



Note: Finishes may vary



Products is not actual size

SRG3900

TETRA GATEWAY/REPEATER

Sepura's SRG3900 is the latest generation of the proven SRG3000 Series mobile radio and includes support for both the Sepura **Colour Console** (SCC) with hi-colour user interface and for "hot swappable" front connected accessories.

The SRG3900 is a **fully featured TETRA mobile** that is hardware ready to support Direct Mode **Gateway**, Direct Mode **Repeater**, **PEI** based Data and **E2EE** options.

Designed and manufactured by Sepura, the **adaptability and flexibility** of the SRG3900 has been designed to meet the needs of demanding users within the Transport, Utility and Public Safety markets.

ADAPTABLE

- Class leading 10 Watts RF Power gives the greatest **operational range** of any TETRA radio.
- Direct Mode Gateway services increase workflow management with Intelligent Call Conversion and Message Routing.
- Direct Mode Repeater functionality enhances DMO communication.

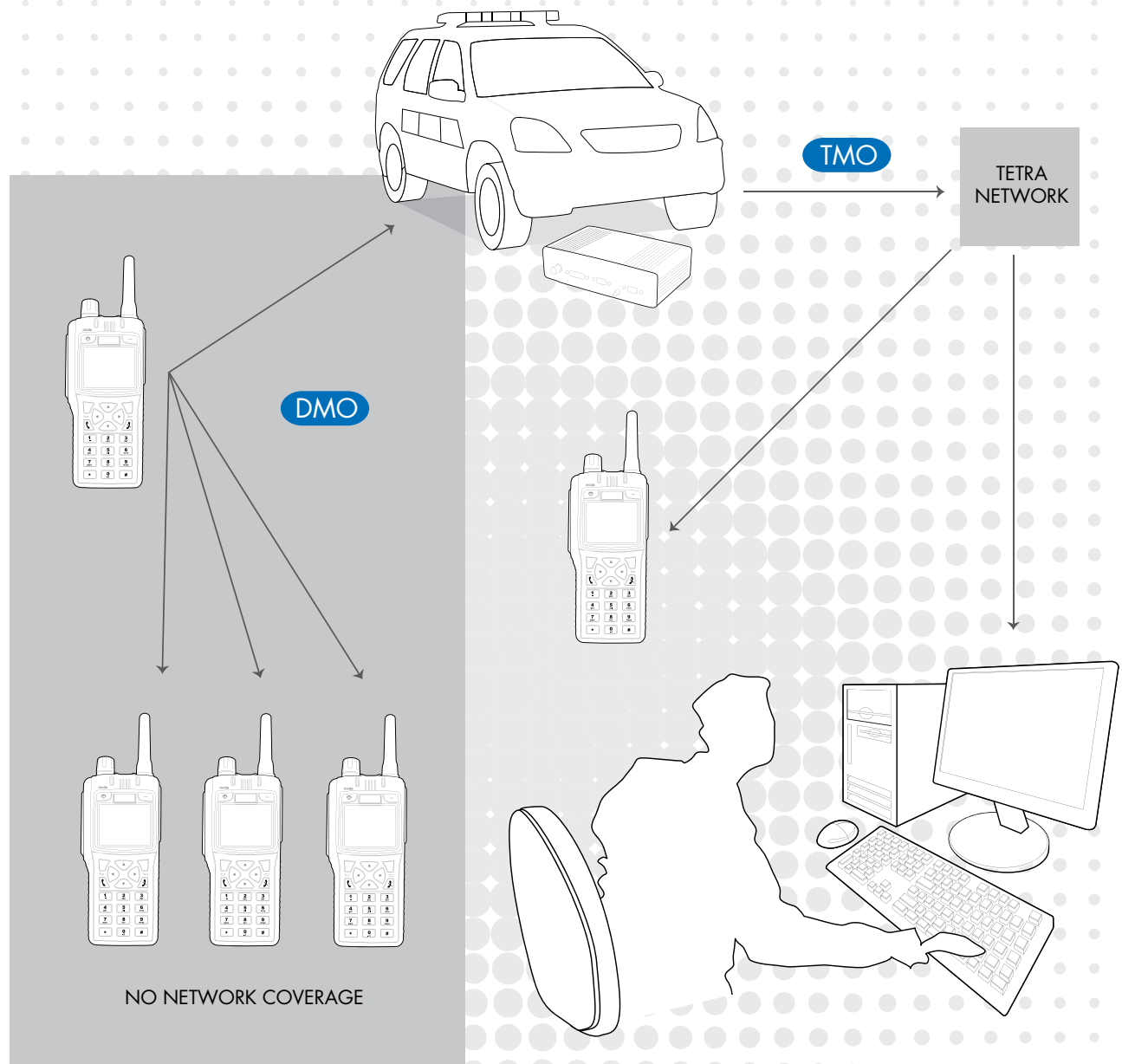
FLEXIBLE

- Feature licence codes to enable functionality when required in the field.
- **Backwards compatible** with existing Sepura Mobile installations.
- **Numerous installation solutions** include Transceiver only, Dual Console, Virtual Console, Handset Based Console and a Remote SIM Reader option.
- Audio presentation options support PA broadcast, local recording and 3rd party radio equipment.

