

QtXBee

Generated by Doxygen 1.8.11



# Contents

<b>1</b>	<b>Module Index</b>	<b>1</b>
1.1	Modules . . . . .	1
<b>2</b>	<b>Hierarchical Index</b>	<b>3</b>
2.1	Class Hierarchy . . . . .	3
<b>3</b>	<b>Class Index</b>	<b>5</b>
3.1	Class List . . . . .	5
<b>4</b>	<b>Module Documentation</b>	<b>7</b>
4.1	QXBee . . . . .	7
4.2	XBeePacket . . . . .	8
4.2.1	Detailed Description . . . . .	8
<b>5</b>	<b>Class Documentation</b>	<b>9</b>
5.1	ATCommand Class Reference . . . . .	9
5.1.1	Detailed Description . . . . .	10
5.2	ATCommandQueue Class Reference . . . . .	10
5.2.1	Detailed Description . . . . .	11
5.3	ATCommandRemote Class Reference . . . . .	11
5.3.1	Detailed Description . . . . .	12
5.4	ATCommandResponse Class Reference . . . . .	12
5.4.1	Detailed Description . . . . .	13
5.5	ATCommandResponseRemote Class Reference . . . . .	13
5.5.1	Detailed Description . . . . .	14

5.6	ModemStatus Class Reference . . . . .	14
5.6.1	Detailed Description . . . . .	14
5.7	NodeIdentificationIndicator Class Reference . . . . .	15
5.7.1	Detailed Description . . . . .	16
5.8	QXBee Class Reference . . . . .	16
5.9	RXIndicator Class Reference . . . . .	17
5.9.1	Detailed Description . . . . .	17
5.10	RXIndicatorExplicit Class Reference . . . . .	18
5.10.1	Detailed Description . . . . .	18
5.11	TransmitStatus Class Reference . . . . .	19
5.11.1	Detailed Description . . . . .	19
5.12	TXRequest Class Reference . . . . .	20
5.12.1	Detailed Description . . . . .	20
5.13	TXRequestExplicit Class Reference . . . . .	21
5.13.1	Detailed Description . . . . .	21
5.14	XBeePacket Class Reference . . . . .	22
5.14.1	Member Function Documentation . . . . .	22
5.14.1.1	operator int() . . . . .	22
<b>Index</b>		<b>25</b>

# Chapter 1

## Module Index

### 1.1 Modules

Here is a list of all modules:

QXBee . . . . .	7
XBeePacket . . . . .	8



## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

QObject	
QXBee . . . . .	16
XBeePacket . . . . .	22
ATCommand . . . . .	9
ATCommandQueue . . . . .	10
ATCommandRemote . . . . .	11
ATCommandResponse . . . . .	12
ATCommandResponseRemote . . . . .	13
ModemStatus . . . . .	14
NodeIdentificationIndicator . . . . .	15
RXIndicator . . . . .	17
RXIndicatorExplicit . . . . .	18
TransmitStatus . . . . .	19
TXRequest . . . . .	20
TXRequestExplicit . . . . .	21





## Chapter 3

# Class Index

### 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">ATCommand</a>	9
<a href="#">ATCommandQueue</a>	10
<a href="#">ATCommandRemote</a>	11
<a href="#">ATCommandResponse</a>	12
<a href="#">ATCommandResponseRemote</a>	13
<a href="#">ModemStatus</a>	14
<a href="#">NodeIdentificationIndicator</a>	15
<a href="#">QXBee</a>	16
<a href="#">RXIndicator</a>	17
<a href="#">RXIndicatorExplicit</a>	18
<a href="#">TransmitStatus</a>	19
<a href="#">TXRequest</a>	20
<a href="#">TXRequestExplicit</a>	21
<a href="#">XBeePacket</a>	22



## Chapter 4

# Module Documentation

### 4.1 QXBee

The [QXBee](#) class provides bi-directional communication with a XBee device thru serial port.

