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gpRadio Reference Manual

API Description

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Chapter 1

Introduction

This document describes in a formal manner the API interface that can be used to control all the functionality of the gpRadio.

Chapter 2

Module Documentation

2.1 INIT primitives

Functions

- void gpRadio_Init (void)
  Initialisation method.

2.1.1 Detailed Description

This module groups the primitives for initialisation.

2.1.2 Function Documentation

gpRadio_Init()

```
void gpRadio_Init (
                void  )
```

This primitive is for initialisation and typically called from *gpBaseComps_StackInit()*.

2.2 CONFIG primitives

Functions

- gpRadio_Status_t gpRadio_SetRxMode (Bool enableMultiStandard, Bool enableMultiChannel, Bool enableHighSensitivity)

  RxMode config.
- gpRadio_Status_t gpRadio_GetRxMode (Bool *enableMultiStandard, Bool *enableMultiChannel, Bool *enableHighSensitivity)

  RxMode config.
- gpRadio_Status_t gpRadio_SetRxAntenna (gpRadio_AntennaSelection_t rxAntenna)

  Antenna config.
- gpRadio_AntennaSelection_t gpRadio_GetRxAntenna (void)

  Antenna config.

2.2.1 Detailed Description

This module groups the primitives for configuring the radio modes

2.2.2 Function Documentation

gpRadio_SetRxMode()

```
gpRadio_Status_t gpRadio_SetRxMode (
              Bool enableMultiStandard,
              Bool enableMultiChannel,
              Bool enableHighSensitivity )
```

This primitive is for configuring the options for the Rx Mode.

gpRadio_GetRxMode()

```
gpRadio_Status_t gpRadio_GetRxMode (
              Bool * enableMultiStandard,
              Bool * enableMultiChannel,
              Bool * enableHighSensitivity )
```

This primitive is for getting the options for the Rx Mode.

Parameters

enableMultiStandard	Allows concurrent listening on ZigBee and BLE channels (not compatible with the other two options). This option is also known as ConcurrentConnect™. Note that this is not available on some older products.
enableMultiChannel	Allows listening to multiple ZigBee channels simultaneously (not compatible with the other two options)
enableHighSensitivity	Allows for higher sensitivity ZigBee reception (not compatible with the other two options)

gpRadio_SetRxAntenna()

```
gpRadio_Status_t gpRadio_SetRxAntenna (
            gpRadio_AntennaSelection_t rxAntenna )
```

This primitive is for configuring the rx antenna selection.. This affects this ZB and BLE Rx antenna, but in the current implementation also the BLE TX antenna since it is always the same as the BLE Rx antenna.

gpRadio_GetRxAntenna()

```
gpRadio_AntennaSelection_t gpRadio_GetRxAntenna (
            void  )
```

This primitive is for getting the rx antenna selection..

Chapter 3

File Documentation

3.1 gpRadio.h File Reference

Functions

- void gpRadio_Init (void)

  Initialisation method.
- gpRadio_Status_t gpRadio_SetRxMode (Bool enableMultiStandard, Bool enableMultiChannel, Bool enableHighSensitivity)

  RxMode config.
- gpRadio_Status_t gpRadio_GetRxMode (Bool *enableMultiStandard, Bool *enableMultiChannel, Bool *enableHighSensitivity)

  RxMode config.
- gpRadio_Status_t gpRadio_SetRxAntenna (gpRadio_AntennaSelection_t rxAntenna)

  Antenna config.
- gpRadio_AntennaSelection_t gpRadio_GetRxAntenna (void)

  Antenna config.

gpRadio_AntennaSelection_t

- #define gpRadio_AntennaSelection_PortRF1 0x0

  Force antenna 0 (termed RF Port 1 or Ant1 in datasheet) to be used.
- #define gpRadio_AntennaSelection_PortRF2 0x1

  Force antenna 1 (termed RF Port 2 or Ant2 in datasheet) to be used.
- #define gpRadio_AntennaSelection_Auto 0x2

  Automatic antenna seletion based on BBP-RX for RX and on MAC settings for TX.
- #define gpRadio_AntennaSelection_Unknown 0xFF

  Not possible to dedect which antenna is selected (error condition)
- typedef UInt8 gpRadio_AntennaSelection_t

  The gpRadio_AntennaSelection_t type defines the antenna selection mode.

gpRadio_Status_t

- #define gpRadio_StatusSuccess 0x00

  The requested operation was completed successfully.
- #define gpRadio_StatusNotImplemented 0x01

Requested language is not supported.

- #define gpRadio_StatusInvalidParameter 0x02

  Invalid parameter before enabling currentRX mode.

- #define gpRadio_StatusError 0xFF

  Unspecified error condition triggered.

- typedef UInt8 gpRadio_Status_t

  Return status enumeration.