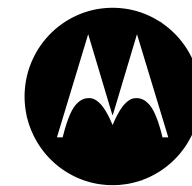| ENTRY TIER	MID TIER	HIGH TIER	ATEX
DP1400 SL1600	DP2400e DP2600e SL2600	DP4400e DP4600e DP4800e DP3441e DP3661e SL4000e DP4401e DP4601e DP4801e SL4010e	DP4401Ex DP4801Ex
DM1400 DM1600	DM2600	DM4600e DM4601e DM4400e DM4401e DM4000e Handheld Control Head	DP4401Ex Ma DP4801Ex Ma
VOICE	**VOICE, BASIC SYSTEMS**	**SUPERB VOICE, ENHANCED DATA, SYSTEMS, APPS, FEATURES**	**POTENTIALLY EXPLOSIVE ENVIRONMENTS**

MOTOTRBO DP1400

RUGGED AND SIMPLE
FOR THE EVERYDAY USER
WHO NEEDS TO STAY CONNECTED

- Simple voice-only portable radio

- Analogue only or dual analogue/digital models available

- Tough, rugged, dependable

- Easy migration path from analogue radio

- High-efficiency features
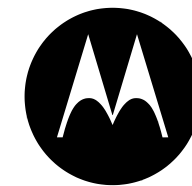
- Compatible with MOTOTRBO feature-set

DIRECT MODE CONVENTIONAL IP SITE CONNECT CAPACITY PLUS CAPACITY MAX

YOU'RE SIMPLY MORE EFFICIENT

DP1400 DETAILS

SPECIFICATIONS

- Dimensions with battery:
  - 128 x 62 x 42 mm (NiMH 1400mAH)
  - 128 x 62 x 39 mm (Li-Ion 1600mAH)
  - 128 x 62 x 44 mm (Li-Ion 2200mAH)
- Bands
  - VHF (136-174 MHz)
  - UHF (403-470 MHz)
- Transmitter Power
  - 1 or 5W (VHF)
  - 1 or 4W (UHF)
- Capacity: 16 Channels
- Battery Life (analogue/digital)
  - 9.0 / 11.5 hours (NiMH 1400 mAh battery)
  - 10.5 / 13.5 hours (Slim Li-Ion 1600 mAh battery)
  - 14.5 / 18.5 hours (Li-Ion 2200 mAh battery)
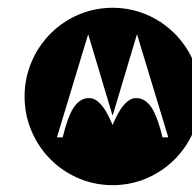- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 2 Programmable Buttons

MOTOTRBO SL1600

SLIM AND PORTABLE
FOR THE CUSTOMER SERVICE USER
WHO WANTS INTUITIVE TECHNOLOGY

- Slim, lightweight voice-only radio

- Elegant ergonomics for easy use

- Rugged and reliable

- Advanced technology for high performance

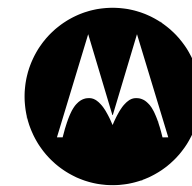- "Active View" display

- Award-winning design

● DIRECT MODE	● CONVENTIONAL	○ IP SITE CONNECT	CAPACITY PLUS	CAPACITY MAX

YOU'RE SHARPER, CONNECTED

SL1600 DETAILS

SPECIFICATIONS

- Dimensions:
  - 126 X 55 X 22 mm
  - 169g (VHF) 166g (UHF)
- Bands
  - VHF (136-174 MHz)
  - UHF (403-470 MHz)
- Transmitter Power
  - 1 or 2W (Analogue)
  - 1 or 3W (Digital)
- Capacity:
  - 99 Channels
- Battery Life (analogue/digital)
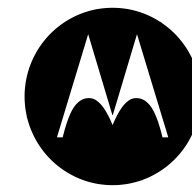 - 11.8 / 14.0 hours
- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 1 Programmable Button scrolls up to 7 Features

SL1600 ACTIVE VIEW DISPLAY

Channel
Alias

Channel
Alias
Scrolling

Channel
Number

Volume
Level

Battery
Charged

Tones On

Tones Off

Display
Brightness

Voice
Announcement
On

Power Level
High

AN INNOVATIVE WAY TO COMMUNICATE IMPORTANT RADIO INFORMATION

CRISP AND CLEAR
- LED matrix: No glare or reflections
- Displays important information in large characters
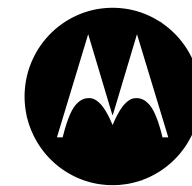- Longer messages scroll across screen

DURABLE
- LEDs are protected by radio casing
- Display is unaffected by scratches and dust