This class can send and receive data using Digi's XBee API protocol mode 1 or 2. There are also included two helper functions, that can easily unicast or broadcast data to XBee devices. This class uses QObject signals and slots, and emits a signal whenever a new packet arrive, it also needs a previously setup QSerialPort for communication.

Example:

```
QSerialPort serial;
serial.setPortName("/dev/ttyUSB1");
serial.setBaudRate(QSerialPort::Baud9600);
serial.setDataBits(QSerialPort::Data8);
serial.setParity(QSerialPort::NoParity);
serial.setStopBits(QSerialPort::OneStop);
serial.setFlowControl(QSerialPort::NoFlowControl);

QXBee xbee(serial);
xbee.broadcast("Hello World!");
```

## 4.2 XBeePacket

### Classes

- class [ATCommand](#)
- class [ATCommandQueue](#)
- class [ATCommandRemote](#)
- class [ATCommandResponse](#)
- class [ATCommandResponseRemote](#)
- class [ModemStatus](#)
- class [NodeIdentificationIndicator](#)
- class [RXIndicator](#)
- class [RXIndicatorExplicit](#)
- class [TransmitStatus](#)
- class [TXRequest](#)
- class [TXRequestExplicit](#)

### 4.2.1 Detailed Description

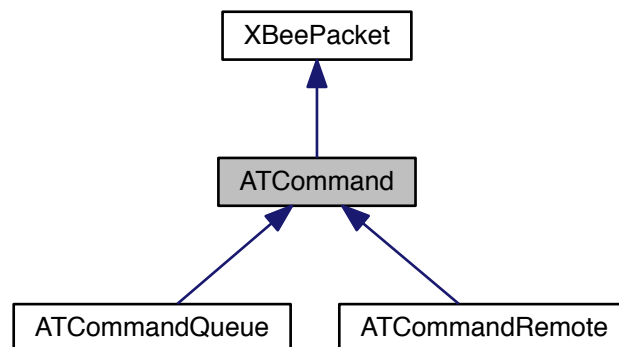
Pure virtual class, base for all packet types.

## Chapter 5

# Class Documentation

### 5.1 ATCommand Class Reference

Inheritance diagram for ATCommand:



#### Public Member Functions

- virtual uint8\_t [getFrameType](#) () const  
*Returns the API frame type value.*
- uint8\_t [getFrameID](#) ()  
*Returns the frame ID, used for correlation between a request and a response packet.*
- QByteArray [getATCommand](#) ()  
*Returns two ASCII characters that identify the AT command.*
- QByteArray [getATParameter](#) ()  
*Returns the AT parameter.*
- virtual QByteArray [getFrameData](#) ()  
*Returns the data portion of the frame.*
- void [setFrameID](#) (uint8\_t id)

*Sets the frame ID, used for correlation between a request and a response packet.*

- void [setATCommand](#) (QString command)

*Returns two ASCII characters that identify the AT command.*

- void [setATParameter](#) (QByteArray parameter)

*Sets the AT parameter.*

- virtual void [setFrameData](#) (QByteArray data)

*Sets the data portion of the frame.*

## Additional Inherited Members

### 5.1.1 Detailed Description

Represents an AT Command packet

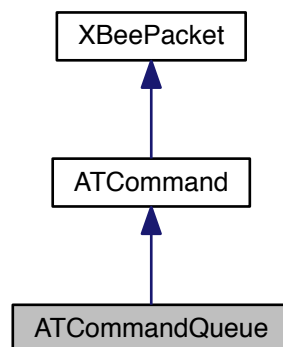
Test...

