



SmartPTT Enterprise 9.14

System Requirements

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Introduction

SmartPTT-based dispatch system can include several dispatch consoles, SmartPTT Radioservers and communication channels connecting them. Thus, technical requirements are related to the following system components:

- SmartPTT Dispatcher
- SmartPTT Radioserver Configurator
- Communication channels connecting SmartPTT Dispatcher and SmartPTT Radioserver, and communication channels connecting SmartPTT Dispatcher, MOTOTRBO repeaters, and control stations.

Number of the required components can increase. This depends on the product type and required functionality.

Minimum System Requirements for SmartPTT Dispatcher

Software Requirements

SmartPTT Dispatcher can be installed and used on Windows computers only.

| OS Family | Version |
|-------------|------------------------------------|
| Windows 11 | Pro (64 bit) |
| Windows 10 | Pro version 1909 or later (64 bit) |
| | Enterprise 2016 LTSB (64 bit) |
| Windows 8.1 | Windows 8.1 (64 bit) |

NOTE
Windows 8.1 must have the latest updates or the KB 2919355 update. For details, see [Microsoft Support information](#).

NOTE

To ensure operating system security and SmartPTT stable operation, it is recommended to install the latest Windows updates.

Hardware Requirements

| | |
|----------------------------|-----------------------------------------------------------------------------------------------------------|
| Processor: | Intel® Core™ i5 (7th generation or higher) for systems with less than 3,000 subscribers. |
| | Intel® Core™ i7 for systems with more than 3,000 subscribers or activated GPS/Monitoring/Indoor services. |
| Memory (RAM): | 4 GB for systems with less than 3,000 subscribers. |
| | 8 GB for systems with more than 3,000 subscribers or activated GPS/Monitoring/Indoor services. |
| Storage: | 7200 rpm SATA drive. |
| | 20 GB space for software and database. |
| Graphics adapter: | 1 GB RAM PCI-E or similar CPU-integrated for systems with voice transmission only. |
| | 2 GB RAM PCI-E or similar CPU-integrated for systems with activated GPS/Monitoring/Indoor services. |
| Monitor: | display size: 23" |
| | screen resolution: 1366 × 768 px |
| | color depth: 16 bit |
| Input/output ports: | 1 input port per input device or Human Interface Device (HID). |

Minimum System Requirements for SmartPTT Dispatcher

1 analog audio output per playback device (speaker or headset).

1 audio input per microphone.

Sound adapter: Multichannel sound adapter.

Audio recording device: A microphone or a headset.

Playback device: Headphones or a headset.

LAN: 10/100/1000 Mbps Ethernet adapter.

Pointer: A mouse or a trackball.

Keyboard: A standard keyboard.

NOTE

These are standard system requirements for SmartPTT Dispatcher. They can change depending on the configuration, complexity and/or workload of the system.

NOTE

We have experienced issues with USB ports on Dell PCs that cause audio peripherals to disconnect. For this reason we recommend installing SmartPTT on HP or other brands of PCs.

Minimum System Requirements for SmartPTT Radioserver

Software Requirements

SmartPTT Radioserver can be installed on Windows computers only.

| OS Family | Version |
|----------------|------------------------------------|
| Windows 11 | Pro (64-bit) |
| Windows Server | Windows Server 2019 |
| | Windows Server 2016 |
| | Windows Server 2012 R2 |
| Windows 10 | Pro version 1909 or later (64-bit) |
| | Enterprise 2016 LTSB (64-bit) |
| Windows 8.1 | Windows 8.1 (64-bit) |

NOTE
Windows 8.1 must have the latest updates or the KB 2919355 update. For details, see [Microsoft Support information](#).

NOTE

To ensure operating system security and SmartPTT stable operation, it is recommended to install the latest Windows updates.