ENERGY EFFICIENT
- Display shuts off when not in use to conserve battery life

MOTOTRBO DM1000 SERIES

RUGGED AND SIMPLE
FOR THE EVERYDAY USER
WHO NEEDS TO STAY CONNECTED

- Simple voice-only mobile radios

- Tough, rugged, dependable

- Efficiency features

- Compatible with MOTOTRBO feature-set

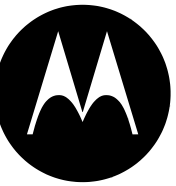- Numeric or alphanumeric display

DM1600

DM1400

● DIRECT MODE	● CONVENTIONAL	○ IP SITE CONNECT	CAPACITY PLUS	CAPACITY MAX

YOU'RE SIMPLY MORE EFFICIENT

DM1000 SERIES DETAILS

SPECIFICATIONS

- Dimensions:
  - 44 x 169 x 134 mm, 1.3kg
- Bands
  - VHF (136-174 MHz)
  - UHF (403-470 MHz)
- Transmitter Power
  - 1-25 W or 25-45 W (VHF)
  - 1-25 W or 25-40 W (UHF)
- Capacity:
  - 16 Channels (DM1400)
  - 160 Channels (DM1600)
- Audio output:
  - 4W (internal speaker)
  - 7.5 W (external 8 Ω speaker)
  - 13 W (external, 4 Ω speaker)
- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 2 Programmable Buttons (DM1400)
- 4 Programmable Buttons (DM1600)
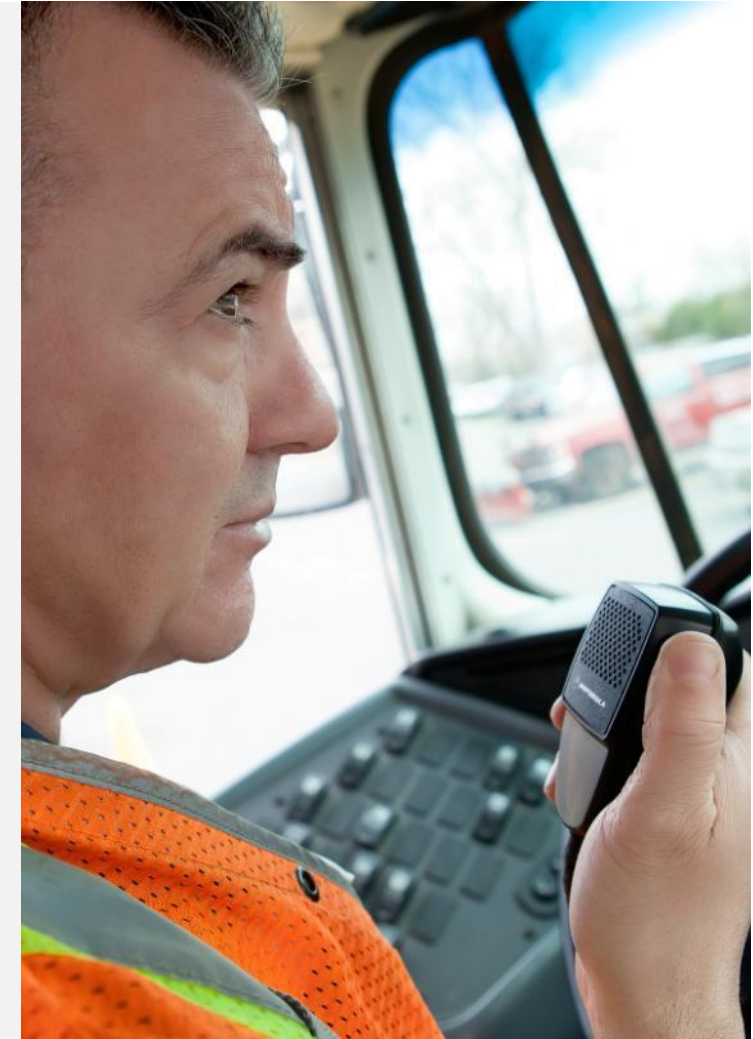
MOTOTRBO DP2000e SERIES

A PERFECT BALANCE
FOR THE BUSY WORKER
WHO NEEDS EFFECTIVE COMMUNICATIONS

- Next-generation, affordable digital system radio

- Rugged and compact

- Plain and display/limited keypad models

- Optional TIA4950 HazLoc certification

DP2400e   DP2600e

YOU'RE MORE PRODUCTIVE, CONNECTED

DP2000e SERIES DETAILS

SPECIFICATIONS

- Dimensions:
  - 122 x 56 x 36mm
  - 265 g (DP2400e), 282 g (DP2600e)
- Bands
  - VHF (136-174 MHz)
  - UHF (403-527 MHz)
  - 300MHz (DP2400e only) (300-360, 350-400 MHz)
- Transmitter Power
  - 1 or 4W (UHF, 300MHz)
  - 1 or 5W (VHF)
- Capacity:
  - 16 Channels (DP2400e)
  - 128 Channels (DP2600e)
- Battery Life (an/dig) - high cap battery
  - Up to 21 / 28.5 hours (VHF)
  - Up to 21 / 27.5 hours (UHF, 300MHz)
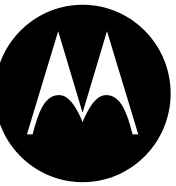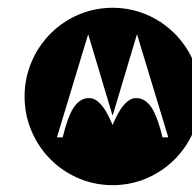- Dust and water rating: IP67

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 2 Programmable Buttons (DP2400e)
- 4 Programmable Buttons (DP2600e)

