

Unique water-porting technology allows for uncompromised audio clarity, even in continuous, heavy rain; Connector Protector technology guards against corrosive damage in salt-laden environments.

BROADBAND READY

Designed to meet your communication challenges, now and in the future, the SC20 Series combines TETRA's secure and flexible voice and data communications with an optional second high-speed data bearer. Its

unique modular capability provides flexible licensing paths, keeping pace with advances in data technology and minimising the need for further investment.

Smart interaction with body-worn devices such as Bluetooth connected printers, barcode readers and RFID scanners is supported. Up to 32GB of on-board user storage (if using an SD card) allows rapid access to locally stored, data-centric applications and the creation of mission critical apps using moving mapping.

TECHNICAL SPECIFICATIONS

DIMENSIONS

Height: 139mm (exc antenna and rotary)
Width: 61mm (54mm)
Depth – standard battery: 32.5mm
Depth – high-capacity battery: 38mm

WEIGHT

With standard battery: 241g (exc antenna)
With high-capacity battery: 266g (excluding antenna)

TETRA RF PERFORMANCE

RF power:
MS power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹
MSPD power Class 3 (2.7W)¹, Class 3L (1.8W) & Class 4 (1W)¹
DMO repeater power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹
RF power customisable for:
• TMO/DMO/DM-repeater
• Adaptive power control
• Receiver class A & B

- Receiver static sensitivity -116dBm (-118dBm typical)
- Receiver dynamic sensitivity -107dBm (-109.5dBm typical)

AUDIO PERFORMANCE

Speaker audio power: 2W with EN-FI filtering
Rugged accessory connector (sRAC)²
Water porting technology continually clears water from mic/earpiece & speaker to allow use in constant rain

ENVIRONMENTAL PERFORMANCE

Operational temperature (conformance tested) -20°C to +60°C
Operational temperature (min./max.) -30°C to +65°C³
Storage temperature -40°C to +85°C⁴
Dust & water protection to IP65, IP66, IP67 & IP68
• IPx5 (weatherproof)
• IP6x (dustproof)

- IPx6 (waterproof – heavy rain/spraying/water-jet)
- IPx7 (waterproof – submersible, 1m depth for 30mins)
- IPx8 (waterproof – submersible, 2m depth for 1hour)
- 'Fit for purpose' tested for complete 8hr shifts "in the pouring rain"

Shock, drop & vibration: ETSI EN 300 019 5M3
Salt fog: MIL-STD-810G Method 509; duration 24hr salt⁵
Salt water: submersion, rated at 2m depth for 1hour⁵

1 – New standard (300-01852) & high-capacity (300-01853) batteries, along with the high power Class 3 feature licence, are required to operate the SC20 in high power RF Class 3 mode. Use of older STP batteries will limit SC20 operation to RF Class 3L
2 – Compatible with Sepura STP9000 & STP8000 RAC-based accessories
3 – Operating at temperature extremes may limit some aspects of operational performance
4 – As defined in ETSI EN300 019-2-1 & EN300 019-2-2
5 – Connector Protector must be enabled in customisation. An antenna, a battery & a Sepura accessory or sRAC cover must be fitted. Rinse in fresh water to prevent salt crystal build-up

For full technical specifications see the SC20 Datasheet or visit www.sepura.com

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ACCESSORIES

APPS

PROGRAMMING

RADIOS

SC20

HAND-HELD RADIO



sepura

Going further in critical communications

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SC20 SERIES

Resilient, intelligent and durable, the SC20 Series next generation smart hand-portable radios are designed to tackle today's communications challenges and provide tomorrow's communications solutions

GLOVE-FRIENDLY OPERATION

Large, tactile press-to-talk key, three side soft keys with haptics and the 'blind find' emergency button make the SC20 Series easy to operate, even with gloved hands

MISSED EVENT INDICATOR

A blue LED indicates that a call/message has been missed

DUSTPROOF AND WATERPROOF

IP65/66/67/68 certified, the SC20 Series' ergonomic non-slip case is impervious to water and continuous immersion to a depth of 2m for one hour. Also allows easy cleaning in running water

UNIQUE NOTIFICATION BAR

Gives rapid access to favourite features, indicates missed calls and messages, and clearly shows changed states, such as speaker mute or transmit inhibit

INTERCHANGEABLE COLOURED BAR

Allows personalisation of the radio and easy identification

TOOL-FREE ACCESS

For quick and easy substitution of the SmartCard and MicroSDHC

RFID TAG

Facilitates access control solutions, tracking of pool-issued radios and potential for integration with back-end systems