INTELLIGENT

- Night Mode for low glare night use.
- Over-the-air remote control via Sepura Status Triggered Functions.
- Tamper protected and Smart card based E2E Encryption options.
- Performance monitoring feature facilitates network analysis.

EXTENDING OPERATIONAL REACH



DIRECT MODE GATEWAY

IMPROVED COVERAGE

Links radios operating in Direct Mode with the trunked radio network **extending primary radio coverage** into areas of unreliable coverage or network dead spots found inside buildings, deep inside tunnels or in remote rural locations.

INTELLIGENT COMMUNICATION

With Sepura Intelligent Call Conversion, the calling party only needs to call the TETRA identity of the SRG3900. Once switched to DMO Gateway mode, the SRG3900 automatically converts and relays the incoming call or message to the Direct Mode users.

OPERATIONAL EFFECTIVENESS

Status messaging and SDS based messaging, including text and GPS location reports, are **seamlessly transferred** between the network and Direct Mode users. In operational terms, a control room dispatcher is able to track the positions of the individual users in a greater number of scenarios.

SRG3900 TETRA GATEWAY / REPEATER RADIO

The SRG3900 is a fully featured TETRA mobile radio that can be easily field upgraded to support DMO Gateway and DMO Repeater via a software licence code.

- 10 Watts RF Power – the most powerful TETRA mobile radio available.
- Hardware ready to support Direct Mode Gateway, Direct Mode Repeater, PEI based Data and E2EE options.
- Common UI with all Sepura radios – gives advantages of **easy integration** into existing fleets, whilst minimising user training.
- **Flexible configuration**, installation and audio options allow a solution to be tailored for all applications. The SRG3900 can be deployed as:
 - Transceiver only – for remote SCADA and telemetry operation.
 - Single Console – for vehicle, motorcycle, marine, desk and rack based solutions.
 - Dual console – for larger vehicles such as ambulance, fire and rail installations, which require multiple control points, each mounted up to 12m away from the transceiver.
 - Virtual Console – a software application allowing control of the radio from a Windows™ based computer.

- Handset Based Console – offers a GSM style handset solution where installation space is limited.
- Full and semi-covert installation.
- Applications Interface Unit – allows 3rd party control of the transceiver and user interface.
- Suitcase and Rucksack Transportable variants plus an Air approved product for helicopter and fixed wing installations.
- Remote SIM Reader allows Smart Card security solutions to be located near the user and up to 7m from the SRG3900.
- Optional GPS module, integral within the transceiver, with selectable support for NEMA, Sepura Compact or ETSI LIP messaging.
- Comprehensive Over the Air control using Sepura Status Triggered Functions.
- Multi-lingual user interface: Eastern and Western European languages plus Cyrillic, Chinese, Korean and Arabic.
- Fully configurable emergency call behaviour including live microphone, status messaging and location reporting options.
- The SRG3900 has been built to address security issues by including tamper protected security processors and a smart card connector in all models. **E2E Encryption** can be implemented in the field by a software upgrade, thus minimising any operational disruption.



