



Configuração do GPS



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AGENDA

- Introdução da Tecnologia
- Capacidade do GPS
- Configurações do GPS
- Software de Despacho



Introdução da Tecnologia

INOVANDO para um Mundo Mais Seguro

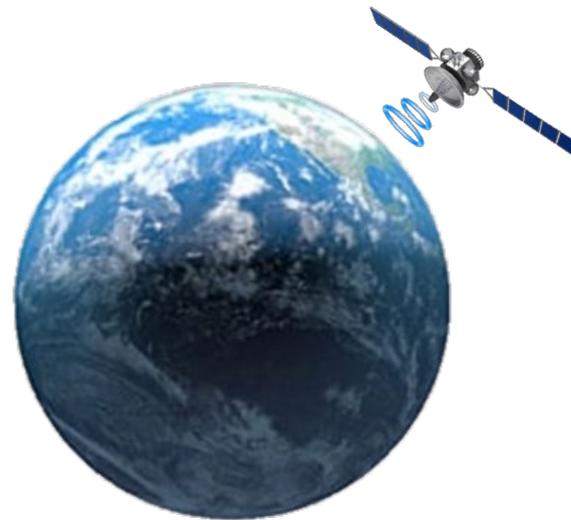


Introdução da Tecnologia

- De onde vem o sinal GPS ?

O GPS funciona por meio de um conjunto (ou constelação) de 24 satélites artificiais ativos que orbitam o planeta Terra, os quais são manejados pelo Departamento de Defesa dos Estados Unidos, essa rede de satélites recebe o nome de **Navstar**.

Quando esse recurso é habilitado, o usuário pode obter suas informações de localização em tempo real ou consultar de outro rádio, e pode relatar informações de localização para outro rádio ou para a estação de despacho.



Introdução da Tecnologia



- Tem GPS ou não ?

Rádios com chip de posicionamento suportam todos os recursos de GPS.

O nono caractere do número do modelo é G, por exemplo, HP780-T00**G**0000-MB000C-Uv-0-D.

Para visualizar o número do modelo, clique em Radio Information no Customer Programming Software (CPS) após o radio ser conectado.

Serial Number	22517A1539
Model Name	HP786
Model Number	HP786-T00 G 0000-MB00DC-V1-0-B
Model Type	Portable
Frequency Range [MHz]	136-174
Signaling Type	HDC1200/2-Tone
Radio Data Version	D2.6.12.016
Firmware Version	A2.6.12.015
Bootloader Version(L2)	4.04.01.005
Bootloader Version(L3)	4.04.03.020
Last Programmed Date	2024.8.21

Introdução da Tecnologia

- Restrição do sinal do GPS

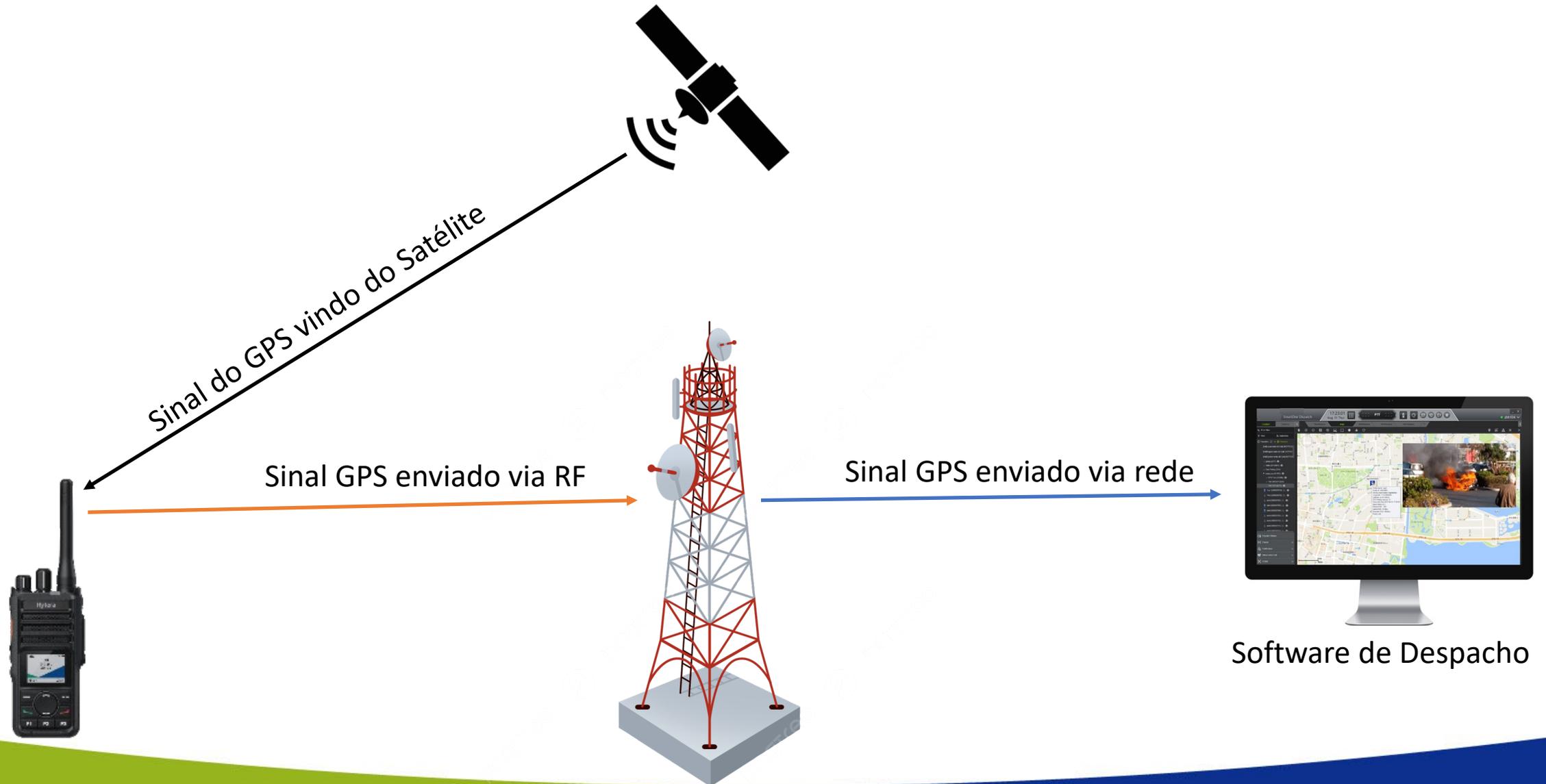
Os rádios sem chip de posicionamento podem consultar a localização dos rádios com chip de posicionamento por meio de **Call Location** ou **Query Neighbors** somente.

A recepção do sinal de satélite está sujeita ao ambiente em que o rádio está localizado.

A intensidade do sinal pode ser baixa em locais desfavoráveis como sub-solos ou metrô.