Hardware Requirements

| | |
|----------------------------|-----------------------------------------------------------------------------------------------------------|
| Processor: | Intel® Core™ i5 (7th generation or higher) for systems with less than 3,000 subscribers. |
| | Intel® Core™ i7 for systems with more than 3,000 subscribers or activated GPS/Monitoring/Indoor services. |
| Memory (RAM): | 4 GB for systems with less than 3,000 subscribers. |
| | 8 GB for systems with more than 3,000 subscribers or activated GPS/Monitoring/Indoor services. |
| Storage: | 7200 rpm SATA drive. |
| | 40 GB space (software and database only). |
| | 190 GB space (software, database, and voice records). |
| Input/output ports: | 1 USB port per connected USB device (mouse, speaker, etc.) |
| | <i>(Optional)</i> 1 analog audio output per speaker |
| | <i>(Optional)</i> 1 analog audio input per microphone |

LAN: 10/100/1000 Mbps Ethernet adapter.

NOTE

These are standard system requirements for SmartPTT Radioserver. They can change depending on the configuration, complexity and/or workload of the system.

NOTE

We have experienced issues with USB ports on Dell PCs that cause audio peripherals to disconnect. For this reason we recommend installing SmartPTT on HP or other brands of PCs.

Networking Requirements

Network Quality

Computer networks where SmartPTT is installed and used, must comply with the following requirements:

| Parameter | Value |
|---------------|-------------------------------------|
| Packet Loss | Slightly distorted voice: 0.0–2.5 % |
| | Distorted voice: 2.5–15.0 % |
| Two-Way Delay | Radio network connection: 0–90 ms |
| | PBX connection: 0–60 ms |
| Jitter | Radio network connection: 0–90 ms |
| | PBX connection: 0–60 ms |

IP access to the radio network means the connection to hardware/software solution that provides access to the radio network:

- Connection to the RG-1000e or RG-2000 device.
- Connection to repeaters:
 - Master repeater (for voice calls and monitoring).
 - Other repeaters (for monitoring).
- Connection to a computer with a MNIS Data Gateway Relay application.
- Connection to a computer with Device Discovery and Mobility Service (DDMS).
- Connection to the XRC controller (Connect Plus).
- Capacity Max System Server (CMSS) connection.

NOTE

Motorola radio hardware may have more specific requirements for the above parameters. For this information, refer to the respective hardware documentation.

Bandwidth Requirements

Computer networks where SmartPTT is installed and used must provide specific bandwidth between the computer with SmartPTT Radioserver and the other IP devices of the dispatch system. All following requirements are applicable to one-way transmissions.

Voice transmission

All following requirements are applicable to a single voice stream.

| Source/Target | Minimum | Comments |
|---------------------------------|----------|-------------------|
| SmartPTT Dispatcher application | 13 kbps | For DMR vocoder |
| | 100 kbps | For G.711 vocoder |

| Source/Target | Minimum | Comments |
|------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RG-1000e/RG-2000 radio gateway | from 65 kbps | Exact value depends on vocoder parameters |
| Master repeater | 20 kbps | |
| PBX | 65 kbps | For G.729 or Speex vocoders |
| | 100 kbps | For G.711 vocoder |
| Applications that use SmartPTT WebSocket | from 65 kbps | For each of the following applications: <ul style="list-style-type: none"> SmartPTT Web Client SmartPTT Mobile Third Party app over SmartPTT Server API Exact value depends on vocoder parameters. |

Required bandwidth should be increased if you use the bridging, cross patches, conference calls, or voice communication between dispatchers. For details on increased bandwidth, contact Elcomplus, Inc. representative in your region.

If you have an alternate/redundant SmartPTT Radioserver, the bandwidth to that computer must comply with the synchronization settings between the main and redundant servers.

Voice traffic between SmartPTT Dispatcher applications (the Dispatchers feature) is not sent to SmartPTT Radioserver. To provide this feature, the bandwidth between dispatcher computers must be 65 kbps or more per each configured contact.