ENHANCED FIDELITY

Along with powerful 2W audio, delivers loud, clear and rich voice communication – even in the noisiest conditions

STP ACCESSORY RE-USE

The SC20 Series is compatible with all Sepura STP antennas, batteries** and RAC-based accessories. It is also compatible with Radio Manager 2 and all Sepura crypto management tools***

UNIQUE WATER PORTING TECHNOLOGY

Expels liquid, protecting the earpiece, speaker and both mics and maintaining clear communication even in heavy downpours

sRAC CONNECTOR

The sRAC delivers loud, clear audio to drive Sepura's range of high-performance accessories. It is compatible with Sepura STP RAC-mounted accessories

LARGE, SUNLIGHT-VISIBLE SCREEN

Ideal for use with data-rich apps. Night mode reduces glare in low light

UNIQUE SMART MENUS

Allow customisable presentation of features and hundreds of soft key functions

APPSPACE ENABLED

Connectivity to Sepura AppSPACE technology delivers operational and functional improvement by interfacing the radio to applications that integrate the radio, data and third-party systems to improve outcomes, increase efficiency and enhance team safety.

RESILIENT, HARD-CAPPED KEYS

Resist abrasion with glove-friendly operation, enhanced by haptics

RUGGED AND SALT RESISTANT

Unique rugged fit-n-lock connector allows rapid data accessory swapping. Connector Protector technology guards against corrosion in salt-laden environments



THE SC20 SERIES COMBINES MISSION CRITICAL TETRA VOICE AND DATA WITH A SECOND HIGH-SPEED DATA BEARER IN A TOUGH, APPS-ENABLED, GO-ANYWHERE PACKAGE

Shaped by user feedback, the SC20 Series provides intuitive operation and outstanding performance, even in the toughest conditions. Highly versatile, the SC20 Series combines the security and advanced capabilities of TETRA with an optional second high-speed data bearer.

An enhanced apps capability supports interaction with a range of USB and Bluetooth-linked body-worn data accessories, and interactive access to online databases via TETRA or the second high-speed data bearer.

USER FRIENDLY

The SC20 Series' intuitive user interface utilises three context keys and a smarter menu, making it easy to pick up and use with a minimum of training, whilst remaining familiar to existing Sepura users.

A unique notification bar gives instant access to five favourite features, indicates missed calls or messages, and alerts the user to any changed states, such as speaker mute or transmit inhibit. Customer-defined SmartMenus give swift access to hundreds of soft key features.

The 2.4" high resolution QVGA screen, the largest on any TETRA hand-portable, anticipates increased apps usage and allows for easy viewing in all light conditions, including direct sunlight.

CLASS-LEADING PERFORMANCE

Powerful 2W audio with enhanced fidelity (EN-FI) technology ensures that voice communication is richer and clearer, even in high noise environments.

Class 3 high-power RF transmission, coupled with exceptional receive sensitivity, gives the SC20 Series extended operational range, stretching coverage into areas where it was not possible before.

UNPARALLELED ROBUSTNESS

Submersible, waterproof and dustproof, the SC20 Series boasts IP65, 66, 67 and 68 environmental protection ratings along with an easy-clean design that allows it to be rinsed in running water – ideal for use in the most demanding environments, such as mining or even within construction.

For more information visit sepura.com/SC20



* Integration with Portalify solutions required. Portalify is a Sepura company. For more information, please contact your local representative.
** STP batteries limit the SC20 series to Class 3L RF. New Sepura SC batteries enable the SC20 series to support Class 3RF. Class 3 Support is licence-enabled.
*** Some performance limitations may apply

SC20 SERIES HAND-PORTABLES



DIMENSIONS

Height: 139mm (excluding antenna and rotary)
Width: 61mm (54mm)
Depth – standard battery: 32.5mm
Depth – high-capacity battery: 38mm

WEIGHT

With standard battery: 241g (excluding antenna)
With high-capacity battery: 266g (excluding antenna)

TETRA FREQUENCY BANDS

380-430MHz – SC2020
403-470MHz – SC2024
806-870MHz – SC2028

POWER SUPPLY

7.4V (nominal) lithium polymer battery packs
Intelligent reporting batteries
1160mAh standard battery¹
1880mAh high-capacity battery¹