Introdução da Tecnologia



Introdução da Tecnologia

- **Portfólio DMR**

Comercial

BP5 Series



MD626

VOZ

Intermediária

HP5 e HP6 Series



HM686

VOZ + GPS + XPT

Profissional

HP7 Series



HM786

DMR 3

ATEX

HP7 ATEX



Intrínsecos

Multi Modo

PDC680



Multi Modo

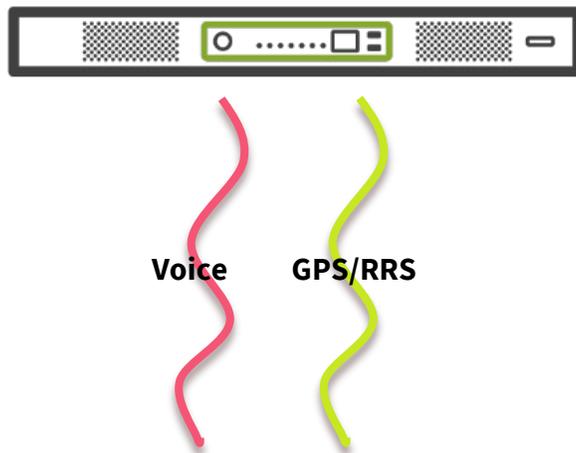


Capacidade do GPS

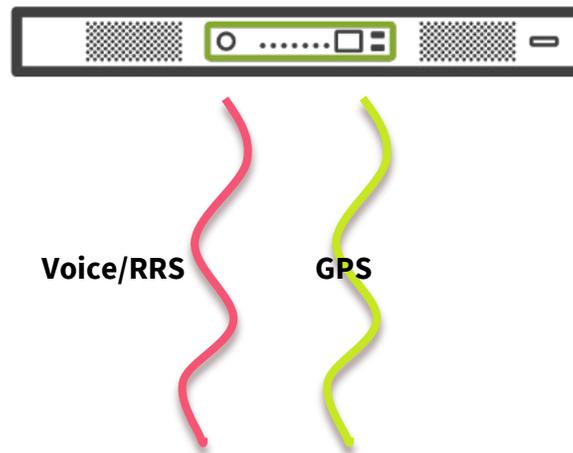
Capacidade do GPS

- 03 maneiras de configurar a repetidora com GPS

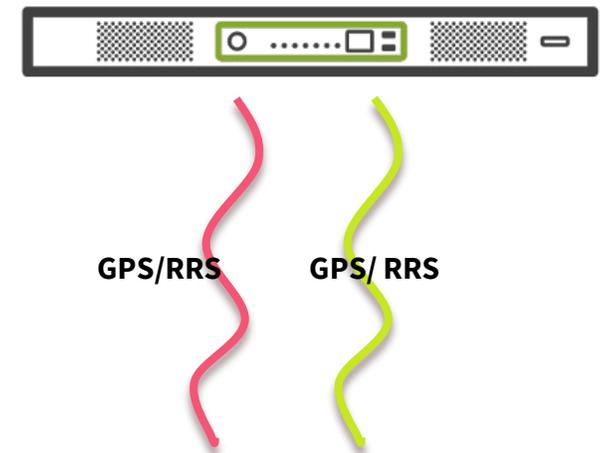
GPS Normal



Quick GPS



Repetidor dedicado



Capacidade do GPS



- Existem 03 tipos de configurações do GPS

GPS normal

Envia os dados para o mesmo slot ou reverte para outro canal e slot.

Baixa capacidade

Quick GPS

Cria uma fila de atualização e dedica um slot somente para dados.

Alta capacidade

Single GPS

Aumenta em 2,5x a capacidade do Quick GPS

Altíssima capacidade

Capacidade do GPS

- Tipos do GPS x Capacidades

	Atualização 30s	Atualização 1min	Taxa de Sucesso
GPS Normal	15	30	60%
Quick GPS	90	180	90%
Single GPS	225	450	90%