Data transmissison

In SmartPTT, data transmissison includes text messages, indoor and outdoor location, telemetry information and control commands.

| Source/Target | Minimum | Comments |
|---------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SmartPTT Dispatcher application | 3.5 kbps | For Enhanced CSBK location data from 10 subscribers and location update period 7.5 s |
| Master repeater | 20.0 kbps | For each repeater without a revert channel |
| | 45.0 kbps | For each repeater with a revert channel |
| Remote MNIS host | 20.0 kbps | For each repeater without a revert channel |
| | 45.0 kbps | For each repeater with a revert channel |
| XRC controller | 20.0 kbps | For each repeater without a revert channel |
| | 45.0 kbps | For each repeater with a revert channel |
| Avigilon server | 3150 kbps | For each camera. This value is obtained based on the following conditions: <ul style="list-style-type: none"> Resolution is 1920 x 1080. |

| Source/Target | Minimum | Comments |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <ul style="list-style-type: none"> FPS is 25. Service packets in stream no more than 5% of the video stream. <i>H.264 Base codec - medium quality.</i> Average dynamics of the image change. |

Bandwidth must be increased if you activate and use the Bridging feature in SmartPTT Radioserver, create a cross patch, or organize a conference call.

If you have a redundant SmartPTT Radioserver, the bandwidth to that computer must comply with the synchronization settings between the main and redundant servers.

Monitoring service

| Source/Target | Minimum | Comments |
|---------------------------------|---------|-----------------------------------------------------------------------|
| SmartPTT Dispatcher application | 42 kbps | For each configured repeater if the Monitoring panel is closed |
| | 45 kbps | For each configured repeater if the Monitoring panel is opened |
| Repeater | 42 kbps | For each configured repeater |

Support and Compatibility

MOTOTRBO Infrastructure

SmartPTT 9.14 has been tested and found compatible with the MOTOTRBO firmware and software listed in the table below.

WARNING

Different MOTOTRBO firmware and software versions may not be mutually compatible. For information on MOTOTRBO products compatibility, contact Motorola Solutions representatives in your region.

| Firmware/Software | Version | Comments |
|-------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------|
| Subscriber radio Firmware | M2023.01 | |
| | M2022.02 | |
| | M2022.01 | |
| | M2021.04 | |
| Repeater Firmware | M2023.01 | |
| | M2022.02 | |
| | M2022.01 | |
| | M2021.04 | |
| Control Station Firmware | M2023.01 | |
| | M2022.02 | |
| | M2022.01 | |
| | M2021.04 | |
| MOTOTRBO Network Interface Services Software (MNIS) | M2023.01 | Provides data transmission in IP Site Connect (NAI), Capacity Plus (NAI), and Linked Capacity Plus |
| | M2022.02 | |
| | M2022.01 | |
| | M2021.04 | |
| Device Discovery and Mobility Service Software (DDMS) | 03.100.5001 | Provides radio registration information in IP Site Connect (NAI), Capacity Plus (NAI), and Linked Capacity Plus |
| XRC Firmware | R02.80.XX | Connect Plus only |
| Capacity Max System Server (CMSS) Firmware | M2023.01 | |
| | M2022.02 | |
| | M2022.01 | |
| | M2021.04 | |

Additional information on infrastructure:

- Within the radio system, all repeaters, subscriber radios and control stations should use the same or compatible firmware versions.
- If you activate the Bridging feature, you should bridge only the radio fleet objects which are associated with the same or compatible firmware versions.
- Access and operation in radio systems for SmartPTT require separate licensing.
- SmartPTT does not support voice calls (including emergency calls) in Connect Plus and Capacity Max over control stations.

Elcomplus Products

SmartPTT is compatible with the following Elcomplus, Inc. products:

| Product | Version | Comments |
|----------------------------------------|-------------|-----------------------------------------------------------------------------------------------------|
| Radio gateway RG-1000e | R3.X | Current version of firmware used on the device for control station remote connection and operation. |
| | R2.2 | Previous version of firmware used on the device. |
| Radio gateway RG-2000 | Any version | Version of firmware used on the device for control station remote connection and operation. |

Third Party Products

SmartPTT is compatible with a range of third-party products. Below you will find a list of hardware and software products that proved to be compatible with the SmartPTT applications.

Database Management Systems

SmartPTT uses Microsoft SQL Server as a database. The following versions are supported:

- Microsoft SQL Server 2022
- Microsoft SQL Server 2019 Express
- Microsoft SQL Server 2019 Enterprise

For information on use of other Microsoft SQL Server versions and editions, submit a request to [SmartPTT Technical Support Center](#).

Option Boards

- Connect-RTLS RF800 (BluFi Wireless).
- K-TERM 44 (Kilchherr Elektronik AG).