FEATURES

- IMPRES™ Audio Compatible
- SINC+ (optional)
- IMPRES Energy Compatible
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch (optional)
- Transmit Interrupt (optional)
- Enhanced Privacy (optional)
- Over-The-Air Programming (RF)
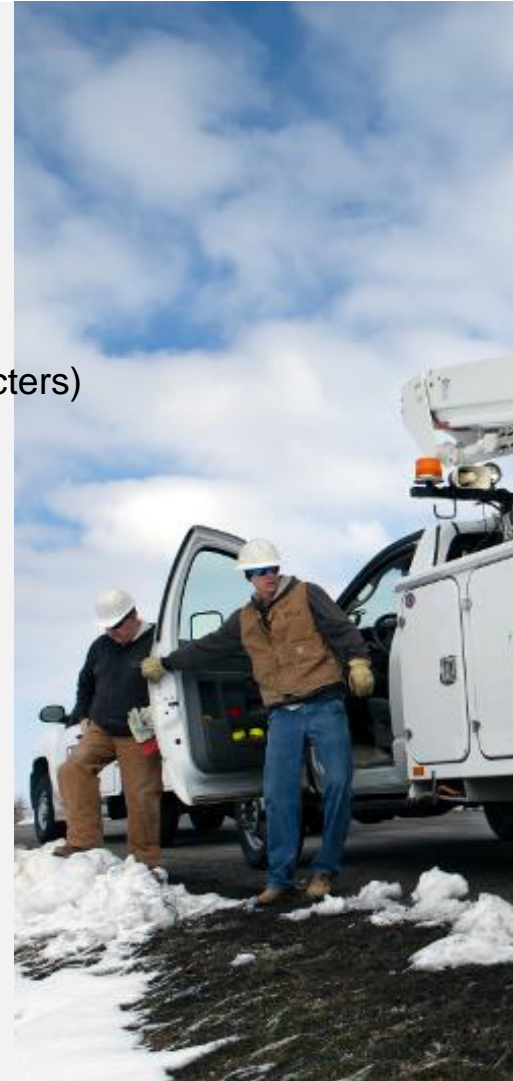
MOTOTRBO SL2600

- Slim, lightweight stylish radio

- Elegant ergonomics for easy use

- Rugged and reliable

- Advanced technology for high performance

- Virtual 4 button keypad and display

- Integrated Bluetooth® and Wi-Fi®

● DIRECT MODE	● CONVENTIONAL	● IP SITE CONNECT	○ CAPACITY PLUS	CAPACITY MAX

YOU'RE SHARPER, CONNECTED

SL2600 DETAILS

SPECIFICATIONS

- Dimensions:
  - 126 x 55 x 23mm
  - 190 g
- Bands
  - VHF (136-174 MHz)
  - UHF (403-480 MHz)
- Transmitter Power
  - 1 or 2W (Analogue)
  - 1 or 3W (Digital)
- Capacity:
  - 256 Channels
- Battery Life (an/dig) - high cap battery
  - Up to 11 / 13.5 hours
- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
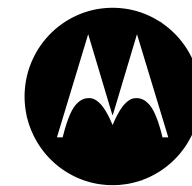- Dual Capacity Direct Mode
- 1 Programmable Button

FEATURES

- SINC+ (optional)
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Covert Mode
- Digital telephone Patch (optional)
- Transmit Interrupt (optional)
- Enhanced Privacy (optional)
- Over-The-Air Programming (RF/Wi-Fi)
- Indoor Location Tracking (optional)
- Bluetooth 4.0 Audio and Data

MOTOTRBO DM2600

A PERFECT BALANCE
FOR THE BUSY WORKER
WHO NEEDS EFFECTIVE COMMUNICATIONS

- Mobile companion to DP2000 Series

- Affordable digital system radio

- Rugged and compact

- Available in VHF and UHF bands

● DIRECT MODE	● CONVENTIONAL	● IP SITE CONNECT	○ CAPACITY PLUS	CAPACITY MAX

YOU'RE MORE PRODUCTIVE, CONNECTED

DM2600 DETAILS
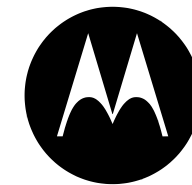
SPECIFICATIONS

- Dimensions:
  - 44 x 169 x 134 mm, 1.3 kg
- Bands
  - VHF (136-174 MHz)
  - UHF (403-470 MHz)
- Transmitter Power
  - 1-25 W or 25-45 W (VHF)
  - 1-25 W or 25-40 W (UHF)
- Capacity:
  - 256 Channels
- Audio output:
  - 4W (internal speaker)
  - 7.5 W (external 8 Ω speaker)
  - 13 W (external, 4 Ω speaker)
- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
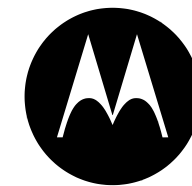- Dual Capacity Direct Mode
- 4 Programmable Buttons

FEATURES

- SINC+ (optional)
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch (optional)
- Transmit Interrupt (optional)
- Enhanced Privacy (optional)
- Over-The-Air Programming (RF)
- Telemetry Support (4 I/O Pins, 3 Buttons)

MOTOTRBO DP3000e SERIES

COMPACT AND RUGGED
FOR THE MOBILE PROFESSIONAL
WHO NEEDS EFFECTIVE COMMUNICATION

- Next-generation, high-performance compact portable

- Supports voice, data, text and apps

- Compatible with all MOTOTRBO system types

- Integrated Wi-Fi®, Bluetooth® 4.0 and GNSS

- Plain and colour display/limited keypad models

- IMPRES™ audio and energy compatible

- Full suite of accessories

- Optional TIA4950 HazLoc certification

DP3441e   DP3661e

DIRECT MODE   CONVENTIONAL   IP SITE CONNECT   CAPACITY PLUS   CAPACITY MAX

YOU'RE COMPLETELY CONNECTED

DP3000e SERIES DETAILS

SPECIFICATIONS

- Dimensions with battery:
  - 100 x 55 x 30 mm, 254 g (DP3441e)
  - 100 x 55 x 36 mm, 290 g (DP3661e)
- Bands:
  - VHF (136-174 MHz)
  - UHF (403-512 MHz)
- Transmitter Power:
  - 1 or 5 W (VHF)
  - 1 or 4 W (UHF)
- Capacity:
  - 32 Channels (DP3441e)
  - 1000 Channels (DP3661e)
- Battery Life (analogue/digital)
  - 20.5 / 27.5 hrs (Low Voltage 3000 mAh batt)
- Waterproof to IP68

