

SRG3500 TETRA GATEWAY/REPEATER

Sepura's SRG3500 is a fully featured TETRA mobile that is hardware ready to support Direct Mode Gateway, Direct Mode Repeater, PEI based Data and E2EE options.

The SRG3500 is the world's best selling TETRA Gateway / Repeater radio. Designed and manufactured by Sepura, the adaptability and flexibility of the SRG3500 has been proven to meet the needs of the most demanding organisations.

Adaptable

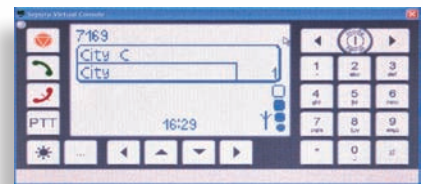
- Class leading 10 Watts RF Power gives the greatest operational range of any TETRA radio.
- Direct Mode Gateway services increase workflow management with Intelligent Call Conversion and Message Routing.
- Direct Mode Repeater functionality enhances DMO communication.

Flexible

- Numerous installation solutions include Transceiver only, Dual Console, Virtual Console and Handset Based Console options.
- Audio presentation options support PA broadcast, local recording and 3rd party radio equipment.

Intelligent

- 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.



Direct Mode Gateway:

Improved Coverage

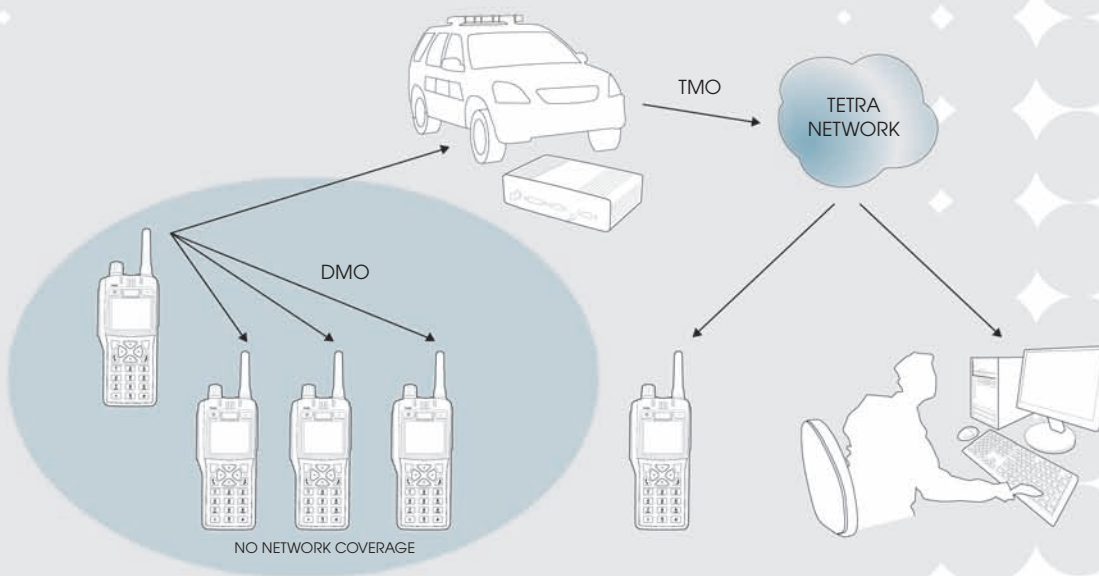
Links radios operating in Direct Mode with the trunked radio network extending primary radio coverage into areas of unreliable coverage or network dead spots found inside buildings, deep inside tunnels or in remote rural locations.

Intelligent Communication

With Sepura Intelligent Call Conversion, the calling party only needs to call the TETRA identity of the SRG3500. Once switched to DMO Gateway mode, the SRG radio 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.