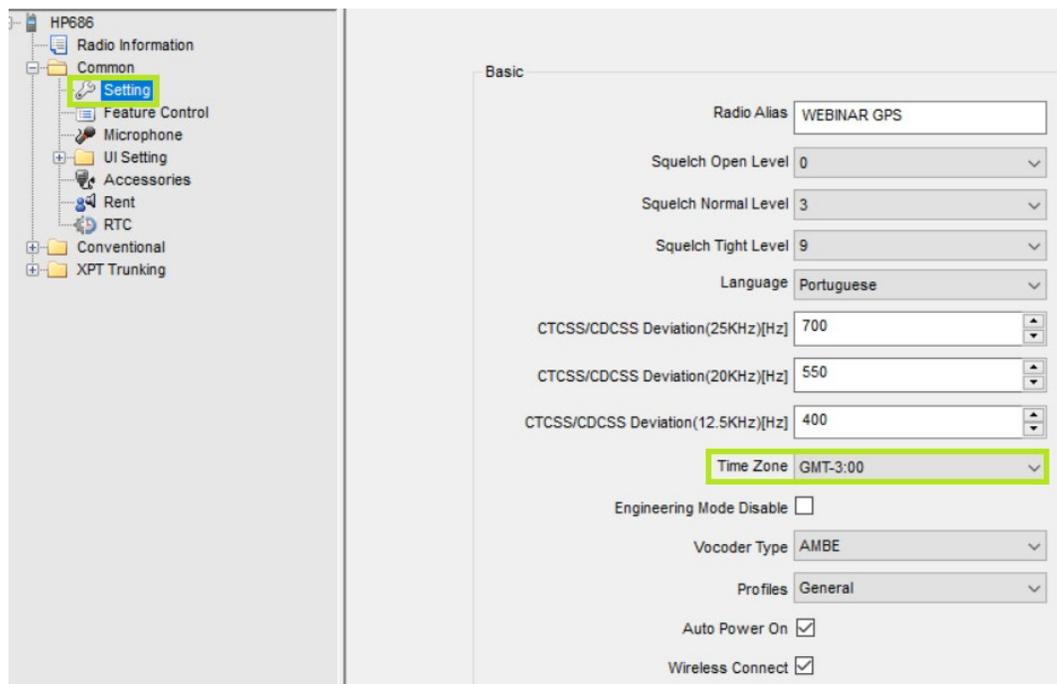


Configurações do GPS

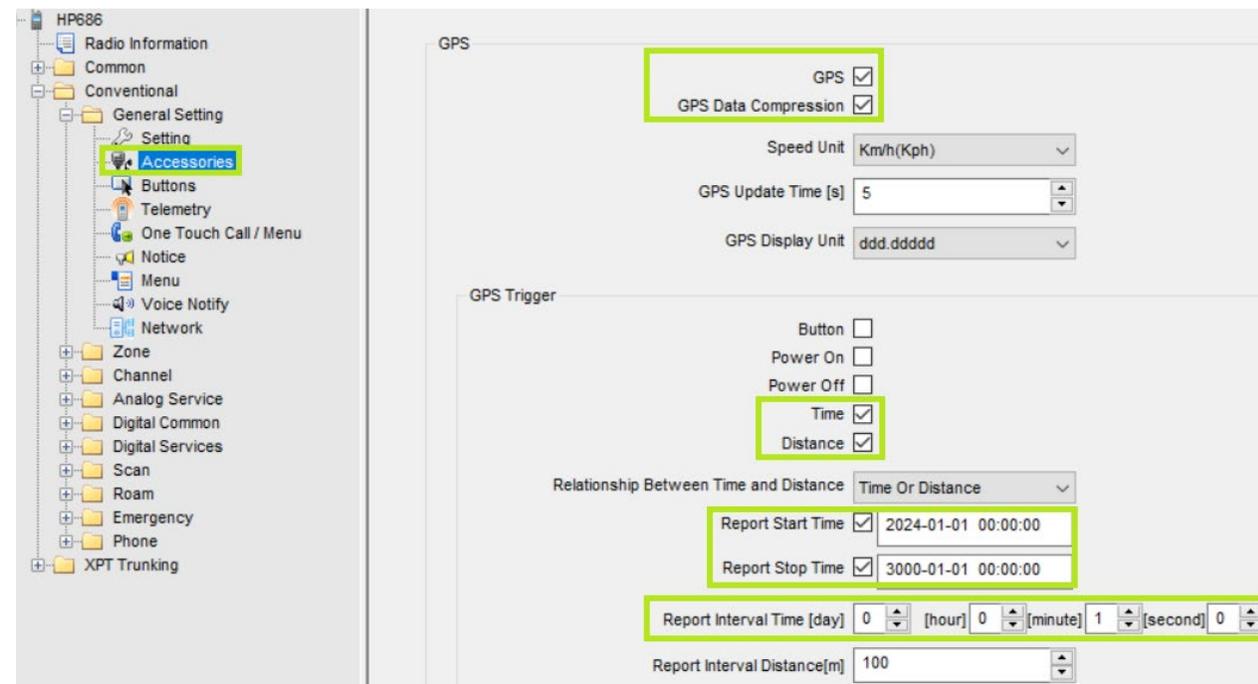
Convencional

Configurações do GPS

■ Convencional - Terminal



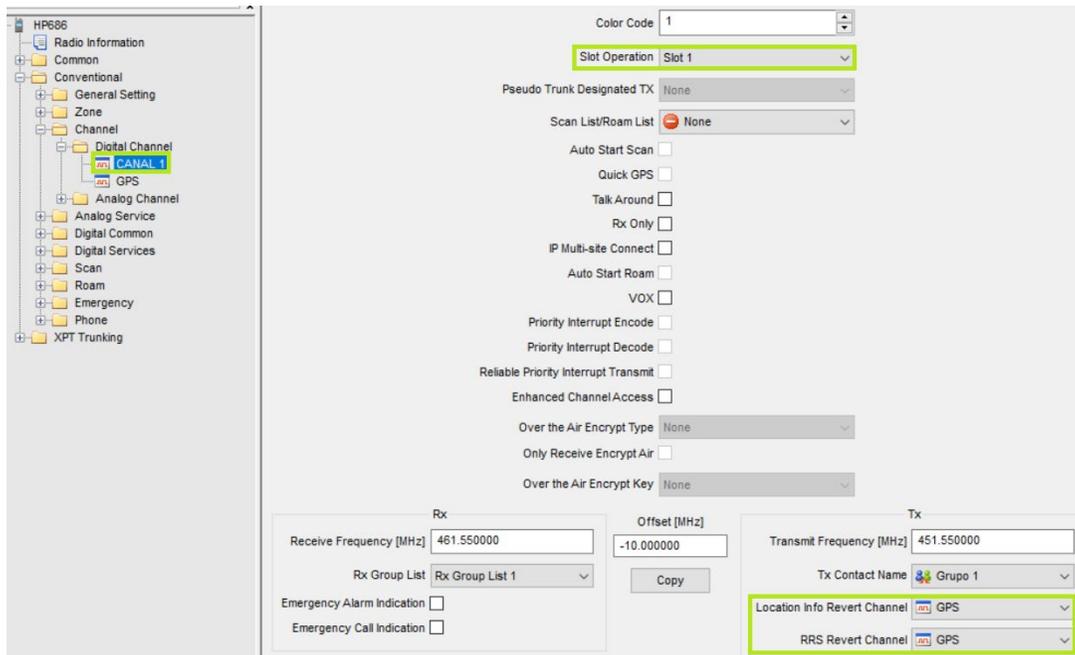
Passo 1



Passo 2

Configurações do GPS

■ Convencional - Terminal

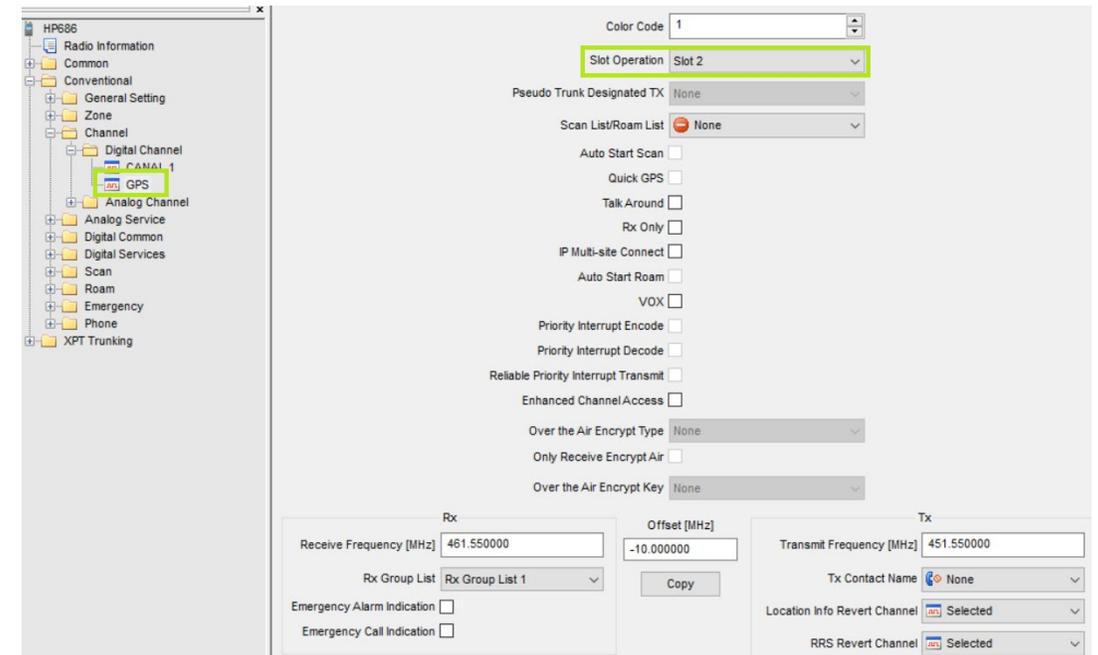


HP686 configuration interface showing the 'GPS' settings for a conventional terminal. The 'Slot Operation' is set to 'Slot 1'. The 'Location Info Revert Channel' and 'RRS Revert Channel' are both set to 'GPS'.

Color Code: 1
Slot Operation: Slot 1
Pseudo Trunk Designated TX: None
Scan List/Roam List: None
Auto Start Scan:
Quick GPS:
Talk Around:
Rx Only:
IP Multi-site Connect:
Auto Start Roam:
VOX:
Priority Interrupt Encode:
Priority Interrupt Decode:
Reliable Priority Interrupt Transmit:
Enhanced Channel Access:
Over the Air Encrypt Type: None
Only Receive Encrypt Air:
Over the Air Encrypt Key: None

Rx: Receive Frequency [MHz]: 461.550000, Offset [MHz]: -10.000000
Tx: Transmit Frequency [MHz]: 451.550000, Tx Contact Name: Grupo 1
Location Info Revert Channel: GPS
RRS Revert Channel: GPS

Passo 3



HP686 configuration interface showing the 'GPS' settings for a conventional terminal. The 'Slot Operation' is set to 'Slot 2'. The 'Location Info Revert Channel' is set to 'Selected' and the 'RRS Revert Channel' is set to 'Selected'.

Color Code: 1
Slot Operation: Slot 2
Pseudo Trunk Designated TX: None
Scan List/Roam List: None
Auto Start Scan:
Quick GPS:
Talk Around:
Rx Only:
IP Multi-site Connect:
Auto Start Roam:
VOX:
Priority Interrupt Encode:
Priority Interrupt Decode:
Reliable Priority Interrupt Transmit:
Enhanced Channel Access:
Over the Air Encrypt Type: None
Only Receive Encrypt Air:
Over the Air Encrypt Key: None

Rx: Receive Frequency [MHz]: 461.550000, Offset [MHz]: -10.000000
Tx: Transmit Frequency [MHz]: 451.550000, Tx Contact Name: None
Location Info Revert Channel: Selected
RRS Revert Channel: Selected

Passo 4

Configurações do GPS

- Convencional - Terminal

HP686

- Radio Information
- Common
- Conventional
- General Setting
- Zone
 - WEBINAR GPS**
- Channel
- Analog Service
- Digital Common
- Digital Services
- Scan
- Roam
- Emergency
- Phone
- XPT Trunking

Zone Alias: WEBINAR GPS (The actual display may change, See the Help for details)

Channel List

Only Display Unused Channel

Available		Members	
Alias		No.	Alias
CH A1		1	CANAL 1
CH A2			
CH A3			
GPS			
None			
Per C1			

