SmartPTT System Requirements

November 2021

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 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).
	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.

Minimum System Requirements for SmartPTT Radioserver

Software Requirements

SmartPTT Radioserver can be installed on Windows computers only.

OS Family	Version
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 each control station connected directly to the computer.
	1 analog audio input/output per each control station connected directly to the computer.
	1 input port per each input device.
Sound card:	External sound cards required to support multiple control stations connected directly to the computer.
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.

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 an RG-1000e 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
RG-1000e 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: • 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 LLC 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.

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

Source/Target	Minimum	Comments
	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: • Resolution is 1920 x 1080. • FPS is 25. • Service packets in stream no more than 5% of the video stream. • *H.264 Base codec - medium quality*. • 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 9.10 has been tested and found compatible with the MOTOTRBO firmware and software listed in the table below.

WARNING
Different MOTOTRBO fimware 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	M2021.02 M2021.01 M2020.02	M2020.02 is not supported in Capacity Max Networks.
Repeater Firmware	M2021.02 M2021.01 M2020.02	M2020.02 is not supported in Capacity Max Networks.
Control Station Firmware	M2021.02 M2021.01 M2020.02	
MOTOTRBO Network Interface Services Software (MNIS)	M2021.02 M2021.01 M2020.02	Provides data transmission in IP Site Connect (NAI), Capacity Plus (NAI), and Linked Capacity Plus
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	M2021.02 M2021.01	

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 LLC 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.
SmartICS	2.0 and above	New version of software SmartPTT extension for data acquisition and remote control in civil engineering.

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 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 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:

Description

Explains what the port is used for.

Value

Number of the single port or the initial boundary of the port range (interpretation depends on the **Quantity** column). 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.

Quantity

Number of ports that must be unlocked (including the one that is specified in the **Value** column):

- *<number of ports>* — number of ports in the range.

Initiator

Name of the process that initiates the connection. In the column, the following options are available:

- *RadioService.exe* — name of the radioserver process (available for both main/primary and alternate/redunant radioservers).
- *Client.exe* — name of the SmartPTT Dispatcher process (available on dispatch console computers only).
- *external* — reference that the connection is initiated by an external process.

Direction

Shows if the connection request is incoming/inbound or outgoing/outbound. In the column, the following options are available:

- *in* — incoming/inbound request.
- *out* — outgoing/outbound request.

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.

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
  - ERDM Systems
  - IP Site Connect
  - Capacity Plus
  - Capacity Plus Multi-Site (Linked Capacity Plus)
  - Capacity Max
  - Connect Plus
- Control Stations
  - MOTOTRBO
  - I/O
- Clients
  - Desktop Client
  - Web Client
  - SmartPTT Mobile
  - Third-Party Apps
- Services
  - DDMS
  - MNIS
  - 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

Value	Quantity	Initiator	Direction	Protocol	Description
1433	1	RadioService.exe	out	TCP	
1434	1	RadioService.exe	out	UDP	

ERDM SYSTEMS

Value	Quantity	Initiator	Direction	Protocol	Description
50000	1	RadioService.exe	out	UDP	Repeater connection
3000	1	RadioService.exe	out	UDP	DDMS connection
any	1	RadioService.exe	out	TCP	MNIS connection
4001	1	RadioService.exe external	out in	UDP	Radio location updates over LRRP
5017	1	external	in	UDP	Radio location updates over LIP
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands

IP SITE CONNECT

Value	Quantity	Initiator	Direction	Protocol	Description
WIRELINE CONNECTION					
50000	1	RadioService.exe	out	UDP	Master repeater connection
NETWORK APPLICATION INTERFACE					
50000	1	RadioService.exe	out	UDP	Master repeater connection
3000	1	RadioService.exe	out	UDP	DDMS connection
any	1	RadioService.exe	out	TCP	MNIS connection
4001	1	RadioService.exe	out	UDP	Radio location updates over LRRP

Value	Quantity	Initiator	Direction	Protocol	Description
		external	in		
5017	1	external	in	UDP	Radio location updates over LIP
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands

MOTOTRBO™ CAPACITY PLUS

Value	Quantity	Initiator	Direction	Protocol	Description
			HYBRID INTERFACE		
50000	1	RadioService.exe	out	UDP	Master repeater connection
any	1	RadioService.exe	out	TCP and UDP	TX station connection
5017	1	external	in	UDP	Radio location updates over LIP
4001	1	RadioService.exe external	out in	UDP	Radio location updates over LRRP (local TX stations only)
4005	1	RadioService.exe external	out in	UDP	ARS information updates (local TX stations only)
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages (local TX stations only)
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands (local TX stations only)
1024	1	RadioService.exe external	out in	TCP	Radio gateway connection for TX station control (remote TX stations only)
1024	1	RadioService.exe external	out in	UDP	Radio gateway connection for voice and data communication (remote TX stations only)