Beacons

- Connect-RTLS RF800 (BluFi Wireless).
- K-TERM 70IC Beacon Transmitter (Kilchherr Elektronik AG).
- iBeacons.

Option Boards Software

SmartPTT supports MOTOTRBO™ option boards programmed using Tallysman Sprite Configurator. Use the version 0.3.16 for the Movement Reports Restoration feature.

Sound cards

- Internal PCI-E Sound Blaster Audigy RX.
- External Sound Blaster X-Fi Go.
- ESI MAYA44XTe.
- ICON Digital Cube Pro USB.

Accessories

SmartPTT supports HID-compliant devices. The devices listed below have been tested in SmartPTT and are fully compatible with it.

- Desktop USB microphone [D-9 by Holmco](#)
- Desktop USB microphone [PS12/PS20 by pei tel](#)
- Desktop microphone [DM-160 by CXD](#)
- Desktop USB microphone [VM-1S™](#)
- Desktop USB microphone [TM-2 USB V2](#)
- Desktop USB microphone [VCC-3 USB Command Console](#)
- Desktop USB microphone [VCC-2 USB mini-Command Console](#)
- Push-to-talk button [PTT-13 by Imtradex](#)
- USB corded headsets [Blackwire C310-M and C320-M by Plantronics](#)
- Yellow foot switch [X-keys XK-3 USB Switch Interface by P.I. Engineering](#)
- Modular console [Tipro TM-HHA-6AW](#) with analog interface without touchcomputer.

Hardware

- SmartPTT Dispatcher can be installed and used on [BeFREE 10](#) computers.
- SmartPTT supports the IP Gear Claro 30 SIP-gateway (by ESTel) for access to analog telephone networks.
- SmartPTT can connect to [NexLog recorders](#) running under NexLog Recorder Software 2.8.2.
- SmartPTT can connect to [Avigilon](#) system cameras using the [Avigilon Control Center Server 7](#) software.

NOTE

We have experienced issues with USB ports on Dell PCs that cause audio peripherals to disconnect. For this reason we recommend installing SmartPTT on HP or other brands of PCs.

Ports Used by SmartPTT System

All port numbers below are default ones. They can be changed if required. However, some port ranges are limited. For details, see the corresponding documentation and/or embedded help files.

Conventions

List of ports is available in the table view. Corresponding tables consist of the following columns:

Local Port

Number of the port that is used by the host described. In the column, the following options are available:

- *any* – port number is selected automatically.
- *<port number>* – default port number.
- *<port number>** – port number can be used for simultaneous use by multiple connections.

Protocol

Type of the transport protocol that is used for data provision. In the column, the following options are available:

- *TCP* – transmission control protocol.
- *UDP* – user datagram protocol.

Role

Role of the host described in establishing a connection. In the column, the following options are available:

- *Server* – host that can receive incoming connections from remote device/service.
- *Client* – host that can initiate the connection to remote device/service.
- *Peer* – host that can receive and initiate connections to remote device/service.

Remote Device/Service

Description of devices or services which interact with the host described.

Remote port

Port number that is used by the corresponding remote device or service.

Description

Explains what the port is used for.

Brief description of each connection is provided in the table before the connection parameters (port numbers, quantities, etc.).

Radio server Host

Table below provides information about network ports that used by the radio server computer. For information on table conventions, see [Conventions](#).

- [DBMS Connection](#)
- [MOTOTRBO Radio Systems](#)
 - [IP Site Connect / Capacity Plus / Linked Capacity Plus / ERDM \(network application interface\)](#)
 - [IP Site Connect \(wireline connection\)](#)
 - [Capacity Plus \(direct interface\)](#)
 - [Capacity Plus Multi-Site \(Linked Capacity Plus\)](#)

- [Capacity Max](#)
- [Connect Plus](#)
- [Control Stations](#)
 - [Local MOTOTRBO Control Station](#)
 - [Remote RG-1000e/RG-2000](#)
- [Clients](#)
 - [Desktop Client](#)
 - [Web Client](#)
 - [SmartPTT Mobile](#)
 - [Third-Party Apps](#)
- [Services](#)
 - [Email](#)
- [Add-on Modules](#)
 - [Option Board Features](#)
 - [Indoor Tracking using Kilchherr](#)
 - [NexLog Recording System](#)
 - [Avigilon Connection](#)
 - [Phone Line Connection over SIP trunk](#)
 - [Network Monitoring](#)