Buttons: Add >>, << Remove, Up, Down

Passo 5



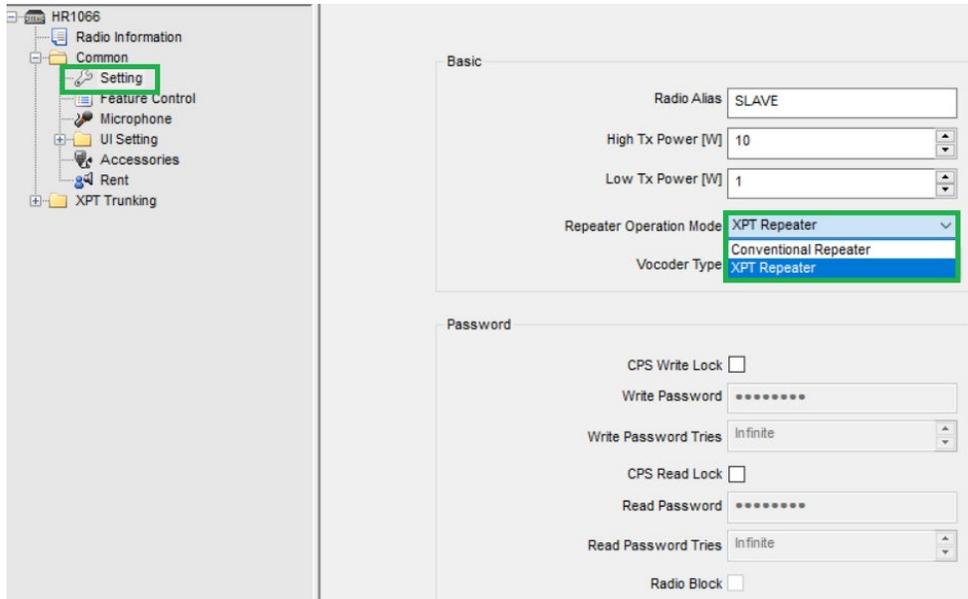
Configurações do GPS

XPT



Configurações do GPS

■ XPT - Repetidora



HR1066

- Radio Information
- Common
- Setting
- Feature Control
- Microphone
- UI Setting
- Accessories
- Rent
- XPT Trunking

Basic

Radio Alias: SLAVE

High Tx Power [W]: 10

Low Tx Power [W]: 1

Repeater Operation Mode: XPT Repeater

Vocoder Type: XPT Repeater

Password

CPS Write Lock:

Write Password:

Write Password Tries: Infinite

CPS Read Lock:

Read Password:

Read Password Tries: Infinite

Radio Block:

Passo 1



HR1066

- Radio Information
- Common
- XPT Trunking
- General Setting
- Zone
- Channel
- Digital Common
- XPT Service
- Setting
- AIS

Site Setting

Repeater Index: 16

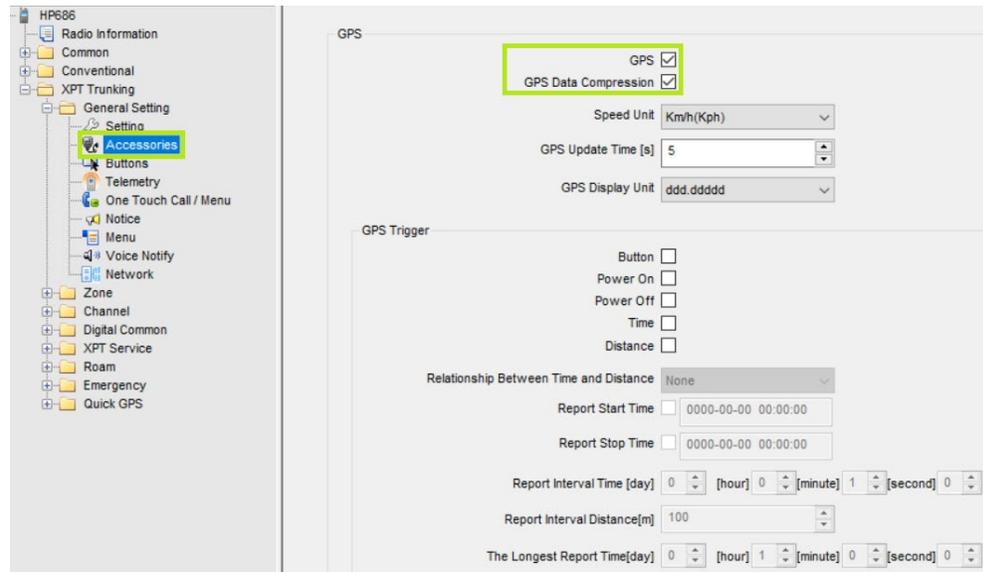
Site ID: 1

Repeater Service Type: Data Repeater

Passo 2

Configurações do GPS

■ XPT - Terminal



HP686

Radio Information

- Common
- Conventional
- XPT Trunking
- General Setting
 - Setting
 - Accessories**
 - Buttons
 - Telemetry
 - One Touch Call / Menu
 - Notice
 - Menu
 - Voice Notify
 - Network
- Zone
- Channel
- Digital Common
- XPT Service
- Roam
- Emergency
- Quick GPS

GPS

GPS

GPS Data Compression

Speed Unit Km/h(Kph)

GPS Update Time [s] 5

GPS Display Unit ddd.ddddd

GPS Trigger

Button

Power On

Power Off

Time

Distance

Relationship Between Time and Distance None

Report Start Time 0000-00-00 00:00:00

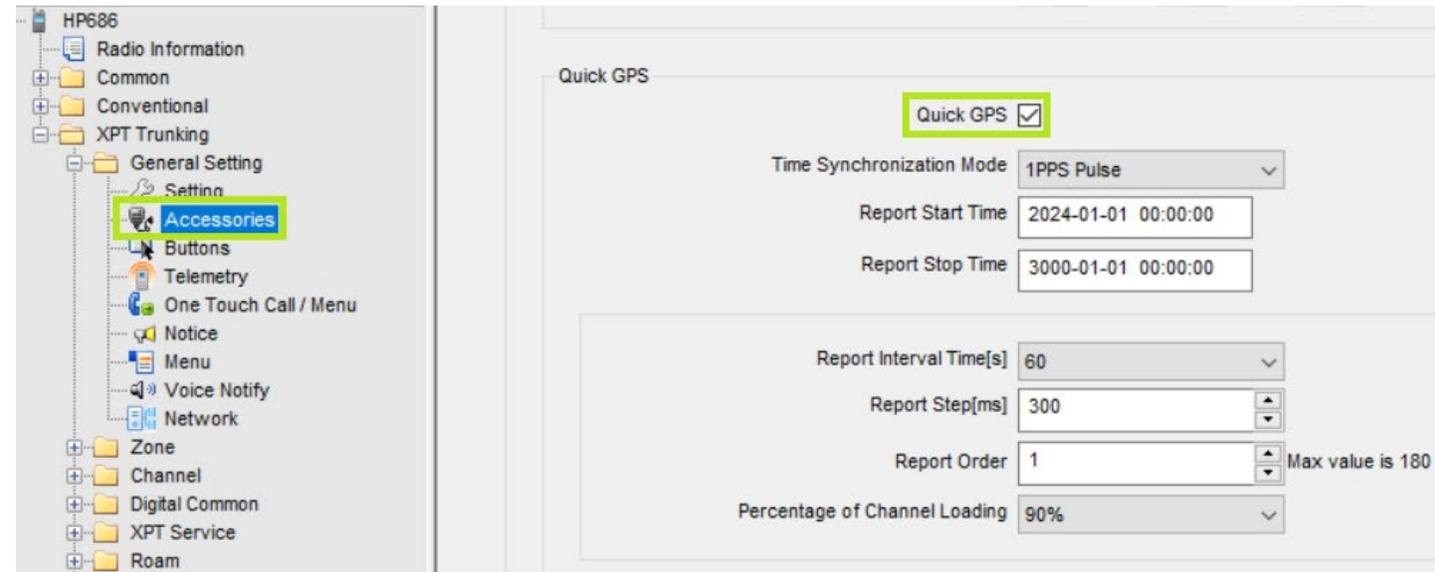
Report Stop Time 0000-00-00 00:00:00

Report Interval Time [day] 0 [hour] 0 [minute] 1 [second] 0

Report Interval Distance [m] 100

The Longest Report Time [day] 0 [hour] 1 [minute] 0 [second] 0

Passo 1



HP686

Radio Information

- Common
- Conventional
- XPT Trunking
- General Setting
 - Setting
 - Accessories**
 - Buttons
 - Telemetry
 - One Touch Call / Menu
 - Notice
 - Menu
 - Voice Notify
 - Network
- Zone
- Channel
- Digital Common
- XPT Service
- Roam

