



# SmartPTT PLUS 9.14.100

## 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 LTSC (64 bit)
Windows 8.1	Windows 8.1 (64 bit)
<b>NOTE</b> Windows 8.1 must have the latest updates or the KB 2919355 update. For details, see <a href="#">Microsoft Support information</a> .	

### NOTE

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

## Hardware Requirements

<b>Processor:</b>	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.
<b>Memory (RAM):</b>	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.
<b>Storage:</b>	7200 rpm SATA drive.
	20 GB space for software and database.
<b>Graphics adapter:</b>	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.
<b>Monitor:</b>	display size: 23"
	screen resolution: 1366 × 768 px
	color depth: 16 bit

### Minimum System Requirements for SmartPTT Dispatcher

<b>Input/output ports:</b>	1 input port per input device or Human Interface Device (HID).
	1 analog audio output per playback device (speaker or headset).
	1 audio input per microphone.
<b>Sound adapter:</b>	Multichannel sound adapter.
<b>Audio recording device:</b>	A microphone or a headset.
<b>Playback device:</b>	Headphones or a headset.
<b>LAN:</b>	10/100/1000 Mbps Ethernet adapter.
<b>Pointer:</b>	A mouse or a trackball.
<b>Keyboard:</b>	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 LTSC (64-bit)
Windows 8.1	Windows 8.1 (64-bit)
	<b>NOTE</b> Windows 8.1 must have the latest updates or the KB 2919355 update. For details, see <a href="#">Microsoft Support information</a> .

### NOTE

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

## Hardware Requirements

<b>Processor:</b>	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.
<b>Memory (RAM):</b>	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.
<b>Storage:</b>	7200 rpm SATA drive.
	40 GB space (software and database only).
	190 GB space (software, database, and voice records).
<b>Input/output ports:</b>	1 USB port per connected USB device (mouse, speaker, etc.)
	(Optional) 1 analog audio output per speaker

*(Optional)* 1 analog audio input per microphone

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**LAN:** 10/100/1000 Mbps Ethernet adapter.

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**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:

<b>Parameter</b>	<b>Value</b>
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).
- Connection to the XRT gateway (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.



<b>Source/Target</b>	<b>Minimum</b>	<b>Comments</b>
SmartPTT Dispatcher application	13 kbps	For DMR vocoder
	100 kbps	For G.711 vocoder
RG-1000e/RG-2000 radio gateway	from 65 kbps	Exact value depends on vocoder parameters
Master repeater	20 kbps	
XRT Gateway	20 kbps	Applicable to Connect Plus only
Capacity Max System Server	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"> <li>• SmartPTT Web Client</li> <li>• SmartPTT Mobile</li> <li>• Third Party app over SmartPTT Server API</li> </ul> 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 transmisison**

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

<b>Source/Target</b>	<b>Minimum</b>	<b>Comments</b>
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

Source/Target	Minimum	Comments
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	<p>For each camera.</p> <p>This value is obtained based on the following conditions:</p> <ul style="list-style-type: none"> <li>Resolution is 1920 x 1080.</li> <li>FPS is 25.</li> <li>Service packets in stream no more than 5% of the video stream.</li> <li>H.264 Base codec - medium quality.</li> <li>Average dynamics of the image change.</li> </ul>

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 <b>Monitoring</b> panel is closed
	45 kbps	For each configured repeater if the <b>Monitoring</b> panel is opened
Repeater	42 kbps	For each configured repeater

# Support and Compatibility

## MOTOTRBO Infrastructure

SmartPTT 9.14.100 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.