TETRA RF PERFORMANCE

RF power:
MS power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹
MSPD power Class 3 (2.7W)¹, Class 3L (1.8W) & Class 4 (1W)¹
DMO repeater power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹
RF power customisable for:
• TMO/DMO/DM-repeater
• Adaptive power control
• Receiver class A & B
• Receiver static sensitivity -116dBm (-118dBm typical) (SC2028: -114dBm, -117dBm typical)
• Receiver dynamic sensitivity -107dBm (-109.5dBm typical) (SC2028: -104dBm, -107dBm typical)

AUDIO PERFORMANCE

Speaker audio power: 2W with EN-FI filtering
Rugged accessory connector (sRAC)²
Water porting technology continually clears water from mic/earpiece & speaker to allow use in constant rain

ENVIRONMENTAL PERFORMANCE

Operational temperature (conformance tested) -20°C to +60°C
Operational temperature (min./max.) -30°C to +65°C³
Storage temperature -40°C to +85°C⁴

Dust & water protection to IP65, IP66, IP67 & IP68

- IPx5 (weatherproof)
- IP6x (dustproof)
- IPx6 (waterproof – heavy rain/spraying/water-jet)
- IPx7 (waterproof – submersible, 1m depth for 30mins)
- IPx8 (waterproof – submersible, 2m depth for 1hour)
- 'Fit for purpose' tested for complete 8hr shifts "in the pouring rain"

Shock, drop & vibration: ETSI EN 300 019 5M3

Salt fog: MIL-STD-810G Method 509; duration 24hr salt⁵

Salt water: submersion, rated at 2m depth for 1hour⁵

RFID PERFORMANCE

Internal tag: HITAG S2048, short range, 125 KHz, ISO11784 & ISO11785 compliant
Range: 1 cm from back of individual radio box pack
User accessible storage: 2048 bits, passive technology pre-programmed (user editable):

- 32-bit unique identifier
- Serial number
- Hardware code
- TEI

PRODUCT OPTIONS

GPS with future Glonass & BeiDou2 support
Bluetooth/Wi-Fi broadband module
Man-Down alarm⁷
DM-Repeater Type-1A
Air Interface encryption
End-to-end encryption
Enhanced security module (ESM)
End-to-end encryption smart card support
Wide range of languages supported
Micro SDHC card up to 32GB
User-changeable coloured bar for easy identification

DISPLAY & USER INTERFACE

Screen:
• 37 x 49mm active LCD area
• High-resolution display QVGA (320 x 240 pixels)
• Sunlight-visible Transflective TFT display, 262K colours
Menu:
• Intuitively-enhanced user interface
• 'Favourite feature' shortcut & event notification bar, with missed call indicator LED
• Choice of three user interface presentation styles (compatibility, grid & list modes)
• Customisable top-level screen content
• Customisable SmartMenus supporting 100s of intuitively arranged soft keys
• Quick change menu for rapid & intuitive selection of talkgroups, status & user profile
• Custom zoom/normal, large & very large mode text
• 'Twist & zoom' portrait image viewer
• Night mode to reduce low-light glare in vehicles
• Invert display for easy viewing whilst lapel- or belt-mounted
• Customisable privacy screen image
• Customisable user profiles e.g. 'covert', 'quiet', 'in a meeting' & 'loud'
Controls:
• Dual-language alpha-numeric keypad option
• Four-way navigation keys
• Three context keys for intuitive menu interaction
• Three configurable feature-activation side keys: blind-find & glove-friendly
• 12 configurable keypad feature activation keys
• Manual & automatic keypad lock
• Hard-capped keys
• Large, easy reach, blind find, glove-friendly PTT
• Blind-find emergency key
• Single rotary
Haptics:
• Vibrate on call/message
• Haptic technology for enhanced key tactility when used with gloves

TALKGROUP MANAGEMENT

- 9900 talkgroups including TMO & DMO
- 50 DGNA
- 5000 folders
- Five multi-level structure
- Quick groups/quick folder
- Home group
- Group toggle
- Talkgroup stack toggle

Talkgroup selection:

- Single or user-defined scan list (UDSL)
- 20 UDSL each with 10 talkgroups

Folder selection:

- 4987 folder scan list of 22 scanned talkgroups each
- Each folder scan list with 75 talkgroups
- 10 editable folder scan lists
- Background talkgroups in folder scan list

NETWORK

Multiple home networks
Up to 30 configurable networks
Simple & mutual authentication
Aliasing with Radio User Assignment (RUA)
• Radio user-initiated log-on/log-off process
• Dispatcher-initiated log-on/log-off process
Preferred location area
Fixed location area