Note: Finishes may vary

INTELLIGENT OPERATION

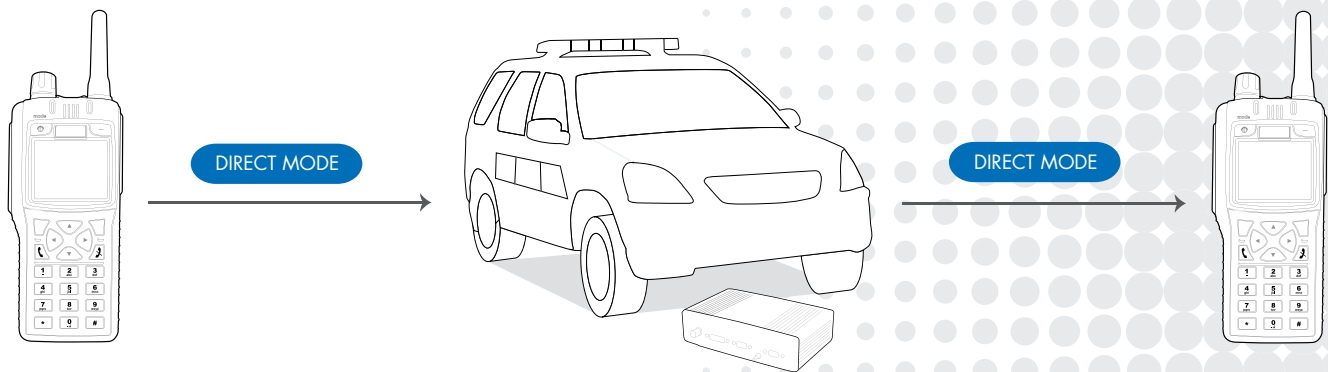
- Low glare night mode to enable **safe night use**.
- Dual data ports, as standard, enable support for two data applications.
- Multiple I/O lines available – activated locally or via Status Triggered operation.
- Configurable audio presentation options allow:
 - Fixed Level Line-out audio for use with PA Broadcast or local voice Recorder².
 - Line-in Audio to support a 3rd party console interface².
 - Independent volume control of the loudspeaker and audio accessories².
- Sepura Advanced Serial Interface (SASI) on the SCC provides future scope for advanced accessories with increased functionality.
- Macro keys allow a sequence of functions to be combined and activated by a single Soft key action.
- **Short Data Applications** that allow system integrators to create and run complex form driven programmes that can interact with back office systems via SDS messaging.
- Performance Monitoring, whereby the radio can be remotely interrogated for a report on the signal level, location, neighbour cells and data latency of a TETRA network, allowing an organisation to monitor the Quality of Service (QoS) provided.
- When operating in Gateway mode, the SRG3900 will translate any received GPS message so that the DMO originator's identity is maintained.

ADAPTABLE DESIGN

- Fully compatible with existing Sepura accessories and cabling, allowing easy substitution and extending the life of existing installations.
- The SRG3900 will automatically vary the display mode to match the connected console and accessories⁴. The following modes are supported:
 - Hi-Colour
 - Colour
 - Monochrome

DIRECT MODE REPEATER

EXTENDING OPERATIONAL REACH



In situations where there is no network coverage available, the 10 watt DMO Repeater allows multiple Direct Mode users to exchange voice and data messages over a wider area with **increased reliability**. The DMO Repeater is ETSI compliant Type 1A which uses a single frequency, thus **saving scarce spectrum**.

Note: Direct Mode Gateway and Repeater services are enabled by a feature licence code.

SRG3900 CONSOLE OPTIONS



Handset
Based
Control



SCC Black
Bezel



SCC Blue
Bezel



Standard Mode Screen



Night Mode Screen



Virtual Console Screen

SRG3900

TETRA GATEWAY/REPEATER

SIZE AND WEIGHT

TRANSCIVER

980g - 178mm W x 49.75mm L x 126.2mm D (inc Connectors and SIM door)
SEPURA COLOUR CONSOLE (SCC)
 220g - 185mm W x 58mm L x 33mm D
HANDSET BASED CONSOLE
 225g - 69mm W x 162mm L x 28mm D

FREQUENCY BANDS

380 - 430MHz
 407 - 473MHz

POWER SUPPLY

10.8 to 15.6V DC, typical 13.8V DC

RF PERFORMANCE

10 watt RF Power output (Class 2)
 RF power adjustable in steps of 5dB,
 Independently adjustable for TMO and DMO
 operations
 Adaptive Power Control supported
 Receiver Static Sensitivity -112dBm
 Receiver Dynamic Sensitivity -103dBm
 Receiver Class A & B

ENVIRONMENTAL

Dust & Water protection to IEC529 IP54
 ETS 300 019 -2.5 drop, vibration and humidity
 Storage Temp -40°C to +85°C⁵
 Operating Temp -30°C to +70°C⁶
 IP67 Console option available¹

GPS RECEIVER - OPTIONAL

12 channel GPS receiver
 - 155dBm / - 185dBW acquisition sensitivity
 - 159dBm / - 189dBW tracking sensitivity
 ETSI LIP, Sepura Compact & NMEA protocol
 support
 Position Assist
 Over the Air GPS management
 Location reporting to two TETRA identities
 Position & Direction Display¹

SECURITY

Authentication – Mutual and SwMI initiated
 TMO and DMO Air Interface Encryption
 support - TEA1, TEA2, TEA3 and TEA4³
 Trunked Mode Security Class 1, 2 and 3
 Direct Mode DM-2C support
 PIN and PUK Entry
 Temporary Enable and Disable
 Fully Integrated E2E hardware with tamper
 protection
 Public & Private Algorithm E2E support ena-
 bled via software upgrade³
 Integral SIM connector for Smart Card based
 E2EE options³
 Dual E2EE Algorithm support with dynamic
 switching of active algorithm³
 Software Authenticity and protection
 employing Digital Signature