Quick GPS

Quick GPS

Time Synchronization Mode 1PPS Pulse

Report Start Time 2024-01-01 00:00:00

Report Stop Time 3000-01-01 00:00:00

Report Interval Time [s] 60

Report Step [ms] 300

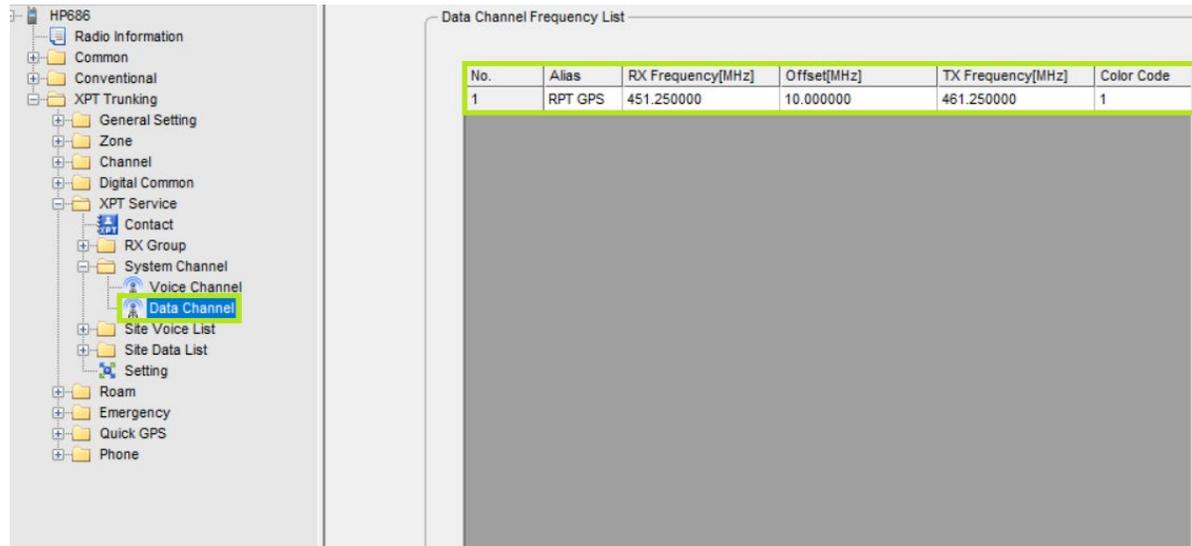
Report Order 1 Max value is 180

Percentage of Channel Loading 90%

Passo 2

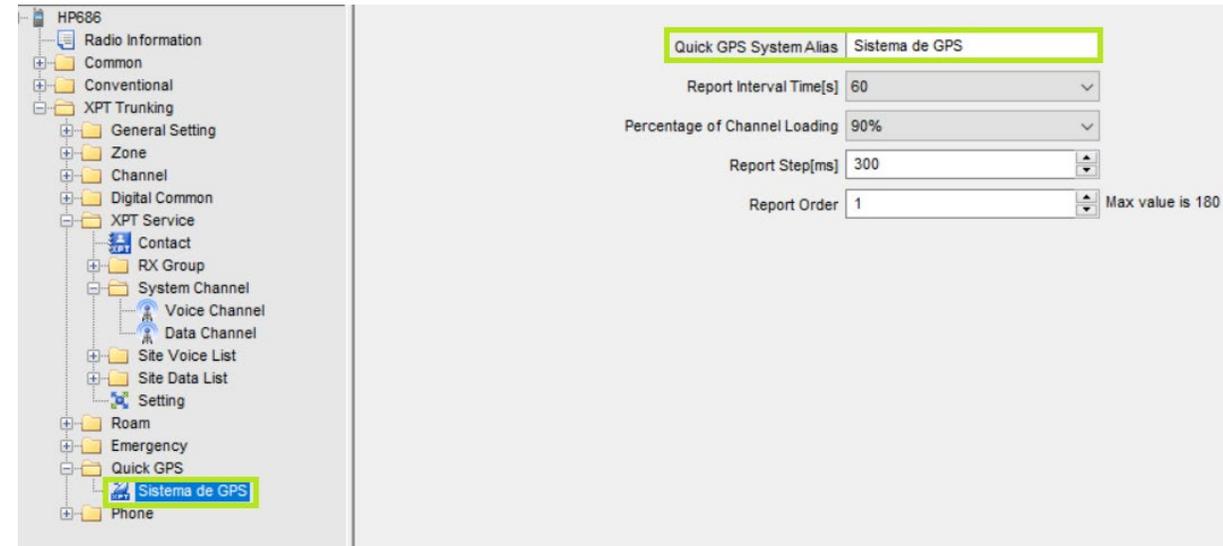
Configurações do GPS

■ XPT - Terminal



No.	Alias	RX Frequency[MHz]	Offset[MHz]	TX Frequency[MHz]	Color Code
1	RPT GPS	451.250000	10.000000	461.250000	1

Passo 4



Quick GPS System Alias: Sistema de GPS

Report Interval Time[s]: 60

Percentage of Channel Loading: 90%

Report Step[ms]: 300

Report Order: 1 (Max value is 180)

Passo 5

Configurações do GPS



■ XPT - Terminal

HP686

Radio Information

- Common
- Conventional
- XPT Trunking
- General Setting
- Zone
- Channel
- Digital Common
- XPT Service
 - Contact
 - RX Group
 - System Channel
 - Site Voice List
 - Site Data List
 - GPS 1
 - GPS 2
 - Setting
- Roam
- Emergency
- Quick GPS
- Phone

Data Channel List

Site Data List Alias: GPS 1

No.	Channel Alias	Channel Type
1	RPT GPS	Quick GPS

Quick GPS Configuration

Quick GPS Channel: RPT GPS

Quick GPS Slot: Slot 1

Quick GPS System: Sistema de GPS

Passo 6

HP686

Radio Information

- Common
- Conventional
- XPT Trunking
- General Setting
- Zone
- Channel
- Digital Common
- XPT Service
 - Contact
 - RX Group
 - System Channel
 - Site Voice List
 - Site Data List
 - GPS 1
 - GPS 2
 - Setting
- Roam
- Emergency
- Quick GPS
- Phone