PHONEBOOK

- 2000 contact names
- Up to six numbers per contact (to a max. of 6000 stored numbers)
- 64 contact folders including favourite folder

VOICE SERVICES

Individual/group/broadcast call
Half-duplex (individual & group)
Route pre-emptive half-duplex call to internal loudspeaker
Half-duplex audio toggle
Full-duplex calls (to MS & PABX/PSTN)
Full-duplex auto-answer
Independent volume control
Speed, one-touch & direct dialling
Call priority
Calling/talking party identification
DTMF/MSISDN/abbreviated dialling
Ambience listening
Privacy & whisper modes
Group focus
Transmit inhibit with on/off status messaging
Call history
Multiple alert tones

DMO SERVICES

DMO individual & group call
DMO emergency & intelligent emergency call
DM-repeater inter-working call
DM-gateway inter-working call
Channel-only talkgroup
DM-Gateway talkgroup pair

DATA SERVICES & APPLICATIONS

Dual-data-bearer support:
• TETRA & broadband Wi-Fi⁶
Single- & multi-slot packet data
WAP support:
• WAP 2.0
• WAP browsing via TETRA
• WAP high-speed browsing via Wi-Fi⁶
• WAP shortcuts embedded in S for instant data access
• WAP access OTA via TETRA or second data bearer
WAP onboard:
• Micro SDHC-based WAP sites for instant access to intelligence, images, maps & text
• Data maintained by Radio Manager2
Bluetooth module:

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Going further in critical communications

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- Discovery mode
- Generic attributes profile (GATT)
- Hardware-ready for:
 - Object push profile
 - Heart device (heart rate & temperature)
 - Battery service profile
 - Devices identity profile
 - Message Access profile
 - Human Interface Device (HID) profile
 - HID over GATT profile
- Bluetooth trusted device, auto re-connect
- Battery status advised immediately on start-up
- Short data applications (SDAs)
- Lone Worker feature
- Missed event application
- 30 quick status messages

AppSPACE

Allows use of secure apps on your radio
 Apps increase operational safety and productivity whilst reducing costs
 Apps can be customised to suit your workflows
 Controlled deployment by your fleet manager

GNSS LOCATION-BASED SERVICES (OPTIONAL)⁶

GPS -194dBw (-164dBm) tracking sensitivity
 Over-The-Air GPS reporting:

- ETSI location standard reporting (LIP)
- NMEA & Sepura compact messaging

 Max. simultaneous satellite track = 24
 Integral antenna plus active external antenna input option for use in sky obscured vehicles
 GPS-based compass
 On-board mapping capable
 Enhanced start-up & acquire through 'predictive ephemeris'

- Glonass and BeiDou2 support⁶

 34-channel concurrent GPS/GLONASS receiver
 SBAS differential GPS support
 -191dBW (-161dBm) acquisition sensitivity
 -191dBW (-161dBm) tracking sensitivity
 Over-The-Air GPS reporting using the following protocols:

- ETSI location standard reporting (LIP)
- NMEA & Sepura compact messaging

 Active anti-jamming of Continuous Wave (CW) jammers
 Multipath mitigation

SECURITY SERVICES

Authentication: mutual and SwMI initiated
 TMO & DMO Air Interface encryption support: TEA1, TEA2, TEA3 & TEA4⁵
 Trunked mode class 1, 2, 3 & 3G TETRA security
 Direct mode DM-2C support
 PIN & PUK entry temporary enable and disable
 Fully integrated E2E hardware with tamper protection
 Public & private algorithm E2E support enabled via software upgrade⁵
 Integral SIM connector for smart card-based E2EE options⁵
 Optional remote smart card reader
 Dual E2EE algorithm support with dynamic switching of active algorithm⁵
 Software authenticity & protection employing digital signature

GATEWAY SERVICES (LICENCE REQUIRED)

Group voice call between DMO & TMO
 Individual voice calls between DMO & TMO
 Emergency group call from DMO to TMO & TMO to DMO
 Pre-emption (in either direction) of existing call
 SDS messaging in either direction
 Configurable routing of SDS messages to console or PEI intelligent handling of point to point calls & SDS messages whilst operating as a gateway

REPEATER SERVICES (LICENCE REQUIRED)

DMO voice repeated
 DMO tone signalling repeated
 Group status & SDS repeated
 Type 1A efficient operation over one RF channel
 Presence signal support
 Emergency call
 Monitoring & participation in calls