DBMS CONNECTION

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|----------------------------|
| any | TCP | Client | Microsoft SQL | 1433 | Database Engine connection |
| any | UDP | Client | Microsoft SQL | 1434 | Browser Service connection |

IP SITE CONNECT / CAPACITY PLUS / LINKED CAPACITY PLUS / ERDM (network application interface)

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-----------------------------------------------------------|
| 50000 | UDP | Peer | Repeater MOTOTRBO | 50000 | Control commands, data and voice traffic exchange |
| any | TCP | Client | Motorola DDMS | 3000 | Radio registration data receiving |
| any | TCP | Client | Motorola DDMS | 5055 | Radio users data receiving |
| any | TCP | Client | MNIS Data Gateway | 55000 | Control commands and data exchange in TCP connection mode |

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|------|-----------------------|-------------|-----------------------------------------------------------------------------|
| 4001 | UDP | Peer | MNIS Data Gateway | 4001 | Radio location data receiving and sending over LRRP protocol and MNIS |
| 5017 | UDP | Peer | MNIS Data Gateway | 5017 | Radio location update over LIP protocol and MNIS |
| 4007 | UDP | Peer | MNIS Data Gateway | 4007 | Text message sending and receiving over MOTOTRBO Advanced protocol and MNIS |
| 4008 | UDP | Peer | MNIS Data Gateway | 4008 | Telemetry data and remote control commands receiving over MNIS |

IP SITE CONNECT (wireline connection)

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|------|-----------------------|-------------|---------------------------------------------------|
| 50000 | UDP | Peer | Repeater MOTOTRBO | 50000 | Control commands, data and voice traffic exchange |

MOTOTRBO™ CAPACITY PLUS (direct interface)

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|--------------------------|-------------|---------------------------------------------------------------------------|
| 50000 | UDP | Peer | Repeater MOTOTRBO | 50000 | Control commands, data and voice traffic exchange |
| any | TCP | Client | MOTOTRBO control station | 8002 | Control commands |
| 5017 | UDP | Peer | MOTOTRBO control station | 5017 | Radio location updates over LIP |
| 4001 | UDP | Peer | MOTOTRBO control station | 4001 | Radio location updates over LRRP (local TX stations only) |
| 4005 | UDP | Peer | MOTOTRBO control station | 4005 | ARS information updates (local TX stations only) |
| 4007 | UDP | Peer | MOTOTRBO control station | 4007 | Incoming and outgoing text messages (local TX stations only) |
| 4008 | UDP | Peer | MOTOTRBO control station | 4008 | Telemetry data and remote control commands (local TX stations only) |
| 30010 | TCP | Client | RG-1000e/Gector-M1 | 30010 | Radio gateway connection for TX station control (remote TX stations only) |

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|------|-----------------------|-------------|-------------------------------------------------------------------------------------|
| any | UDP | Peer | RG-1000e/Gector-M1 | 30010 | Radio gateway connection for voice and data communication (remote TX stations only) |
| any | UDP | Peer | RG-1000e/Gector-M1 | 30010 | Radio location updates (remote TX stations only) |
| any | UDP | Peer | RG-1000e/Gector-M1 | 30010 | Incoming and outgoing text messages (remote TX stations only) |
| any | UDP | Peer | RG-1000e/Gector-M1 | 30010 | ARS information updates (remote TX stations only) |
| any | UDP | Peer | RG-1000e/Gector-M1 | 30010 | Telemetry data and remote control commands (remote TX stations only) |

MOTOTRBO™ CAPACITY PLUS MULTI-SITE (LINKED CAPACITY PLUS)