Value	Quantity	Initiator	Direction	Protocol	Description
1025	1	RadioService.exe external	out in	TCP and UDP	Radio location updates (remote TX stations only)
1026	1	RadioService.exe external	out in	TCP and UDP	Incoming and outgoing text messages (remote TX stations only)
1027	1	RadioService.exe external	out in	TCP and UDP	ARS information updates (remote TX stations only)
1028	1	RadioService.exe external	out in	TCP and UDP	Telemetry data and remote control commands (remote TX stations only)
NETWORK APPLICATION INTERFACE					
50000	1	RadioService.exe	out	UDP	Master repeater connection
3000	1	RadioService.exe	out	UDP	DDMS connection
any	1	RadioService.exe	out	TCP	MNIS connection
4001	1	RadioService.exe external	out in	UDP	Radio location updates over LRRP
5017	1	external	in	UDP	Radio location updates over LIP
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands

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

Value	Quantity	Initiator	Direction	Protocol	Description
50000	1	RadioService.exe	out	UDP	Master repeater connection
3000	1	RadioService.exe	out	UDP	DDMS connection
any	1	RadioService.exe	out	TCP	MNIS connection
4001	1	RadioService.exe	out	UDP	Radio location updates over LRRP

Value	Quantity	Initiator	Direction	Protocol	Description
		external	in		
5017	1	external	in	UDP	Radio location updates over LIP
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands

MOTOTRBO™ CAPACITY MAX

Value	Quantity	Initiator	Direction	Protocol	Description
any*	1	RadioService.exe	out	TCP	Connection to the single Presence Server (up to 5 connections are supported)
4001	1	RadioService.exe external	out in	UDP	Radio location updates through the primary MNIS data gateway
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages through the primary MNIS data gateway
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands through the primary MNIS data gateway
4011	1	RadioService.exe external	out in	UDP	Radio location updates through the alternate/redundant MNIS data gateway
4017	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages through the alternate/redundant MNIS data gateway
4018	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands through the alternate/redundant MNIS data gateway
any	1	RadioService.exe	out	TCP	Connection to the locally installed MNIS service

Value	Quantity	Initiator	Direction	Protocol	Description
any	1	RadioService.exe	out	TCP	Connection to the remotely installed MNIS service

MOTOTRBO™ CONNECT PLUS

Value	Quantity	Initiator	Direction	Protocol	Description
38000	1	RadioService.exe	out	TCP and UDP	Connection to the network monitoring service that is hosted in XRC controllers
50005	1	RadioService.exe	out	TCP and UDP	Connection to the presence notification service (ARS) that is hosted in XRC contorollers
50001	1	RadioService.exe	out	TCP and UDP	Connection to the radio location service that is hosted in XRC controllers
50007	1	RadioService.exe	out	TCP and UDP	Connection to the text message service that is hosted in XRC controllers

MOTOTRBO CONTROL STATION

Value	Quantity	Initiator	Direction	Protocol	Description
5017	1	external	in	UDP	Radio location updates over LIP (local stations only)
4001	1	RadioService.exe external	out in	UDP	Radio location updates over LRRP (local stations only)
4005	1	RadioService.exe external	out in	UDP	ARS information updates (local stations only)
4007	1	RadioService.exe external	out in	UDP	Incoming and outgoing text messages (local stations only)
4008	1	RadioService.exe external	out in	UDP	Telemetry data and remote control commands (local stations only)
1024	1	external	in	TCP	Connection over RG-1000e (remote stations only)
1024	1	external	in	UDP	

Value	Quantity	Initiator	Direction	Protocol	Description
1024	1	RadioService.exe external	out in	TCP	Radio gateway connection for TX station control (remote stations only)
1024	1	RadioService.exe external	out in	UDP	Radio gateway connection for voice and data communication (remote stations only)
1025	1	RadioService.exe external	out in	TCP and UDP	Radio location updates (remote stations only)
1026	1	RadioService.exe external	out in	TCP and UDP	Incoming and outgoing text messages (remote stations only)
1027	1	RadioService.exe external	out in	TCP and UDP	ARS information updates (remote stations only)
1028	1	RadioService.exe external	out in	TCP and UDP	Telemetry data and remote control commands (remote stations only)