The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/ATCommand.h

## 5.2 ATCommandQueue Class Reference

Inheritance diagram for ATCommandQueue:



### Public Member Functions

- virtual uint8\_t [getFrameType](#) () const

*Returns the API frame type value.*

## Additional Inherited Members

### 5.2.1 Detailed Description

Represents an AT Command packet

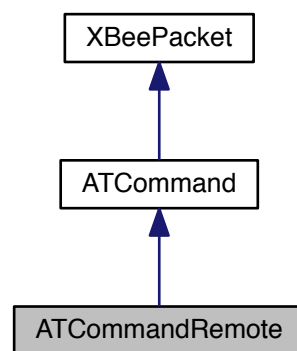
Test...

The documentation for this class was generated from the following file:

- `src/QXBee/XBeePacket/ATCommandQueue.h`

## 5.3 ATCommandRemote Class Reference

Inheritance diagram for ATCommandRemote:



### Public Member Functions

- virtual `uint8_t` [getFrameType](#) () const  
*Returns the API frame type value.*
- `QByteArray` **getDestinationAddress64** ()
- `QByteArray` **getDestinationAddress16** ()
- `uint8_t` **getCommandOptions** ()
- `QByteArray` [getFrameData](#) ()  
*Returns the data portion of the frame.*
- void **setDestinationAddress64** (`QByteArray` address)
- void **setDestinationAddress16** (`QByteArray` address)
- void **setCommandOptions** (`uint8_t` options)
- void [setFrameData](#) (`QByteArray` data)  
*Sets the data portion of the frame.*

## Additional Inherited Members

### 5.3.1 Detailed Description

Represents an AT Command packet

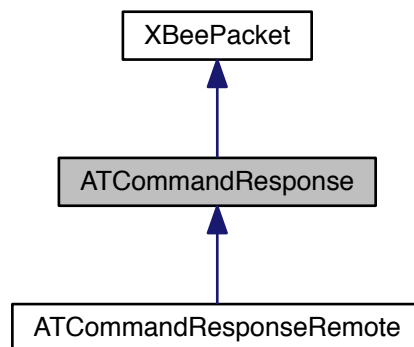
Test...

The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/ATCommandRemote.h

## 5.4 ATCommandResponse Class Reference

Inheritance diagram for ATCommandResponse:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- uint8\_t **getFrameID** ()
- QString **getATCommand** ()
- uint8\_t **getCommandStatus** ()
- QByteArray **getCommandData** ()
- virtual QByteArray **getFrameData** ()
- virtual void **setFrameData** (QByteArray data)

### Protected Member Functions

- void **setFrameID** (uint8\_t id)
- void **setATCommand** (QString command)
- void **setCommandStatus** (uint8\_t status)
- void **setCommandData** (QByteArray data)



## Additional Inherited Members

### 5.4.1 Detailed Description

Represents an AT Command packet

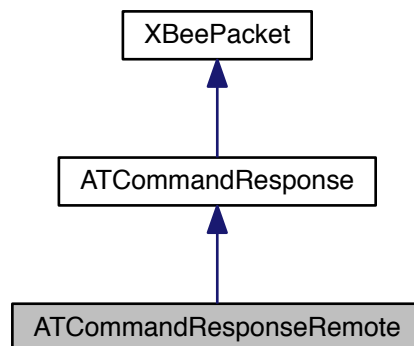
Test...

The documentation for this class was generated from the following file:

- `src/QXBee/XBeePacket/ATCommandResponse.h`

## 5.5 ATCommandResponseRemote Class Reference

Inheritance diagram for ATCommandResponseRemote:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- QByteArray **getSourceAddress64** ()
- QByteArray **getSourceAddress16** ()
- QByteArray **getFrameData** ()
- void **setFrameData** (QByteArray data)

### Protected Member Functions

- void **setSourceAddress64** (QByteArray address)
- void **setSourceAddress16** (QByteArray address)

## Additional Inherited Members

### 5.5.1 Detailed Description

Represents an AT Command packet

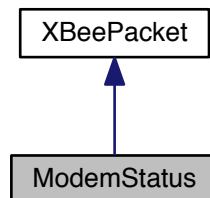
Test...