CONNECTIVITY

TETRA voice & data
 Bluetooth support for voice & data
 Wi-Fi support
 PEI data via RS232, or USB data cables direct to radio or via SCC3
 Accessory connections via consoles and AIU
 SASI high speed interface for feature-rich audio accessories

Digital I/O lines expandable via AIU or expand by second board in main unit
 Line level audio connection
 Remote control via status-triggered functions
 Ethernet ¹ (hardware ready)

PROGRAMMING CAPABILITY

Micro SDHC contents manageable via Radio Manager 2
 On-screen programming progress bar
 High-speed programming via USB slave cable
 Background 'over the air' programming via Wi-Fi Radio Manager 2 compatible

1- Factory fit option

2 - Further information available on request

3 - Accessories connected at the rear of a console use the same volume level

4 - Operating at temperature extremes may limit some aspects of operational performance

5 - Functionality is subject to an export license

6 - GNSS any 2 of 4



SCG22

MOBILE RADIO



SCG22 SERIES

Intelligent, connected and **proven**, the SCG22 is the next generation mobile radio designed to tackle today's communication challenges and to meet the communications needs of the future

POWERFUL 10W CLASS2 RF

Extends communication into areas otherwise beyond network coverage

POWERFUL DMO GATEWAY AND REPEATER

Maintain and extend communications in terrain with poor coverage

ENHANCED APPS CAPABILITY

Deployed through Sepura AppSPACE

EXPANDED OPERATING BANDWIDTH (380-470 MHZ)

Flexibility to use across a range of users radio applications

OPTIONAL CONSOLE ATTACHED TO FRONT

Easy integration into vehicle DIN slot with ergonomic access to the control console

ETHERNET CONNECTIVITY

Connection over IP protocols to connect to third party applications and services

BUILT IN ACCELEROMETER

Monitoring of the vehicle dynamics providing alerts to control rooms through AppSPACE

WI-FI AND BLUETOOTH READY

Enables the use of OTAP and connection to wireless devices and networks using AppSPACE

PHYSICAL SIZE AND SPACING AS PREDECESSOR

The same size and shape as the SRG3900 allows smooth integration in existing vehicle configurations

FLEXIBLE CONFIGURATION

Dual console connectors and multiple I/O ports for maximum versatility



THE SCG22 COMBINES WORLD CLASS TETRA FUNCTIONALITY WITH FUTURE PROOFING TECHNOLOGIES FOR INTEGRATED MISSION CRITICAL COMMUNICATIONS

CLASS-LEADING PROVEN PERFORMANCE

The SCG22 is a fully featured TETRA mobile radio, including hardware ready to support Direct Mode Gateway, Direct Mode Repeater, PEI based Data and End to End Encryption options.

With a class-leading 10 Watts of RF power, and the most proven gateway and repeater technology on the market, the SCG22 TETRA mobile extends communication into areas otherwise beyond network coverage.

USER FRIENDLY

The SCG22 is part of the third generation SC Series family with standard interface between the SC20 and SC21 hand-held radios increasing efficiency and reducing training needs.

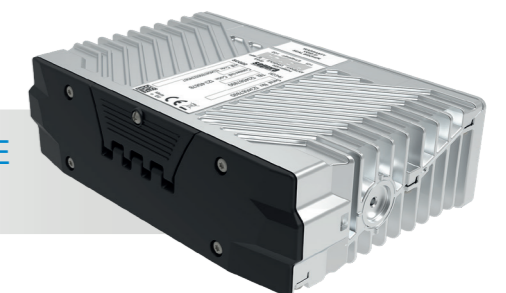
The SCG22 is compatible with the wide range of audio, power and installation accessories that are used with the SRG3900 mobile radio, resulting in smooth upgrades and seamless operations when managing mixed radio networks.

POWERING THE FUTURE

Designed for flexibility and use with multiple technologies the SCG22 comes with Bluetooth, Wi-Fi and Ethernet options to provide connection to a range of accessories and ancillary systems creating a mission critical communications hub for now and in the future.

Like all SC Series radios, the SCG22 supports the use of Sepura's AppSPACE to deliver improved operational safety, efficiency and outcomes by automating workflows and sharing situational data.