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-----------------------------------------------------------------------------|
| 50000 | UDP | Peer | MOTOTRBO repeater | 50000 | Control commands, data and voice traffic exchange |
| any | TCP | Client | Motorola DDMS | 3000 | Radio registration data receiving |
| any | TCP | Client | Motorola DDMS | 5055 | Radio users data receiving |
| any | TCP | Client | MNIS Data Gateway | 55000 | Control commands and data exchange in TCP connection mode |
| 5017 | UDP | Peer | MNIS Data Gateway | 5017 | Radio location update over LIP protocol and MNIS |
| 4001 | UDP | Peer | MNIS Data Gateway | 4001 | Radio location update over LRRP protocol and MNIS |
| 4007 | UDP | Peer | MNIS Data Gateway | 4007 | Text message sending and receiving over MOTOTRBO Advanced protocol and MNIS |
| 4008 | UDP | Peer | MNIS Data Gateway | 4008 | Telemetry data and remote control commands receiving over MNIS |

MOTOTRBO™ CAPACITY MAX

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-------------------------|-------------|-----------------------------------------------------------------------------------------------|
| any* | TCP | Client | Server CMSS, TC | 60015 | Connection to the separate CMSS presence notification service (up to 5 connections available) |
| 51112 | UDP | Server | Server CMSS, SysAdvisor | any | Monitoring data receiving |
| 4001 | UDP | Peer | MNIS Data Gateway | 5017 | Radio location update over LRRP protocol and MNIS |

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-----------------------------------------------------------------------------|
| 4007 | UDP | Peer | MNIS Data Gateway | 4007 | Text message sending and receiving over MOTOTRBO Advanced protocol and MNIS |
| 4008 | UDP | Peer | MNIS Data Gateway | 4008 | Telemetry data and remote control commands receiving over MNIS |
| any. | TCP | Client | MNIS Data Gateway | 55000 | Control commands and data exchange in TCP connection mode |

MOTOTRBO™ CONNECT PLUS

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|-------------|--------|-----------------------|-------------|------------------------------------------------------------------------------|
| 38000 | TCP and UDP | Client | XRC controller | 38000 | Access to site repeater monitoring service that is hosted in XRC controllers |
| 50005 | TCP and UDP | Client | XRC controller | 50005 | Connection to the XRC controller radio registration service |
| 50001 | TCP and UDP | Client | XRC controller | 50001 | Connection to the radio location service that is hosted in XRC controllers |
| 50007 | TCP and UDP | Client | XRC controller | 50007 | Connection to the text message service that is hosted in XRC controllers |

LOCAL MOTOTRBO CONTROL STATION

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|--------------------------|-------------|----------------------------------------------------------------|
| any | TCP | Client | MotoTRBO control station | 8002 | Control commands |
| 5017 | UDP | Peer | MotoTRBO control station | 5017 | Radio location updates over LIP |
| 4001 | UDP | Peer | MotoTRBO control station | 4001 | Radio location updates over LRRP |
| 4005 | UDP | Peer | MotoTRBO control station | 4005 | Information on the presence of a radio on the network |
| 4007 | UDP | Peer | MotoTRBO control station | 4007 | Incoming and outgoing text messages |
| 4008 | UDP | Peer | MotoTRBO control station | 4008 | Telemetry data and remote control commands receiving over MNIS |

REMOTE RG-1000e/RG-2000

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-------------------------------------|
| 30010 | TCP | Client | RG-1000e | 30010 | Control commands |
| any | UDP | Peer | RG-1000e | 30010 | Voice call reception and initiation |
| any | UDP | Peer | RG-1000e | 30010 | Radio location updates |
| any | UDP | Peer | RG-1000e | 30010 | Incoming and outgoing text messages |

DESKTOP CLIENT

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-------------------------------------------------|
| 8888 | TCP | Server | AWS | any | Control commands and data transmission commands |
| 18500* | UDP | Peer | AWS | 18501 | Voice traffic transmission |

WEB CLIENT

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-------------------------------------------------|
| 8443* | TCP | Server | Web-client | any | Control commands and data transmission commands |
| 18500 | UDP | Server | Web-client | 3478 | STUN service |
| 18500* | UDP | Peer | Web-client | 18501 | Voice traffic transmission |