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Basic Privacy
- Voice Announcement
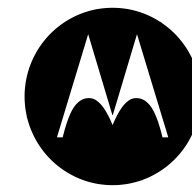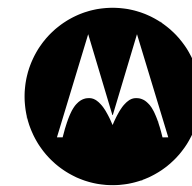- Dual Capacity Direct Mode
- 2 Programmable Buttons (DP3441e)
- 4 Programmable Buttons (DP3661e)

FEATURES

- IMPRES™ Audio Compatible
- SINC+ (optional)
- IMPRES Energy Compatible
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch (optional)
- Transmit Interrupt (optional)
- Enhanced Privacy (optional)
- AES256 Encryption (optional)
- Over-The-Air Programming (RF/Wi-Fi)
- Integrated GPS/GLONASS
- Integrated Wi-Fi
- Bluetooth 4.0 Audio and Data
- Dedicated Orange Emergency Button
- Option Board Compatible
- Indoor Location Tracking (optional)
- Integrated Accelerometer for Mandown

MOTOTRBO DP4000e SERIES

TOTAL CONNECTIVITY
FOR THE SKILLED PROFESSIONAL
WHO REFUSES TO COMPROMISE

- Next-generation, high-performance portable radio
- Supports voice, data, text and apps
- Compatible with all MOTOTRBO system types
- Integrated Wi-Fi®, Bluetooth® 4.0 and GNSS
- Plain, limited keypad and full keypad models
- IMPRES™ audio and energy
- Full suite of accessories
- Optional TIA4950 HazLoc certification

DP440*e   DP460*e   DP480*e

| ● DIRECT MODE | ● CONVENTIONAL | ● IP SITE CONNECT | ● CAPACITY PLUS | ○ CAPACITY MAX |

YOU'RE COMPLETELY CONNECTED

DP4000e SERIES DETAILS

SPECIFICATIONS

- Dimensions with battery:
  - 130 x 55 x 34 mm, 295 g (DP440*e)
  - 130 x 55 x 36 mm, 330 g (DP460*e/DP480*e)
- Bands:
  - VHF (136-174 MHz)
  - UHF (403-527 MHz)
  - 300 (DP4401e, DP4801e only) (300-360, 350-400 MHz)
- Transmitter Power:
  - 1 or 4W (UHF, 300MHz)
  - 1 or 5 W (VHF)
- Capacity:
  - 32 Channels (DP440*e)
  - 1000 Channels (DP460*e/DP480*e)
- Battery Life (an/dig) – high cap battery
  - 21.5 / 28.0 hours (UHF, 300MHz)
  - 21.5 / 29.0 hours (VHF)
- Waterproof to IP68, rugged MIL-STD 810

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Freeform Texting (DP480*e)
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 3 Programmable Buttons (DP440*e)
- 5 Programmable Buttons (DP460*e/DP480*e)
- Dedicated Orange Emergency Button
- Vibrate Alert (optional)

FEATURES

- IMPRES™ Audio Compatible
- SINC+ (optional)
- IMPRES Energy Compatible
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch (optional)
- Transmit Interrupt (optional)
- Enhanced Privacy (optional)
- AES256 Encryption (optional)
- Over-The-Air Programming (RF/Wi-Fi)
- Integrated GPS/GLONASS (optional)
- Integrated Wi-Fi (optional)
- Bluetooth 4.0 Audio & Data (optional)
- Option Board Compatible
- Indoor Location Tracking (optional)
- Integrated Accelerometer for Mandown
- Telemetry Support (3 I/O Pins, 3 Buttons)

MOTOTRBO SL4000e SERIES

SLEEK AND SMART
FOR THE BUSINESS LEADER
WHO NEEDS COMPLETE CONTROL

- Next-generation slim portable radio

- Supports voice, data, text and apps

- Digital signalling only

- Compatible with all MOTOTRBO system types

- Integrated Wi-Fi and Bluetooth 4.0

- Colour screen and full keypad

- Model available with built in option board

- Full suite of accessories

SL4010e   SL4000e

DIRECT MODE	CONVENTIONAL	IP SITE CONNECT	CAPACITY PLUS	CAPACITY MAX

YOU'RE SMARTER, CONNECTED

SL4000e SERIES DETAILS

SPECIFICATIONS

- Dimensions with slim battery:
  - 121 x 55 x 17 mm, 154 g
- Bands:
  - UHF (403-470 MHz)
- Transmitter Power:
  - 1, 2 or 3 W (UHF)
- Capacity:
  - 1000 Channels
- Battery Life:
  - 14.3 hours (2200 mAh battery)
- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Freeform Texting
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 2 Programmable Buttons
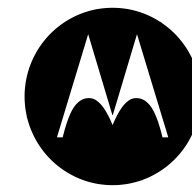- Dedicated Orange Emergency Button
- Vibrate Alert
- Covert Mode