Data Channel List

Site Data List Alias: GPS 2

No.	Channel Alias	Channel Type
1	RPT GPS	Quick GPS

Quick GPS Configuration

Quick GPS Channel: RPT GPS

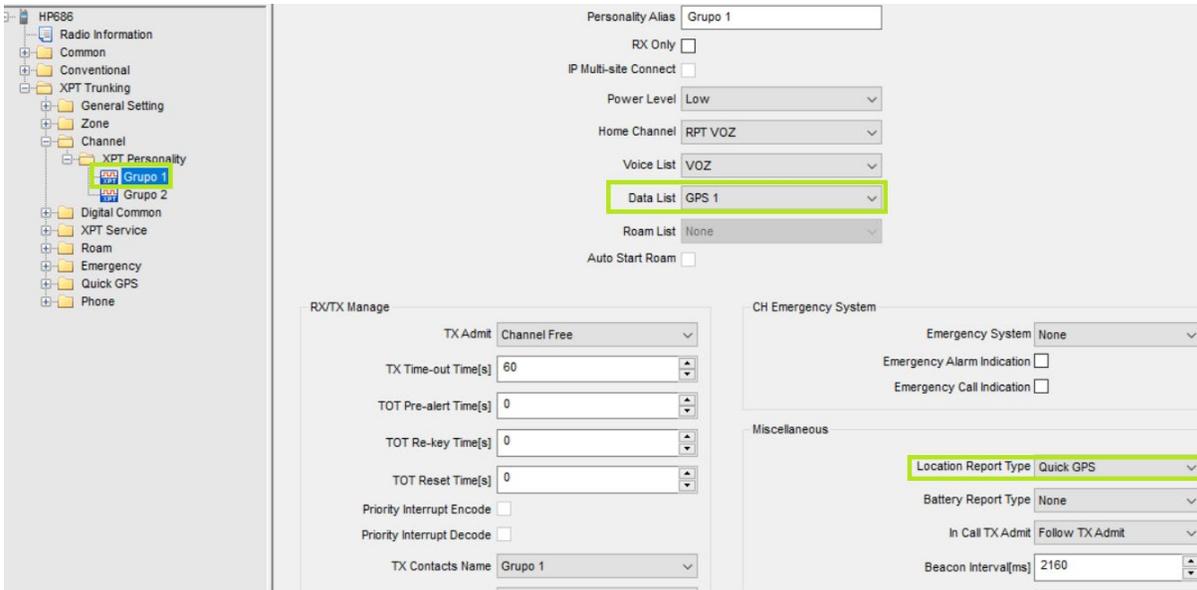
Quick GPS Slot: Slot 2

Quick GPS System: Sistema de GPS

Passo 7

Configurações do GPS

■ XPT - Terminal



HP686

- Radio Information
- Common
- Conventional
- XPT Trunking
 - General Setting
 - Zone
 - Channel
 - XPT Personality
 - Grupo 1
 - Grupo 2
- Digital Common
- XPT Service
- Roam
- Emergency
- Quick GPS
- Phone

Personality Alias: Grupo 1

RX Only:

IP Multi-site Connect:

Power Level: Low

Home Channel: RPT VOZ

Voice List: VOZ

Data List: GPS 1

Roam List: None

Auto Start Roam:

RX/TX Manage

TX Admit: Channel Free

TX Time-out Time[s]: 60

TOT Pre-alert Time[s]: 0

TOT Re-key Time[s]: 0

TOT Reset Time[s]: 0

Priority Interrupt Encode:

Priority Interrupt Decode:

TX Contacts Name: Grupo 1

CH Emergency System

Emergency System: None

Emergency Alarm Indication:

Emergency Call Indication:

Miscellaneous

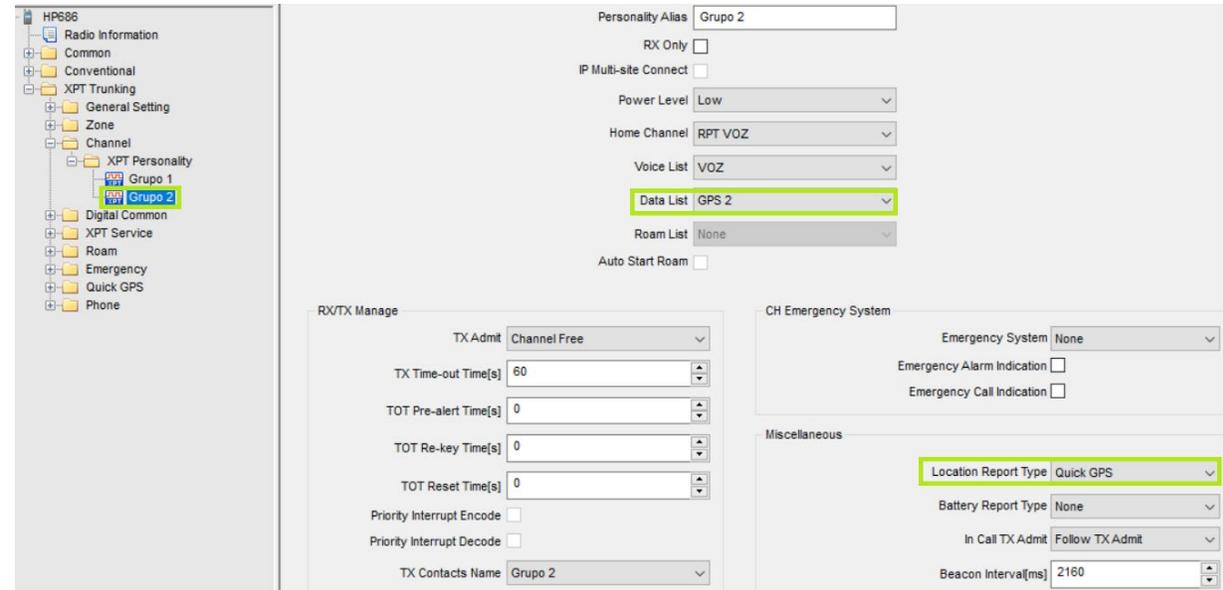
Location Report Type: Quick GPS

Battery Report Type: None

In Call TX Admit: Follow TX Admit

Beacon Interval[ms]: 2160

Passo 8



HP686

- Radio Information
- Common
- Conventional
- XPT Trunking
 - General Setting
 - Zone
 - Channel
 - XPT Personality
 - Grupo 1
 - Grupo 2
- Digital Common
- XPT Service
- Roam
- Emergency
- Quick GPS
- Phone

Personality Alias: Grupo 2

RX Only:

IP Multi-site Connect:

Power Level: Low

Home Channel: RPT VOZ

Voice List: VOZ

Data List: GPS 2

Roam List: None

Auto Start Roam:

RX/TX Manage

TX Admit: Channel Free

TX Time-out Time[s]: 60

TOT Pre-alert Time[s]: 0

TOT Re-key Time[s]: 0

TOT Reset Time[s]: 0

Priority Interrupt Encode:

Priority Interrupt Decode:

TX Contacts Name: Grupo 2

CH Emergency System

Emergency System: None

Emergency Alarm Indication:

Emergency Call Indication:

Miscellaneous

Location Report Type: Quick GPS

Battery Report Type: None

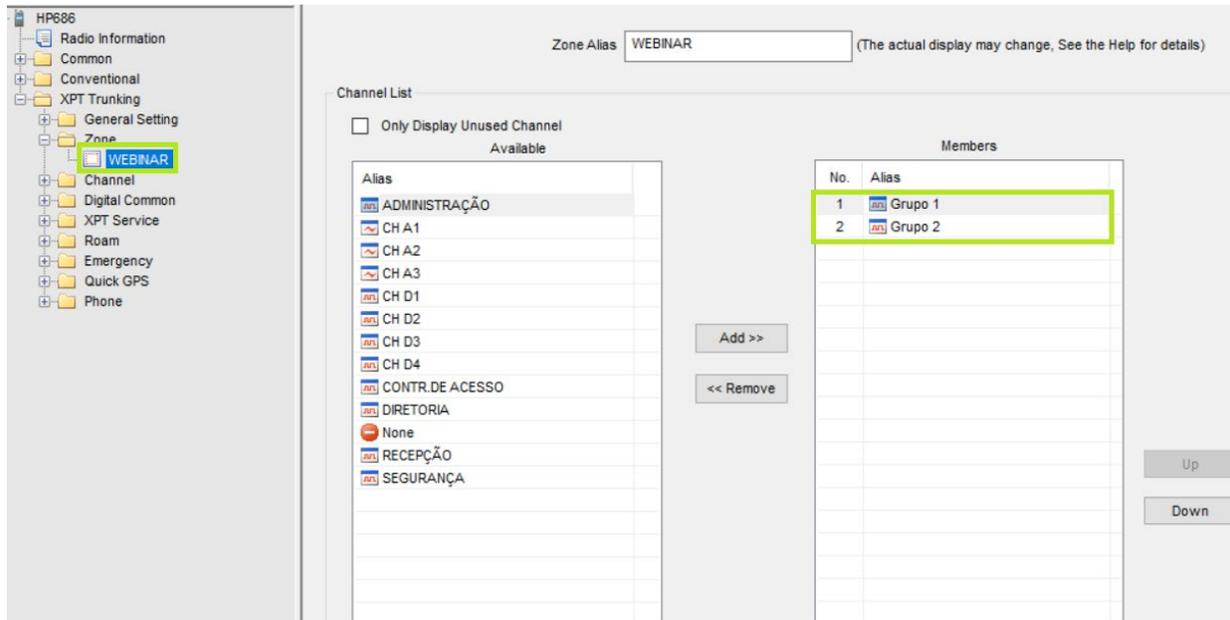
In Call TX Admit: Follow TX Admit

Beacon Interval[ms]: 2160

Passo 9

Configurações do GPS

■ XPT - Terminal



Zone Alias: WEBINAR (The actual display may change, See the Help for details)

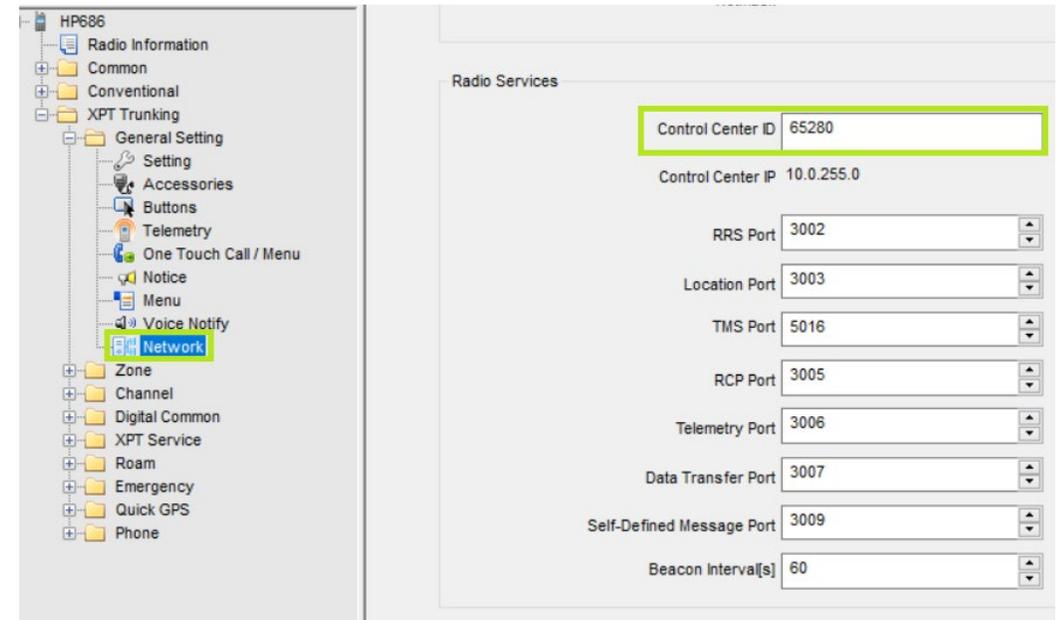
Channel List

Only Display Unused Channel

Available		Members	
Alias		No.	Alias
ADMINISTRAÇÃO		1	Grupo 1
CH A1		2	Grupo 2
CH A2			
CH A3			
CH D1			
CH D2			
CH D3			
CH D4			
CONTR.DE ACESSO			
DIRETORIA			
None			
RECEPÇÃO			
SEGURANÇA			

Buttons: Add >>, << Remove, Up, Down

Passo 10



Radio Services

Control Center ID: 65280

Control Center IP: 10.0.255.0

RRS Port: 3002

Location Port: 3003

TMS Port: 5016

RCP Port: 3005

Telemetry Port: 3006

Data Transfer Port: 3007

Self-Defined Message Port: 3009

Beacon Interval[s]: 60

Passo 11



Software de Despacho

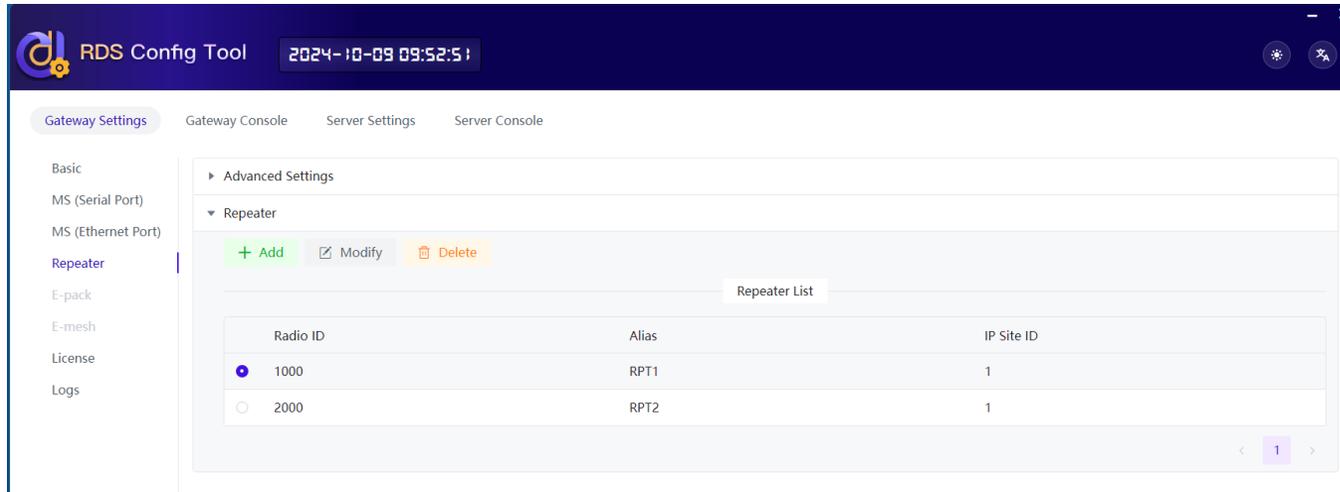
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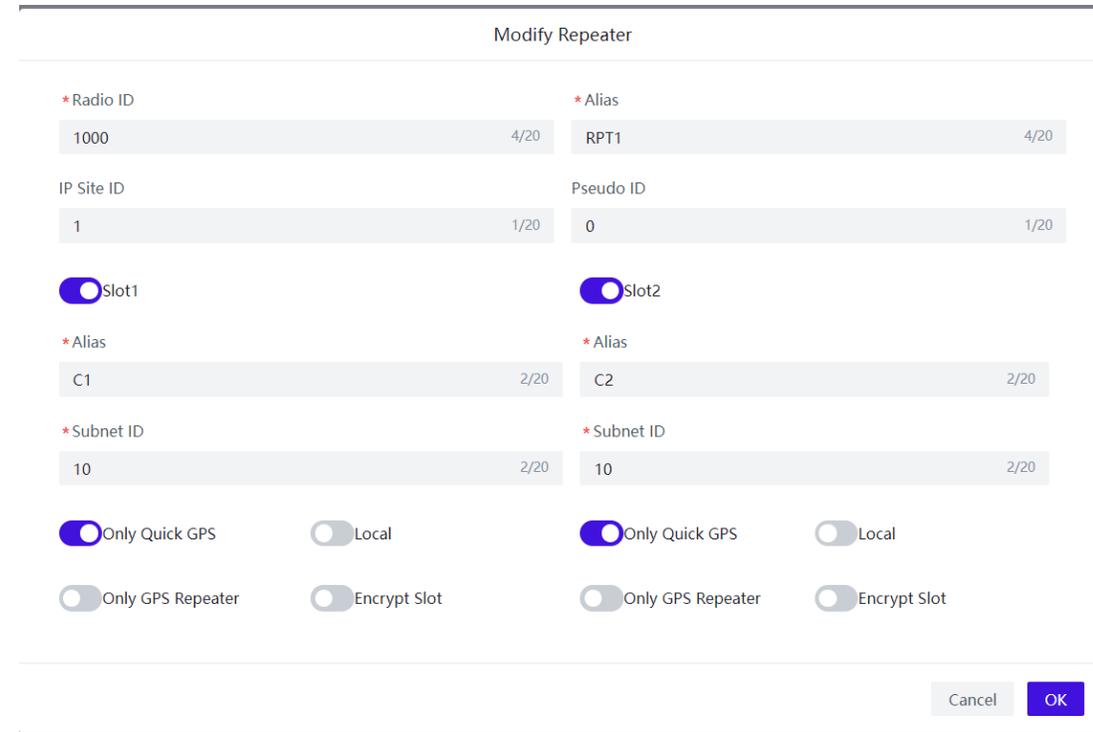
Software de Despacho