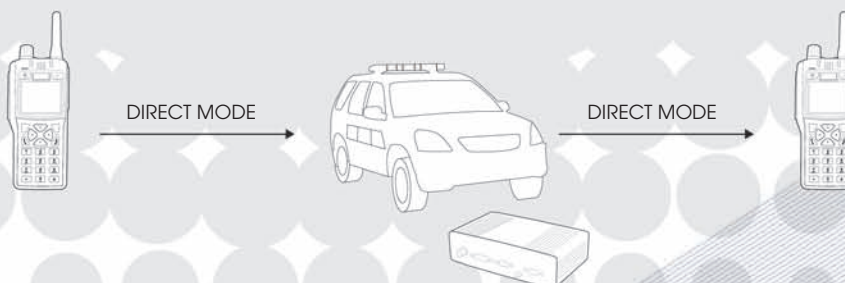


Direct Mode Repeater:

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 saving scarce spectrum.



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

Extending operational reach

SRG3500 TETRA Gateway / Repeater Radio

The SRG3500 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 SRG3500 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 10m 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.
- 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 and Korean and Arabic.
- Fully configurable emergency call behaviour including live microphone, status messaging and location reporting options.
- The SRG3500 has been built to address security 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 minimising any operational disruption.

Intelligent Operation

- 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 allows:
 - 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 an audio accessory².
- 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 SRG3500 will translate any received GPS message so that the DMO originators identity is maintained.

SRG3500 SPECIFICATIONS

All specifications are relative to +25°C unless otherwise stated.

SIZE AND WEIGHT <ul style="list-style-type: none"> • Transceiver 980g - 180mm W x 54mm L x 110mm D • Standard Console 200g - 187mm W x 64mm L x 30mm D • Handset Based Console 225g - 69mm W x 162mm L x 28mm D 	CONSOLE <ul style="list-style-type: none"> • 128 x 64 pixels LCD display with coloured backlights to indicate radio state • Up to 6 lines of 24 characters displayed • Dual remote console support, each up to 10 metres from the Transceiver. • Virtual and Handset Based Console (HBC) options available¹. 	<ul style="list-style-type: none"> • Whisper Mode • Group Focus
FREQUENCY BANDS <ul style="list-style-type: none"> • 350 - 372MHz • 380 - 430MHz • 440 - 473MHz¹ • 806/825 paired with 851/870MHz 	GATEWAY SERVICES (option enabled by a feature license code). <ul style="list-style-type: none"> • 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 	DATA SERVICES <ul style="list-style-type: none"> • 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
POWER <ul style="list-style-type: none"> • 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 	REPEATER SERVICES (option enabled by a feature license code). <ul style="list-style-type: none"> • 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 	OTHER FUNCTIONS AND FEATURES <ul style="list-style-type: none"> • Support for up to 3000 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 255 Folders 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 • Network performance monitoring
POWER SUPPLY <ul style="list-style-type: none"> • 10.8 to 15.6V DC, typical 13.8V DC 	AUDIO <ul style="list-style-type: none"> • Rated Audio Output - 8 W @ 1kHz into 4 Ohms • Fixed Level Line-out audio option enabling Broadcast and Recording support.² • Line-in Audio for 3rd party console interface support² • Independent Volume Control of Loudspeaker and Audio Accessory² 	
ENVIRONMENTAL <ul style="list-style-type: none"> • Dust & Water protection to IEC529 IP54 • ETS 300 019 -2.5 drop, vibration and humidity • Storage Temp -40°C to +85°C • Operating Temp -30°C to +70°C 	VOICE SERVICES <ul style="list-style-type: none"> • 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 	
GPS RECEIVER - OPTIONAL <ul style="list-style-type: none"> • 12 channel GPS receiver • - 163 dBW acquisition sensitivity • ETSI Location Information Protocol (LIP) Sepura Compact and NMEA protocol support • Position Assist • Over the Air GPS management • Location reporting to two TETRA identities • Position & Direction Display¹ 		
SECURITY <ul style="list-style-type: none"> • Authentication – Mutual and SwMI initiated • TMO and DMO Air Interface Encryption support - TEA1, TEA2, TEA3 and TEA4¹ • Trunked Mode Security Class 1, 2 and 3 • Direct Mode DM-2C support • PIN and PUK Entry • Software Authenticity and protection employing Digital Signature • Temporary Enable and Disable • Fully Integrated E2E hardware with tamper protection • Public & Private Algorithm E2E support enabled via software upgrade³ • Integral SIM connector for Smart Card based E2EE options 		

1 – Further information available on request

2 – Available only on 380-430 MHz SRG3500 mobile radios

3 – Functionality is subject to an export licence

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.