FEATURES

- SINC+ (optional)
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch
- Transmit Interrupt
- Enhanced Privacy
- AES256 Encryption (optional)
- Over-The-Air Programming (RF/Wi-Fi)
- Integrated Wi-Fi
- Bluetooth 4.0 Audio and Data (optional)
- Indoor Location Tracking (optional)
- Integrated Accelerometer for Mandown
- Telemetry Support (3 Buttons)

MOTOTRBO ATEX RADIOS

- For customers requiring devices for use in potentially explosive environments

- ATEX Certification:
  - Gas: Class II 2G Ex ib IIC T4 Gb
  - Dust: Class II 2D Ex ib IIIC T130 °C Db
  - Mining:
    - I M2 Ex ib I Mb (DP4000 Ex)
    - I M1 Ex ia I Ma (DP4000 Ex Ma)

- IEC Ex Certification:
  - Gas: Ex ib IIC T4 Gb
  - Dust: Ex ib IIIC T130°C Db
  - Mining:
    - Ex ib I Mb (DP4000 Ex)
    - Ex ia I Ma (DP4000 Ex Ma)

- Radios are colour-coded to enhance recognition

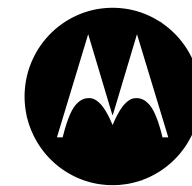- Supporting ATEX/IEC Ex certified accessories available

DP4401 Ex
DP4401 Ex Ma

DP4801 Ex
DP4801 Ex Ma

● DIRECT MODE	● CONVENTIONAL	● IP SITE CONNECT	● CAPACITY PLUS	○ CAPACITY MAX

DP4000 Ex SERIES DETAILS

SPECIFICATIONS

- Dimensions with battery:
  - 138 x 57 x 38 mm, 456 g (DP4401 Ex / Ma)
  - 138 x 57 x 40 mm, 482 g (DP4801 Ex / Ma)
- Bands:
  - VHF (136-174 MHz)
  - UHF (403-470 MHz)
- Transmitter Power:
  - 1W (VHF, UHF)
- Capacity:
  - 32 Channels (DP4401 Ex / Ma)
  - 1000 Channels (DP4801 Ex / Ma)
- Battery Life (an/dig) – high cap battery
  - 16.0 / 19.0 hours (VHF, UHF)
- Waterproof to IP67

FEATURES

- Dedicated Orange Emergency Button
- 3 Programmable Buttons (DP4401 Ex / DP4401 Ex Ma)
- 5 Programmable Buttons (DP4801 Ex / DP4801 Ex Ma)
- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Freeform Texting (DP4801 Ex / Ma)
- Basic Privacy
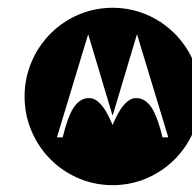- Voice Announcement
- Dual Capacity Direct Mode

FEATURES

- Integrated GPS (DP4000 Ex)
- Option Board Compatible (DP4801 Ex / Ma)
- IMPRES™ Audio Compatible
- SINC+ (optional)
- IMPRES Energy Compatible
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch
- Transmit Interrupt
- Enhanced Privacy
- AES256 Encryption (optional)
- Over-The-Air Programming (RF)
- Integrated Accelerometer for Mandown
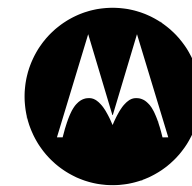- Telemetry Support (3 I/O Pins, 3 Buttons)

MOTOTRBO DM4000e SERIES

TOTAL CONNECTIVITY
FOR THE SKILLED PROFESSIONAL
WHO REFUSES TO COMPROMISE

- Mobile companion to DP4000e Series

- Next-generation mobile radio

- Enhanced voice, data, text and apps

- Compatible with all system types

- Integrated Wi-Fi®, Bluetooth® 4.0 and GPS/GLONASS

- Numeric or full colour display

- Full suite of accessories

DM460*e

DM440*e

● DIRECT MODE ● CONVENTIONAL ● IP SITE CONNECT ● CAPACITY PLUS ○ CAPACITY MAX

YOU'RE COMPLETELY CONNECTED

DM4000e SERIES DETAILS

SPECIFICATIONS

- Dimensions:
  - 53 x 175 x 206 mm, 1.8 kg
- Bands:
  - VHF (136-174 MHz)
  - UHF (403-470, 450-527 MHz)
  - 300 (DM4401e, DM4601e) (300-360, 350-400 MHz)
- Transmitter Power:
  - 1-25 W or 25-45 W (VHF)
  - 1-25 W or 25-40 W (300 MHz, UHF)
- Capacity:
  - 99 Channels (DM440*e)
  - 1000 Channels (DM460*e)
- Dust and water rating: IP54

FEATURES

- Automatic Gain Control
- Trill Enhancement
- Emergency Alarm
- Lone Worker
- Pre-programmed Texting
- Freeform Texting (with keypad mic)
- Basic Privacy
- Voice Announcement
- Dual Capacity Direct Mode
- 4 Programmable Buttons

FEATURES

- IMPRES™ Audio Compatible
- SINC+ (optional)
- Intelligent Audio
- Extended Texting (up to 280 characters)
- Digital telephone Patch (optional)
- Transmit Interrupt (optional)
- Enhanced Privacy (optional)
- AES256 Encryption (optional)
- Over-The-Air Programming (RF/Wi-Fi)
- Integrated GPS/GLONASS (optional)
- Integrated Wi-Fi (optional)
- Bluetooth 4.0 Audio and Data (optional)
- Option Board Compatible
- Indoor Location Tracking (optional)
- Telemetry Support (5 I/O Pins, 3 Buttons)