CONSOLE

High resolution 320 x 240 pixels QVGA TFT
 display
 Large 57.6mm x 43.2mm Active Area (2.8")
 262k colours
 Three text sizes⁴
 Night Mode⁴
 Front mounted audio accessories
 Front mounted connector for data and
 configuration via radio manager
 AMPS and single DIN compatible
 Fully compatible with existing accessories,
 cables and legacy mounting options
 Common Sepura UI
 Two context sensitive keys⁴
 Missed event LED
 Tri colour status LED
 18 configurable soft keys
 Dual remote console support, each up to 12
 metres from the Transceiver
 Virtual and Handset Based Console (HBC)
 options available¹

LICENCES

DMO Gateway
 DMO Repeater
 Virtual Console
 Line in/out audio

GATEWAY SERVICES (OPTION ENABLED BY A FEATURE LICENSE CODE)

Group voice call between DMO and TMO
 Individual voice calls between DMO and TMO
 Emergency group call from DMO to TMO
 Emergency group call from TMO to DMO
 Pre-emption (in either direction) of existing call
 SDS messaging in either direction¹
 Configurable routing of SDS messages to
 Console or PEI
 Intelligent handling of point to point calls and
 SDS messages whilst operating as a Gateway

REPEATER SERVICES (OPTION ENABLED BY A FEATURE LICENSE CODE)

Repeats DMO voice and tone signalling on
 selected talk group
 Repeats SDS and Status messaging on
 selected talk group
 ETSI Type 1A DMO Repeater for channel
 efficient operation
 Priority Call
 Emergency Call (Pre-emptive Priority Call)
 Supports E2E Encrypted DMO traffic
 Call participation whilst in Repeater mode

AUDIO

Rated Audio Output - 8 W @ 1kHz into 4 Ohms
 Dual speaker configuration capable of driving
 2 x 4 Ohms speakers
 Fixed Level Line-out audio option enabling Broad-
 cast and Recording support
 Line-in Audio for 3rd party console interface
 support
 Five independent volume controls for
 Loudspeaker and Audio Accessories ^{2 & 4}
 Three audio accessories per console

VOICE SERVICES

Full Duplex Calls (to MS and PABX/PSTN)
 Half Duplex Calls (Individual and Group)
 Late Entry
 Priority Call
 Emergency Call (Pre-emptive Priority Call)
 Emergency Call preference
 Talking Party Identity
 Calling Line Identity Presentation
 DTMF Dialling
 Ambience Listening
 Privacy Mode
 Whisper Mode
 Group Focus

DATA SERVICES

Status Messaging
 Short Data Service Messaging
 SDS via DMO Gateway
 Circuit Switched Data Calls
 Multi Slot Packet Data
 Text Message Data Store
 Short Data Applications (SDA)
 Wireless Application Protocol (WAP)
 SDS Store & Forward
 Concatenated SDS (up to 1000 characters)

OTHER FUNCTIONS AND FEATURES

Support for up to 9900 pre-programmed
 Talkgroups and in any combination of TMO
 or DMO talk groups
 Up to 50 Dynamic Group Number
 Assignment(DGNA) and supporting Lifetime
 Timers
 Efficient management of talk-groups using up
 to 5000 folders in a multilevel folder structure
 with up to 75 talk-groups per folder
 Talk-group Folder Management via PEI and SDS
 Fixed and User Defined Talk-group Scan Lists
 Priority Group Scanning with support for
 Background groups
 Fast Talk-group Access supports up to 5 TMO
 and 5 DMO groups
 Query selected Talk-group
 Telephone and Radio user Address Book
 (2000 entries) across 64 Folders
 Call History with Missed Call alerts
 Transmit Inhibit (TXI) with On/Off Status
 messaging
 DMO Group and Emergency Calls
 DMO Gateway Interoperability supported
 ETSI compliant PEI port. AT-command interface
 for external applications
 User Profiles including Pager capability
 Remote control via Status triggered functions
 Status triggered functions (up to 64
 configurable actions driven by remote user)
 Macro keys – operation of a single key will
 perform a sequence of complex functions
 Digital I/O lines (3 in, 1 out)
 Network performance monitoring

1 – further information available on request.

2 – accessories connected at the rear of a console use the same volume level.

3 – functionality is subject to an export licence.

4 – display mode and audio support will change when the legacy console, HBC or Virtual Console are connected.

5 – As defined in ETSI EN300 019-2-1 and EN300 019-2-2

6 – Operating at temperature extremes may limit some aspects of operational performance

Sepura's policy is to continually improve its products and services. The features and facilities described in this document were correct at publication, but are subject to change without notice.

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For more information visit sepura.com

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