I/O CONTROL STATION

Value	Quantity	Initiator	Direction	Protocol	Description
1024	1	RadioService.exe	out	TCP	Connection over RG-1000e
1024	1	RadioService.exe	out	UDP	
1024	1	RadioService.exe external	out in	TCP	Radio gateway connection for TX station control
1024	1	RadioService.exe external.	out in	UDP	Radio gateway connection for voice and data communication

DESKTOP CLIENT

Value	Quantity	Initiator	Direction	Protocol	Description
8888	1	external	in	TCP	Radioserver connection
18500*	1	RadioService.exe external	out in	UDP	Exchange voice traffic with the radioserver

WEB CLIENT

Value	Quantity	Initiator	Direction	Protocol	Description
8443*	1	external	in	TCP	Application connection
3478	1	external	in	TCP and UDP	STUN service
18500*	1	RadioService.exe external	out in	UDP	Exchange voice traffic with the radioserver

SMARTPTT MOBILE

Value	Quantity	Initiator	Direction	Protocol	Description
8443*	1	external	in	TCP	Application connection
18500*	1	RadioService.exe external	out in	UDP	Exchange voice traffic with the radioserver

THIRD-PARTY APPS

Value	Quantity	Initiator	Direction	Protocol	Description
8191*	1	external	in	TCP	Application connection
18500*	1	RadioService.exe external	out in	UDP	Exchange voice traffic with the radioserver

DDMS SERVICE

Value	Quantity	Initiator	Direction	Protocol	Description
any	1	RadioService.exe	out	TCP and UDP	Radio presence information
5055	1	RadioService.exe	out	TCP and UDP	Radio user information

MNIS SERVICE

Value	Quantity	Initiator	Direction	Protocol	Description
any	1	RadioService.exe	out	TCP and UDP	Local or remote MNIS connection

EMAIL SERVERS

Value	Quantity	Initiator	Direction	Protocol	Description
any	1	RadioService.exe	out	TCP	Email Message Reception (IMAP or POP)
any	1	RadioService.exe	out	TCP	Email Message Transmission (SMTP)

OPTION BOARD FEATURES

Value	Quantity	Initiator	Direction	Protocol	Description
4010	1	external	in	UDP	Movement reports

INDOOR TRACKING USING KILCHHERR

Value	Quantity	Initiator	Direction	Protocol	Description
3100	1	external	in	UDP	Location reports reception

NEXLOG RECORDING SYSTEM

Value	Quantity	Initiator	Direction	Protocol	Description
13000	200	RadioService.exe	out	UDP	Voice streams reception

AVIGILON CONNECTION

Value	Quantity	Initiator	Direction	Protocol	Description
any	1	RadioService.exe	out	TCP and UDP	

PHONE LINE CONNECTION OVER SIP TRUNK

Value	Quantity	Initiator	Direction	Protocol	Description
5060	1	RadioService.exe	out	TCP or UDP	Control connection
18650	300	RadioService.exe	out	UDP	Full-duplex voice communication with individual phone

NETWORK MONITORING

Value	Quantity	Initiator	Direction	Protocol	Description
161	1	external	in	TCP and UDP	Listening to requests from the SNMP server
162	1	RadioService.exe	out	TCP and UDP	Interaction with a device

Dispatch Console Host

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

Value	Quantity	Initiator	Direction	Protocol	Description
any	1	Client.exe	out	TCP	Radioserver connection
18500	1	Client.exe	out	UDP	Voice reception from the radio network and voice transmission to the radio network over the radioserver; voice reception from another dispatcher and voice transmission to another dispatcher
18501	1	Client.exe	out	TCP	Connection to another dispatch console (for console intercom) and data transmission
5060	1	Client.exe	out	TCP or UDP	Connection to PBX over the SIP trunk protocol (transport protocol depends on PBX settings)
18700	48	Client.exe	out	UDP	Voice reception and transmission between dispatch console and PBX

Contact Information

The document describes the product developed by Elcomplus LLC. The official product website is www.smartptt.com.

For contact information of Elcomplus LLC representatives, see www.smartptt.com/contacts.

Technical Support

Customer support is provided by SmartPTT Technical Support Center. The official website of the Center is support.smartptt.com.

To contact a support engineer, perform one of the following actions:

- Fill in and submit a support request on the website.
- Email a support request to support@smartptt.com.

In America, customer support is also provided by Elcomplus, Inc. To contact support engineers, use the following contact information:

- Phone: +1 786-362-5525
- Email: miami@smartptt.com
- Mailbox: 290 NW 165th St, Ste P-200, 3rd Flr
  Miami, FL, 33169, USA

SmartPTT Technical Support Center and Elcomplus, Inc. do 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.

Customer Documentation

This document is authored and published by Elcomplus LLC. If you have any comments and suggestions on it, please email them to support@smartptt.com.