<b>Firmware/Software</b>	<b>Version</b>	<b>Comments</b>
Subscriber radio Firmware	M2024.01	
	M2024.02	
	M2023.01	
	M2022.02	
	M2022.01	
	M2021.04	
Repeater Firmware	M2024.01	
	M2024.02	
	M2023.01	
	M2022.02	
	M2022.01	
	M2021.04	
Control Station Firmware	M2024.01	
	M2024.02	
	M2023.01	
	M2022.02	
	M2022.01	
	M2021.04	
MOTOTRBO Network Interface Services Software (MNIS)	M2024.01	Provides data transmission in IP Site Connect, Capacity Plus, and Linked Capacity Plus
	M2024.02	
	M2023.01	
	M2022.02	
	M2022.01	
	M2021.04	

<b>Firmware/Software</b>	<b>Version</b>	<b>Comments</b>
Device Discovery and Mobility Service Software (DDMS)	03.100.5001	Provides radio registration information in IP Site Connect, Capacity Plus, and Linked Capacity Plus
XRC and XRT Firmware	R02.80.XX	Connect Plus only
Capacity Max System Server (CMSS) Firmware	M2024.01 M2024.02 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.

## Elcomplus Products

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

<b>Product</b>	<b>Version</b>	<b>Comments</b>
<a href="#">Radio gateway RG-1000e</a>	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.).

## Radioserver Host

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

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

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
50000	UDP	Peer	Repeater MOTOTRBO	50000	Control commands, data and voice traffic exchange
any	TCP	Client	Motorola DDMS	3000	Radio registration data receiving



<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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
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

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>

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

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
4008	UDP	Peer	MNIS Data Gateway	4008	Telemetry data and remote control commands receiving over MNIS

**MOTOTRBO™ CAPACITY MAX**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
any*	TCP	Client	Server CMSS, TC	60015	Connection to the separate CMSS presence notification service (up to 5 connections available)
any*	TCP	Client	Server CMSS, VRC GW	56000	Connection to VRC MNIS (voice gateway; up to 15 connections available)
40000*	UDP	Peer	Server CMSS, VRC GW	56000	Voice data transmission between radioserver and voice gateway
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
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**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
any	TCP and UDP	Client	XRT controller	10001	Control commands, data transmission
19000	UDP	Peer	XRT controller	any	Voice call reception and initiation

**LOCAL MOTOTRBO CONTROL STATION**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
8888	TCP	Server	AWS	any	Control commands and data transmission commands

<i>Local Port</i>	<i>Protocol</i>	<i>Role</i>	<i>Remote Device/Service</i>	<i>Remote Port</i>	<i>Description</i>
18500*	UDP	Peer	AWS	18501	Voice traffic transmission

**WEB CLIENT**

<i>Local Port</i>	<i>Protocol</i>	<i>Role</i>	<i>Remote Device/Service</i>	<i>Remote Port</i>	<i>Description</i>
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**

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

**THIRD-PARTY APPS**

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

**EMAIL SERVERS**

<i>Local Port</i>	<i>Protocol</i>	<i>Role</i>	<i>Remote Device/Service</i>	<i>Remote Port</i>	<i>Description</i>
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**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
4010	UDP	Client	MOTOTRBO control station	4010	Movement reports

**INDOOR TRACKING USING KILCHHERR**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
3100	UDP	Client	MOTOTRBO control station	3100	Location reports reception

**NEXLOG RECORDING SYSTEM**

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

**AVIGILON CONNECTION**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
any	TCP and UDP		Avigilon service	any	

**PHONE LINE CONNECTION OVER SIP TRUNK**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
5060	TCP or UDP	Peer	PBX IP	TCP or UDP	SIP protocol signaling
18650-18950	UDP	Peer	PBX IP	UDP	Media sending and receiving

**NETWORK MONITORING**

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
any	UDP	Client	SNMP device	161	Sending SNMP requests and commands from server to device

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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](#).

<b>Local Port</b>	<b>Protocol</b>	<b>Role</b>	<b>Remote Device/Service</b>	<b>Remote Port</b>	<b>Description</b>
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](mailto:sales@smartptt.com)

Information about the product's features and settings is also available on the website [smartptt.com/wiki/](http://smartptt.com/wiki/)

Customer support is provided by SmartPTT Technical Support Center. You can contact a support engineer via email [support@smartptt.com](mailto:support@smartptt.com) or by submitting a request on the official support website [support.smartptt.com](http://support.smartptt.com)

You can find the full SmartPTT Terms of Technical Support on the official website [smartptt.com](http://smartptt.com)

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](mailto:feedback@smartptt.com)



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