HANDHELD CONTROL HEAD
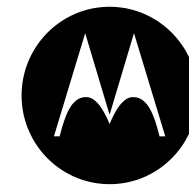
- Option for DM4000 / DM4000e Series mobile radios

- Handheld user interface for mobile radio
  - Full keyboard and colour screen
  - Similar user experience to DP4800e

- 1.8m coiled cord can stretch to 3m
  - Additional 4.9m extension cable available

- Mobile radio can be installed remotely

- Users can communicate while they move around within their vehicles
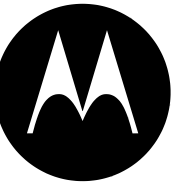 - For example: ambulance staff, delivery truck drivers
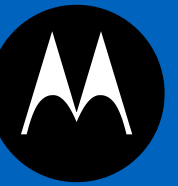
ACCESSORIES

MOTOTRBO ACCESSORIES

AUDIO

Choose from earpieces, headsets, remote speaker microphones (RSMs), active noise cancellation earphones.

ENERGY

Keep your communications up and running for the whole shift, with IMPRES™ smart batteries and chargers

WIRELESS

A comprehensive portfolio of Bluetooth accessories to keep you connected without wires.

MOBILE

A wide range of accessories for vehicle-mounted radios, including keypad microphones, remote mount kits and handheld control heads.

CARRY

Keep your radio safe and conveniently to hand, with the Motorola Solutions range of cases, belt clips, belt loops and holsters.
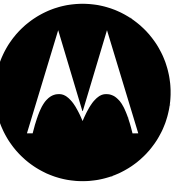
ANTENNAS

Innovative, high technology antennas that give you great performance without getting in your way.

IMPRES AUDIO

- Motorola-patented technology for enhanced audio performance
  - Enhanced performance Remote Speaker Microphones (RSMs), surveillance earpieces, temple transducer headsets, specialist Ear Microphone Solutions and visor, fist or handset-style microphones for in-vehicle installation

- Optimal audio accessory performance
  - Loudness
  - Clarity
  - Intelligibility

- Talk loud or whisper
  - Balances different users' levels of loudness
  - IMPRES automatically adjusts microphone gain to give consistent audio level at receiving radio

- Talk close or further away
  - Compensates for users who hold radio at different distances and angles
  - IMPRES automatically adjusts microphone gain to give consistent audio level at receiving radio

- Background Noise Suppression
  - IMPRES modifies microphone gain when user speaks, lowering the sensitivity and focusing on the spoken word
  - Suppresses background noise, resulting in clearer transmissions

IMPRES ENERGY
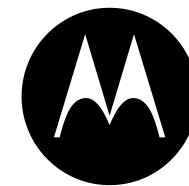
- Motorola-patented technology for enhanced battery lifecycle
  - Maximised runtime, improved lifetime
  - IMPRES radio, battery and charger communicate to optimise performance
  - Can increase life of IMPRES battery by up to 43%

- Smart batteries collect historical information on cell status, charge time and capacity

- Smart chargers read battery data and automatically schedule reconditioning cycles as necessary