AppSPACE
Enabled



For more information visit sepura.com/SCG22



* Integration with Portalify solutions required. Portalify is a Sepura company. For more information, please contact your local representative.
** STP batteries limit the SC20 series to Class 3L RF. New Sepura SC batteries enable the SC20 series to support Class 3RF. Class 3 Support is licence-enabled.
*** Some performance limitations may apply

Hand-held console HBC3

The ergonomically designed hand set based console has outstanding audio combined with the functionality of a traditional radio with the feel of a telephone handset. Connected to the SCG22 via an interface box or through a SCC3 console the console provides rugged and flexible options for the user.



Colour console SCC3

The SCC3 is attached to the SCG22 mobile radio and is installed within a vehicle with a mounting bracket or can be front mounted when the SCG is installed in the vehicle radio DIN socket. It is typically used with a handset or with a fist microphone. Audio is supplied from a loudspeaker attached to the mobile radio or through other personal earpiece accessories. The large daylight readable screen gives easy access to radio functions.

TECHNICAL SPECIFICATIONS

SIZE AND WEIGHT

TRANSCIVER

Standard option: 938g
179mm x 50mm x 116mm

FREQUENCY BANDS

380 - 470MHz

POWER SUPPLY

12V DC rated 90W
Range 10.8 to 15.6V DC

RF PERFORMANCE

10 watt RF power output (Class 2)
RF power adjustable in steps of 5dB, independently adjustable for TMO & DMO operations
Adaptive power control supported

Receiver static sensitivity -115dBm (-118dBm typical)
Receiver dynamic sensitivity -107dBm (-109.5dBm typical)
Receiver class A & B

AUDIO

Rated audio output - 8 W @1kHz into 4 Ohms
Dual speaker configuration capable of driving two 4 Ohm speakers (to be wired in parallel by installer)
Fixed level line-out audio option enabling broadcast & recording support
2x1W of additional audio drive via speaker mics or handsets attached to up to two SCC front-mounted accessory ports¹
Line-in audio for third-party console interface support

Five independent volume controls for loudspeaker & audio accessories^{2,3}
Up to three audio accessories per console

ENVIRONMENTAL

Dust & water protection to IEC60529 IP54
ETS 300 019 -2-5 drop, vibration & humidity
Operational temperature (min./max.) -30°C to +70°C⁴
Operational temperature (conformance tested) -20°C to +55°C
Storage temperature -40°C to +85°C⁴
IP67 SCC3 console option
IP67 HCU handlebar control unit option

1 - Factory fit option
2 - Further information available on request
3 - Accessories connected at the rear of a console use the same volume level
4 - Operating at temperature extremes may limit some aspects of operational performance

For full technical specifications see the SCG22, HBC3 and SCC3 Datasheets or visit www.sepura.com

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SCG22 SERIES MOBILE RADIO



SIZE AND WEIGHT

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(-118dBm typical)
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(-109.5dBm typical)
Receiver class A & B

AUDIO

Rated audio output - 8 W @1kHz into 4
Ohms
Dual speaker configuration capable of
driving two 4 Ohm speakers (to be wired
in parallel by installer)
Fixed level line-out audio option
enabling broadcast & recording support
2x1W of additional audio drive via
speaker mics or handsets attached to
up to two SCC front-mounted accessory
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Line-in audio for third-party console
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Five independent volume controls for
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Up to three audio accessories per
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ENVIRONMENTAL

Dust & water protection to IEC60529
IP54
ETS 300 019 -2-5 drop, vibration &
humidity
Operational temperature (min./max.)
-30°C to +70°C⁴
Operational temperature (conformance
tested) -20°C to +55°C
Storage temperature -40°C to +85°C⁴
IP67 SCC3 console option
IP67 HCU handlebar control unit option

PRODUCT OPTIONS

GNSS location tracking
Bluetooth/Wi-Fi broadband module
Micro SDHC card 32GB
DMO repeater type 1A (licence enabled)
DMO gateway (licence enabled)
Air Interface encryption options⁵
End-to-end encryption options⁵
Wide range of languages supported
including Cyrillic, Chinese, Korean &
Arabic
Coloured bezels on SCC3
Local & remote smart card support
Line in/out audio support (licence
enabled)
Extensive console support: SCC3, HBC3,
AIU.
Specialist solutions include HCU
handlebar control unit & marine
consoles, embedded car console.