■ SmartDispatch Plus



Passo 1



Passo 2

Software de Despacho



SmartOne - Convencional

The screenshot shows the SmartOne configuration interface. The left sidebar contains a menu with options: Service Server, Basic, SIP, Log, Database, Platform, Hot Standby, SIP Phone, License, Geofencing Alarm, Multimedia Path, System Send Mode Node, Backup, Base Data, Call Routing, Locating Data Distribution, Add Locating Server, Media Server, Gateway, and Configuration Tool. The main content area displays the 'Basic' configuration for a 'Service Server'. It includes a welcome message for 'admin Administrator' and a 'Network element authorization status' section showing 'Service: Normal' and 'Gateway: Normal'. Below this, various configuration fields are listed, including 'Version: V3.0.6.31893', 'Server ID: 00001', 'Alias: Server', and 'Periodical GPS Polling: All Radios'. The 'Periodical GPS Polling' field is highlighted with a green box.

Passo 1

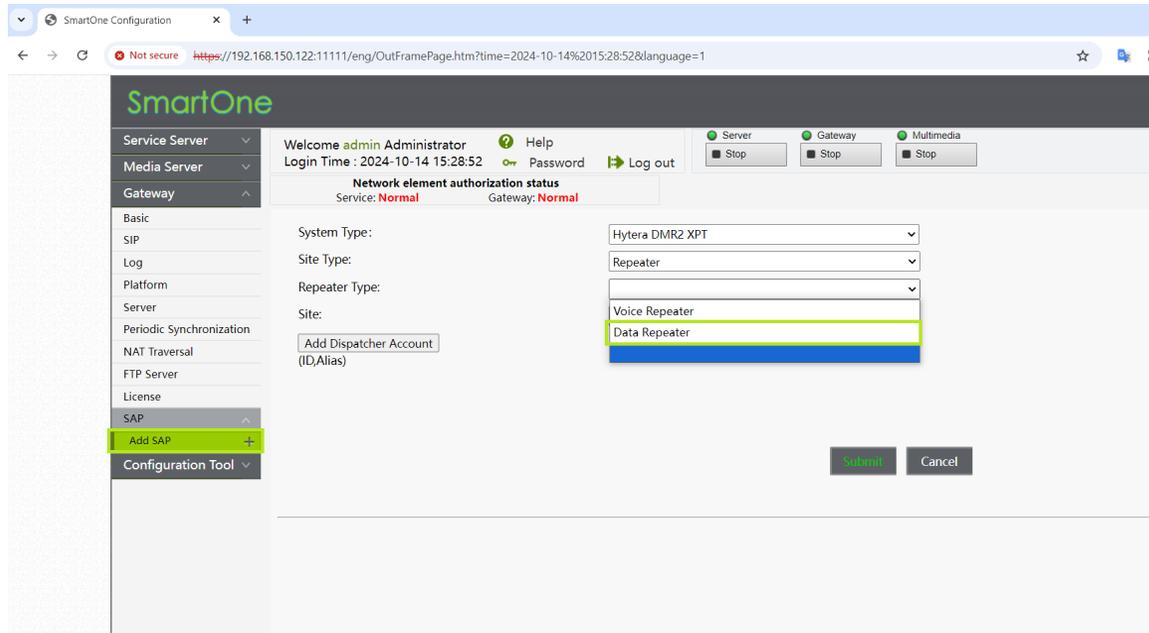
The screenshot shows the SmartOne configuration interface for a 'Radio 10'. The left sidebar is similar to the previous screenshot, but the 'Base Data' option is highlighted. The main content area displays the 'Base Data' configuration for 'SmartOne(0)'. It includes a 'GPS' section with the following settings: 'Enable GPS' (checked), 'Time' (selected), '60 Second', 'Main Control CH' (selected), and 'Yes' (checked). The 'GPS Channel' is set to 'Main Control CH'. The 'with Display' option is also checked. The 'RRS (s)' is set to 900. The 'Organization' is set to 'SmartOne'. A 'Multi-select Delete' button is visible at the bottom of the configuration area.

Passo 2

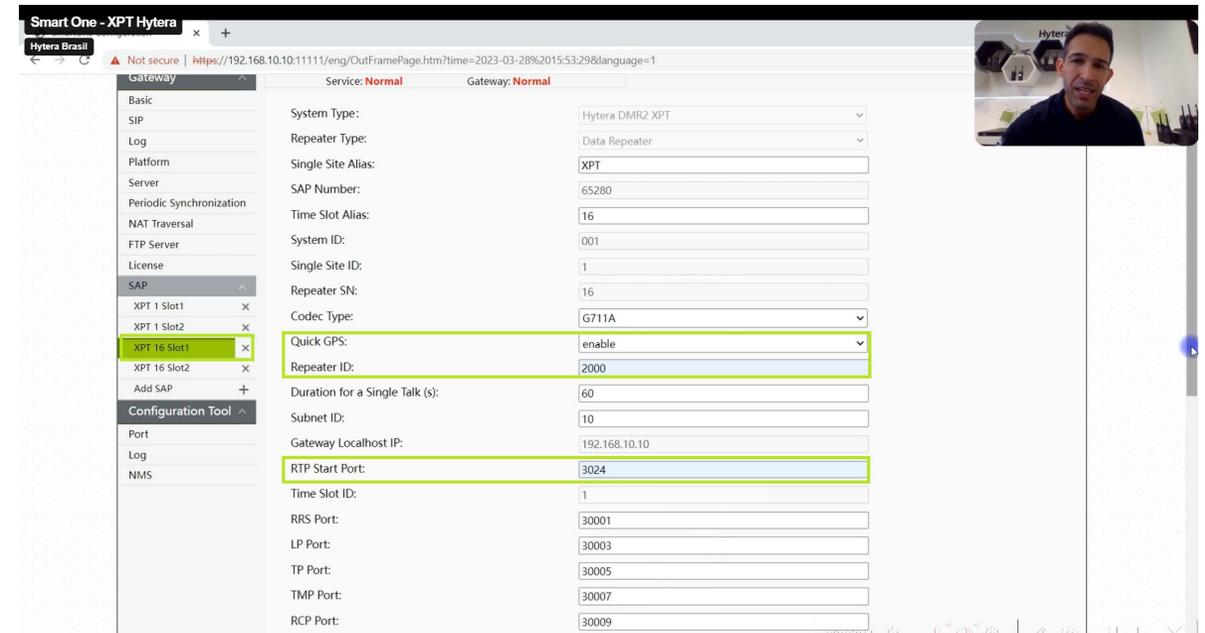
Software de Despacho



- SmartOne - XPT



Passo 1



Passo 2



Hytera

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