- Desktop application interfaces to charger
  - Dashboard view of status of batteries
  - Early prediction of failing batteries
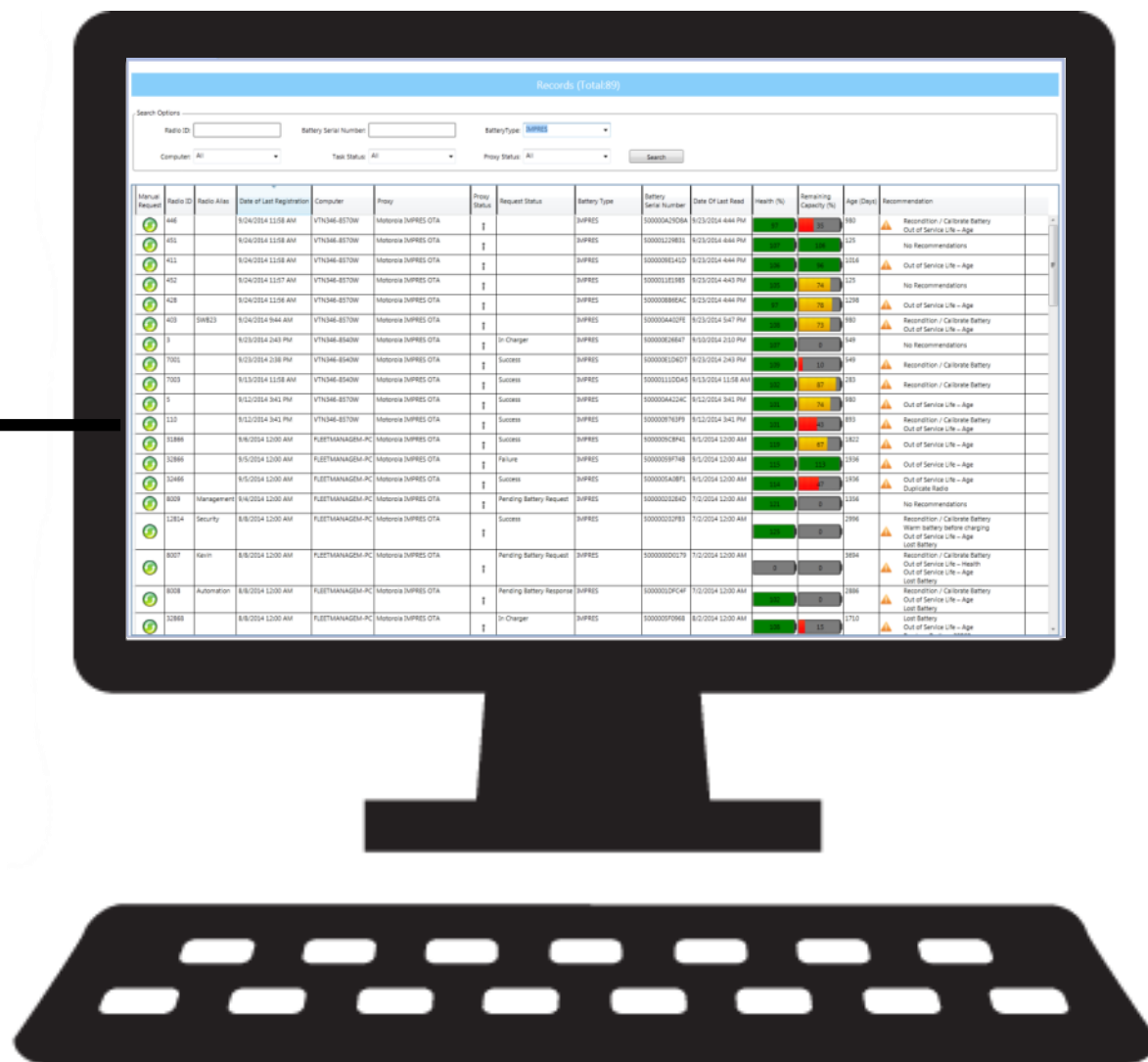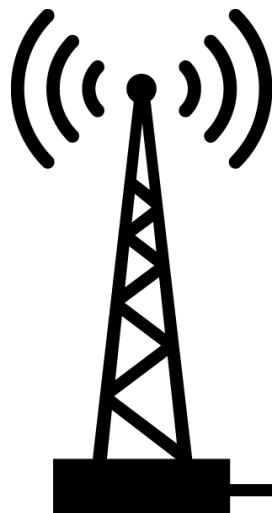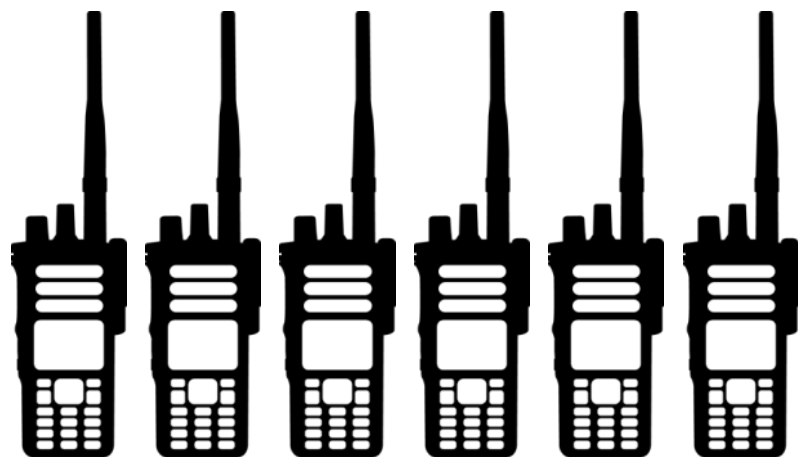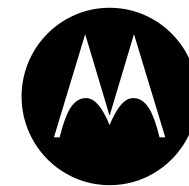
LONG RANGE WIRELESS MIC
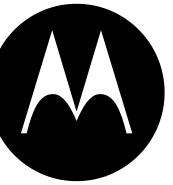
- Allows you to stay connected when you're working away from your vehicle

- Bluetooth touch-pairing with radio

- Up to 100 yards range

- Up to 11 hours battery life

- Integrated task-light

- 3.5 mm audio jack for earpieces
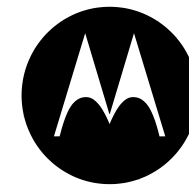
IMPRES OVER-THE-AIR BATTERY MGT

- Collects battery data automatically – even while radios are in use

- Generates long-term battery performance history records

- Allows early prediction of battery end-of-life

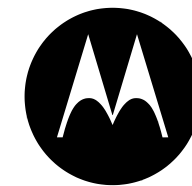# APPLICATIONS

MOTOTRBO APPLICATIONS

- Taking you beyond simple voice communications, the MOTOTRBO Application Developer Programmme (**ADP**) increases the value of your two-way radio system by giving you access to advanced functionality from industry innovators.