SMARTPTT MOBILE

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-------------------------------------------------|
| 8443* | TCP | Server | SmartPTT Mobile | any | Control commands and data transmission commands |
| 18500* | UDP | Peer | SmartPTT Mobile | 18501 | Voice traffic transmission |

THIRD-PARTY APPS

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|-------------------------------------|
| 8191* | TCP | Server | Third-party API | any | Application connection |
| 18500* | UDP | Peer | Third-party API | any | Voice call reception and initiation |

EMAIL SERVERS

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|--------------|----------------------------|
| any | TCP | Client | POP3 | 110 or 995 | Email Message Reception |
| any | TCP | Client | IMAP | 143 or 993 | Email Message Reception |
| any | TCP | Client | SMTP | 25, 587, 465 | Email Message Transmission |

OPTION BOARD FEATURES

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|--------------------------|-------------|------------------|
| 4010 | UDP | Client | MOTOTRBO control station | 4010 | Movement reports |

INDOOR TRACKING USING KILCHHERR

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|--------------------------|-------------|----------------------------|
| 3100 | UDP | Client | MOTOTRBO control station | 3100 | Location reports reception |

NEXLOG RECORDING SYSTEM

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|----------------------------|
| any | UDP | Client | NEXLOG server | 13000-13200 | Voice traffic transmission |

AVIGILON CONNECTION

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|-------------|------|-----------------------|-------------|-------------|
| any | TCP and UDP | | Avigilon service | any | |

PHONE LINE CONNECTION OVER SIP TRUNK

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|------------|------|-----------------------|-------------|------------------------|
| 5060 | TCP or UDP | Peer | PBX IP | TCP or UDP | SIP protocol signaling |

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|-------------|----------|------|-----------------------|-------------|-----------------------------|
| 18650-18950 | UDP | Peer | PBX IP | UDP | Media sending and receiving |

NETWORK MONITORING

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|------------|----------|--------|-----------------------|-------------|----------------------------------------------------------|
| any | UDP | Client | SNMP device | 161 | Sending SNMP requests and commands from server to device |
| 162 | UDP | Server | SNMP device | any | Sending SNMP notifications from device to server |

Connect Plus Ports

In Connect Plus, UDP ports that are related to the voice call reception and initiation are used according to the following rules:

- Each voice call requires UDP connection.
- Port numbers are **not** fixed to talkpaths.
- Port numbers are allocated starting the one that is configured in SmartPTT Radioserver Configurator (default value is 19000).
- Maximum number of ports is determined by the number of voice call IDs configured in all XRT gateways.

If SmartPTT is connected to multiple Connect Plus radio systems, each system must have its own range of UDP ports for voice calls. Port ranges must be different.

Dispatch Console Host

Table below provides information about network ports that used by dispatch console computers. For information on table conventions, see [Conventions](#).

| Local Port | Protocol | Role | Remote Device/Service | Remote Port | Description |
|-------------|------------|--------|-----------------------|-------------|--------------------------------------------------------------------------------------|
| any | TCP | Client | Server SmartPTT | 8888 | Control commands and data transmission commands |
| 18501 | UDP | Peer | Server SmartPTT | 18500 | Voice traffic exchange over RTP |
| 18501 | TCP | Peer | AWS | 18501 | Connection to another dispatch console and data transmission |
| 5060 | TCP or UDP | Client | PBX IP | 5060 | Connection to PBX over the SIP protocol (transport protocol depends on PBX settings) |
| 18700-18750 | UDP | Peer | PBX IP | any | Voice reception and transmission between dispatch console and PBX |

Contact Information

If you have a request or want to learn more about our solutions, please contact our sales managers via email sales@smartptt.com

Customer support is provided by SmartPTT Technical Support Center. You can contact a support engineer via email support@smartptt.com or by submitting a request on the official support website support.smartptt.com

You can find the full SmartPTT Terms of Technical Support on the official website <https://smartptt.com/smartptt-terms-of-technical-support/>

SmartPTT Technical Support Center does not consult on deployment and maintenance of Motorola Solutions products except on settings related to SmartPTT connection and data communication.

For technical support on Motorola Solutions products, please contact an authorized Motorola Solutions representative in your region.

To share your feedback on the product, documentation, and services, email us at feedback@smartptt.com



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