FEATURE LICENSES

DMO-Repeater
DMO-Gateway
Virtual Console
Audio Line In & Line Out
Soft Key Function via PEI
Callout
Picture Message Push
Premium Application Pack (SDA)
Profile by Talkgroup
Network Selection by Talkgroup
DMO/TMO Selection by Talkgroup
Reset to Default Status
Extended Preferred & Fixed LA list
Dynamic Home Screen
Set DMO Power from MMI
Air Interface Migration
End-to-End Encryption
Security Class 3G
Lone Worker
Packet Data
WAP
AT Commands
Status Triggered Function
Sepura Public Protocol (SPP)

Performance Monitoring
Position Report Buffer

VOICE SERVICES

Full-duplex calls (to MS & PABX/PSTN)
Half-duplex calls (individual & group)
Priority call
Emergency call (pre-emptive priority)
Intelligent alarm reporting
Talking party identity
Calling line identity presentation
DTMF dialling
MSISDN dialling
Abbreviated dialling
Dynamic group number assignment
Background (hidden) groups
Ambience listening
Privacy mode
Whisper mode
Group focus
DMO individual call
DMO group call
DMO emergency call
DMO intelligent emergency call
Independent volume control
Gateway pairing

DATA SERVICES

Status messaging (in TMO & DMO)
SDS messaging (in TMO & DMO)
SDS store & forward
SDS via DMO gateway
Auto-capitalisation on SDS text entry
Concatenated SDS messaging
Multi-slot packet data
Circuit mode data
TETRA paging & call out
WAP browsing
WAP shortcuts in SDS
WAP support:
• WAP 2.0
• WAP browsing via TETRA
• WAP shortcuts embedded in SDS for
instant data access
WAP onboard:
• Micro SDHC-based WAP sites for instant
access to intelligence, images, maps &
text
• Data maintained by Radio Manager2
Bluetooth module:
• Bluetooth v2.1+EDR
• Bluetooth v4.x
Bluetooth audio:
• Headset profile (HSP)
• PTT extension to HSP support
Bluetooth data services:
• Serial Port Profile (SPP) for data
connectivity
• Dial-up networking (DUN)

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- Bluetooth v2.1+EDR
 - Bluetooth v4.x
- Bluetooth audio:
- Headset profile (HSP)
 - PTT extension to HSP support
- Bluetooth data services:
- Serial Port Profile (SPP) for data connectivity with body-worn printers/scanners
 - Dial-up networking (DUN)
 - Discovery mode
 - Generic attributes profile (GATT)
 - Hardware-ready for:
 - Object push profile
 - Heart device (heart rate & temperature)
 - Battery service profile
 - Devices identity profile
 - MAP
 - HID
 - HoG

Bluetooth trusted device, auto re-connect
PEI access

USB 2.0 support:

- Host support for interaction with body-worn accessories such as printers & scanners
 - Slave support allows use of SC20 as a modem
 - PEI access
 - High-speed programming
- Enhanced Short Data Applications (eSDAs):
- Supports all existing SDA capabilities from STP⁷
 - Supports data accessories such as body-worn printers & scanners via Bluetooth or USB
 - Supports online database access & interaction with returned data

Messaging:

- SDS messaging (in TMO & DMO)
- Picture Messaging via SDS or packet data
- Concatenated SDS messaging
- Auto-capitalisation in SDS text entry
- Status messaging (in TMO & DMO)
- 350 predefined status messages (up to 140 Unicode characters)
- Up to 30 quick status messages

Callout & paging:

- TETRA simple callout/full callout/paging alert
- AT commands:
- ETSI & enhanced commands
 - via PEI serial port profile over Bluetooth & USB
 - Voice call control supported

Over the air control & programming:

- Status-triggered functions
- Group management via Sepura Public Profile (SPP)
- Reprogramming over Wi-Fi with Radio Manager2

Battery status at start-up

Missed event application

Major radio status change notification application

User-expandable up to 32GB via Micro SDHC card

SAFETY FEATURES & APPLICATIONS

Emergency call:

- Pre-emptive priority
- Hands-free live mic operation
- Emergency voice call & alerting to current or defined talkgroup
- Emergency status/SDS/location report to defined control user/group
- Full-duplex or half-duplex emergency calls
- Manual activation via red emergency key
- Automatic activation via Man-Down** option
- Automatic TMO/DMO selection
- Emergency through DM-repeater/DM-gateway
- Loud, distinct audio & visual indication
- Silent alarm call

Man-Down**:

- Immobility detection
- Unusual inclination detection
- Customisable alerting (see Emergency Call Capability)

Lone-Worker feature

Blind-find emergency button

Wake-on-Alarm allows user to switch on radio & signal an emergency in one action

LOCATION-BASED SERVICES

GPS integrated option -194dBw (-164dBm) tracking sensitivity

Over-The-Air GPS reporting:

- ETSI location standard reporting (LIP)
 - NMEA & Sepura compact messaging
- Max. simultaneous satellite track = 24

GPS-based compass

On-board mapping capable⁵

Enhanced start-up & acquire through 'predictive ephemeris'

RFID tag equipped

- Glonass and BeiDou2 support⁶

SECURITY SERVICES

TETRA:

- Authentication
- Class 1, 2,3 & 3G TETRA security
- Air Interface encryption TEA1/2/3/4⁸
- Smart card E2E encryption⁸
- Embedded E2E encryption⁸
- Enhanced security module (ESM)
- In-country E2E Encryption algorithm⁸
- Multiple E2E algorithm⁸
- Temporary disable (stun)
- Permanent disable (kill)
- 600KEK crypto groups

Wi-Fi:

- WPA2-PSK, WPA2-Enterprise authentication (radius) with AES encryption

DM-REPEATER SERVICES (LICENCE REQUIRED)

DMO voice repeated

Status & SDS repeated

Group status & SDS repeated

Type 1A efficient operation over one RF channel

Presence signal support

Emergency call

Monitoring & participation in calls

CONNECTIVITY

TETRA voice & data

Bluetooth support for voice & data

USB support for data

PEI data via USB or Bluetooth

Wi-Fi support

Accessory connections via rugged accessory connector (sRAC)²

Audio & data connection via bottom connector (sDAC)

MicroSDHC card slot (32GB max.)

Passive 125KHz RFID tag

sRAC – rugged side connector²:

- Rapid tool-less fitting & removal
- Unique anti-overtighten design
- Salt-resistant seal

sDAC – bottom connector:

- Rapid tool-less quarter-turn twist-lock fitting & removal
- Connector Protector salt protection

PROGRAMMING CAPABILITY

High-speed programming via USB slave cable

Six-way USB gang programming supported in 6+2 programmer/charger

Background 'over the air' programming via Wi-Fi

Radio Manager2 compatible

Micro SDHC contents manageable via Radio

Manager2 On-screen programming progress bar

COMPATIBLE STP ACCESSORIES

Chargers:

- 1+1 desktop charger⁹
 - 12- & 24-way battery-only chargers
 - Two-way, battery-only, charger for vehicles
- Antennas

Batteries:

- Standard capacity battery¹
- High capacity battery¹

Carrying accessories

- Stud & belt attachments¹⁰
- STP RAC-mount accessory compatibility
- All overt range
- All covert range
- All semi-covert range
- All public order range

SC20 ACCESSORIES

Chargers:

- Personal rapid charger
- Vehicle rapid charger
- 6+6 desktop charger/programmer (USB connection)

Batteries:

- Standard capacity battery¹
- High capacity battery¹

Carrying accessories:

- Stud & belt attachments¹⁰
- Carry cases & holsters

Car kits:

- Basic car cradle

Data leads:

- USB host adapter for wired body worn accessories
- USB slave data lead for programming & control of SC20 from a third-party device

1 – New standard (300-01852) & high-capacity (300-01853) batteries, along with the high power Class 3 feature licence, are required to operate the SC20 in high power RF Class 3 mode. Use of older STP batteries will limit SC20 operation to RF Class 3L

2 – Compatible with Sepura STP9000 & STP8000 RAC-based accessories

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

4 – As defined in ETSI EN300 019-2-1 & EN300 019-2-2

5 – Connector Protector must be enabled in customisation. An antenna, a battery & a Sepura accessory or sRAC cover must be fitted. Rinse in fresh water to prevent salt crystal build-up

6 – Future: please contact Sepura Product Management to discuss your requirements

7 – SDAs must be reformatted for use with an SC20

8 – Availability is subject to export licence

9 – STP 1+1 chargers shipped since mid-2013 are compatible

10 – Existing STP belt clips may adversely affect broadband performance. SC20 belt clips are recommended



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Going further in critical communications

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.

**Whilst every effort is made to ensure the reliability of the Man Down Alarm ("MDA"), the nature of the technology and the circumstances of use are such that Sepura cannot warrant that it will operate effectively in all circumstances and users should not entrust their safety to the MDA. The MDA should in no way be regarded as a substitute for compliance with appropriate risk assessment and other safety procedures. As such, and specifically in respect of the MDA, all warranties, conditions or other terms implied by statute or common law are excluded. For the avoidance of doubt, no term is to be implied as to the fitness for purpose or satisfactory quality of the MDA.