- Motorola has also partnered with premium application developers to create the Motorola Sold and Supported (**MSS**) programme: a range of applications that are uniquely integrated to your MOTOTRBO radio system.
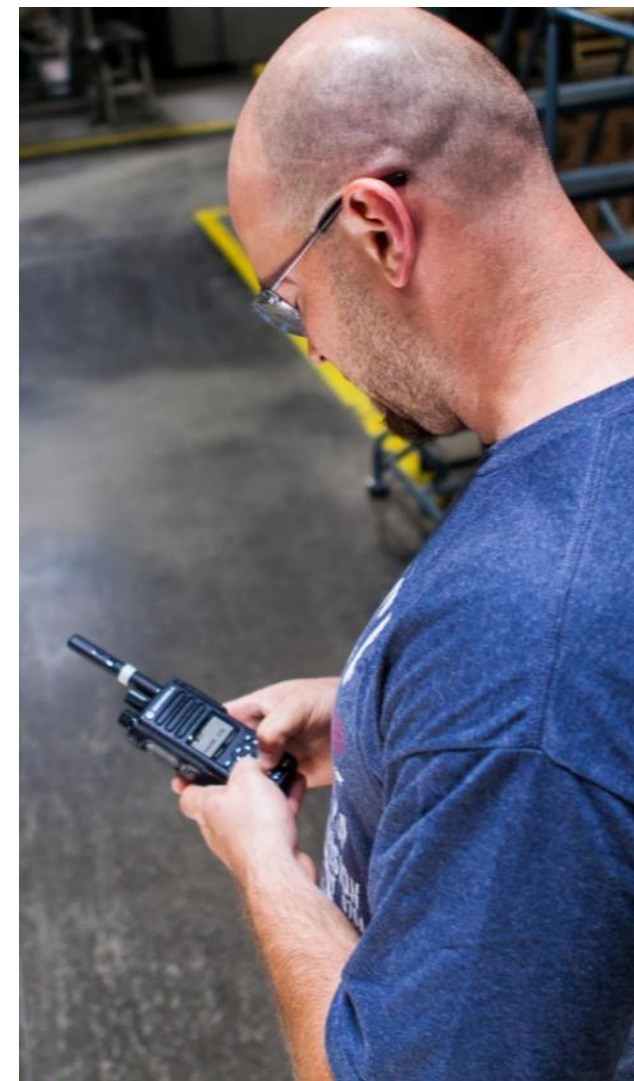
MOTOTRBO ADP APPLICATIONS

COMMAND AND CONTROL

These applications work behind the scenes of your MOTOTRBO network to enhance the efficiency and responsiveness of your system.

EMAIL AND TEXT

Enhance productivity by connecting your radio network with your text and email system. Allow your staff to use advanced work order ticketing solutions, and streamline the flow of information between office and shop floor.

INTEROPERABILITY

Connect your MOTOTRBO radio system to other communication systems. From analogue two-way radio systems to SIP telephone networks, you can increase efficiency and enhance collaboration.

LOCATION

Track your vehicles and your staff for improved safety, security and accountability. These applications allow you to make the most of MOTOTRBO's GPS capabilities, and some even offer indoor location tracking capabilities.

PERSONNEL SAFETY

Increase the safety and accountability of your staff by deploying these applications. Features such as Man Down and Lone Worker can be linked to indoor and outdoor location services for maximum effectiveness.

SYSTEM MONITORING

To get the best from your MOTOTRBO system, you need to know how it's performing. These applications give you a dashboard of metrics and parameters, with detailed logs helping you plan future growth.

VOICE DISPATCH

Giving you centralized control of your workforce, these applications allow your dispatcher to coordinate your staff effectively. They also enhance business connectivity by allowing telephony interconnections and patching.
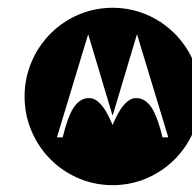
WORK TICKET MANAGEMENT

These applications enhance efficiency and accountability in the workplace using text-based issue management software. They can be integrated with your existing work-order management solution or operated independently.

MOTOROLA SOLD & SUPPORTED

- A range of applications from premium application development partners that add unique value to your MOTOTRBO radio system

- Offered for sale through Motorola Solutions

- Supported through the standard Motorola Solutions service process

- Uniquely integrated with MOTOTRBO
  - Apps have exclusive access to wireline voice interface
  - Developers have early access to software releases
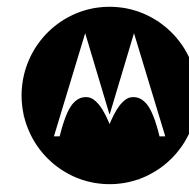
SMARTPTT PLUS
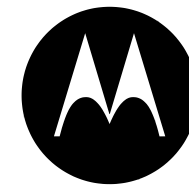
- Software-based Dispatch Console

- Compatible with all MOTOTRBO system types

- Direct wireline IP connection to system
  - No control stations required
  - Gracefully scalable
  - Access to all call types

- Reliable, redundant architecture

- Easily-customized user interface

- Optional functionality
  - GPS / Indoor Location-Tracking
  - Voice Recording
  - Telephone Interconnect
 - 4-Wire analogue Interconnect

SOLD AND SUPPORTED

TRBONET PLUS

- Software-based Dispatch Console

- Compatible with all MOTOTRBO system types

- Direct wireline IP connection to system
  - No control stations required
  - Gracefully scalable
  - Access to all call types

- Reliable, redundant architecture

- Easily-customized user interface

- Optional functionality
  - GPS / Indoor Location-Tracking
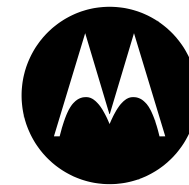 - Voice Recording
  - Telephone Interconnect

SOLD AND SUPPORTED
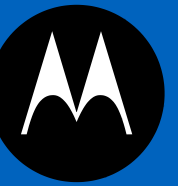
SUMMARY

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- A broad portfolio of products, systems, applications and services

- All the advantages of digital radio, with a graceful migration from analogue

- Compatible with WAVE Unified Communications

- Rugged, dependable devices

- Reliable availability

- Manageable cost of ownership

- Customisable solutions

THANK YOU

www.motorolasolutions.com/mototrbo