The documentation for this class was generated from the following file:

- `src/QXBee/XBeePacket/ATCommandResponseRemote.h`

## 5.6 ModemStatus Class Reference

Inheritance diagram for ModemStatus:



### Public Member Functions

- virtual `uint8_t` **getFrameType** () const
- `uint8_t` **getStatus** ()
- `QByteArray` **getFrameData** ()
- void **setFrameData** (`QByteArray` data)

### Protected Member Functions

- void **setStatus** (`uint8_t` status)

## Additional Inherited Members

### 5.6.1 Detailed Description

Represents an AT Command packet

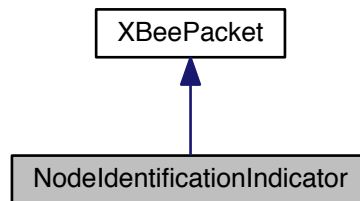
Test...

The documentation for this class was generated from the following file:

- `src/QXBee/XBeePacket/ModemStatus.h`

## 5.7 NodeIdentificationIndicator Class Reference

Inheritance diagram for NodeIdentificationIndicator:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- QByteArray **getSourceAddress64** ()
- QByteArray **getSourceAddress16** ()
- uint8\_t **getReceiveOptions** ()
- QByteArray **getRemoteAddress64** ()
- QByteArray **getRemoteAddress16** ()
- QString **getNString** ()
- QByteArray **getParentAddress16** ()
- uint8\_t **getDeviceType** ()
- uint8\_t **getSourceEvent** ()
- QByteArray **getProfileID** ()
- QByteArray **getManufacturerID** ()
- QByteArray **getDeviceTypeID** ()
- QByteArray **getRSSI** ()
- QByteArray **getFrameData** ()
- void **setFrameData** (QByteArray data)

### Protected Member Functions

- void **setSourceAddress64** (QByteArray address)
- void **setSourceAddress16** (QByteArray address)
- void **setReceiveOptions** (uint8\_t options)
- void **setRemoteAddress64** (QByteArray address)
- void **setRemoteAddress16** (QByteArray address)
- void **setNString** (QString name)
- void **setParentAddress16** (QByteArray address)
- void **setDeviceType** (uint8\_t type)
- void **setSourceEvent** (uint8\_t event)
- void **setProfileID** (QByteArray id)
- void **setManufacturerID** (QByteArray id)
- void **setDeviceTypeID** (QByteArray id)
- void **setRSSI** (QByteArray rssi)

## Additional Inherited Members

### 5.7.1 Detailed Description

Represents an AT Command packet

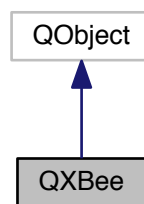
Test...

The documentation for this class was generated from the following file:

- `src/QXBee/XBeePacket/NodeIdentificationIndicator.h`

## 5.8 QXBee Class Reference

Inheritance diagram for QXBee:



## Signals

- void `dataReceived` (`XBeePacket` &)  
*This signal is emitted whenever a packet arrives.*

## Public Member Functions

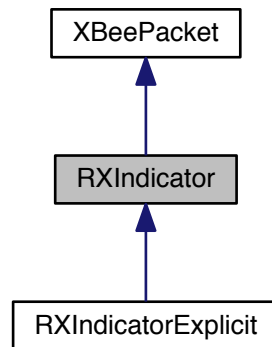
- **QXBee** (`QSerialPort` &port)
- void `send` (`XBeePacket` &packet)  
*Send a custom packet to the XBee device connected on the serial port.*
- void `broadcast` (`QString` data)  
*Broadcast data to any accessible XBee device.*
- void `unicast` (`QByteArray` address, `QString` data)  
*Send data to the XBee device identified by address.*

The documentation for this class was generated from the following file:

- `src/QXBee/QXBee.h`

## 5.9 RXIndicator Class Reference

Inheritance diagram for RXIndicator:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- QByteArray **getSourceAddress64** ()
- QByteArray **getSourceAddress16** ()
- uint8\_t **getReceiveOptions** ()
- QByteArray **getReceivedData** ()
- virtual QByteArray **getFrameData** ()
- virtual void **setFrameData** (QByteArray data)

### Protected Member Functions

- void **setSourceAddress64** (QByteArray address)
- void **setSourceAddress16** (QByteArray address)
- void **setReceiveOptions** (uint8\_t options)
- void **setReceivedData** (QByteArray data)

### Additional Inherited Members

#### 5.9.1 Detailed Description

Represents an AT Command packet

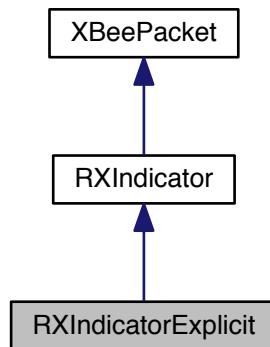
Test...

The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/RXIndicator.h

## 5.10 RXIndicatorExplicit Class Reference

Inheritance diagram for RXIndicatorExplicit:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- uint8\_t **getSourceEndpoint** ()
- uint8\_t **getDestinationEndpoint** ()
- QByteArray **getClusterID** ()
- QByteArray **getProfileID** ()
- QByteArray **getFrameData** ()
- void **setFrameData** (QByteArray data)

### Protected Member Functions

- void **setSourceEndpoint** (uint8\_t endpoint)
- void **setDestinationEndpoint** (uint8\_t endpoint)
- void **setClusterID** (QByteArray id)
- void **setProfileID** (QByteArray id)

### Additional Inherited Members

#### 5.10.1 Detailed Description

Represents an AT Command packet

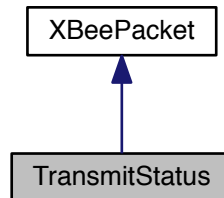
Test...

The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/RXIndicatorExplicit.h

## 5.11 TransmitStatus Class Reference

Inheritance diagram for TransmitStatus:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- uint8\_t **getFrameID** ()
- QByteArray **getDestinationAddress16** ()
- uint8\_t **getTransmitRetryCount** ()
- uint8\_t **getDeliveryStatus** ()
- uint8\_t **getDiscoveryStatus** ()
- QByteArray **getFrameData** ()
- void **setFrameData** (QByteArray data)

### Protected Member Functions

- void **setFrameID** (uint8\_t id)
- void **setDestinationAddress16** (QByteArray address)
- void **setTransmitRetryCount** (uint8\_t count)
- void **setDeliveryStatus** (uint8\_t status)
- void **setDiscoveryStatus** (uint8\_t status)

### Additional Inherited Members

#### 5.11.1 Detailed Description

Represents an AT Command packet

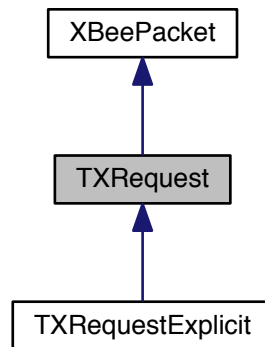
Test...

The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/TransmitStatus.h

## 5.12 TXRequest Class Reference

Inheritance diagram for TXRequest:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- uint8\_t **getFrameID** ()
- QByteArray **getDestinationAddress64** ()
- QByteArray **getDestinationAddress16** ()
- uint8\_t **getBroadcastRadius** ()
- uint8\_t **getTransmitOptions** ()
- QByteArray **getTransmittingData** ()
- virtual QByteArray **getFrameData** ()
- void **setFrameID** (uint8\_t id)
- void **setDestinationAddress64** (QByteArray address)
- void **setDestinationAddress16** (QByteArray address)
- void **setBroadcastRadius** (uint8\_t radius)
- void **setTransmitOptions** (uint8\_t options)
- void **setTransmittingData** (QByteArray data)
- virtual void **setFrameData** (QByteArray data)

### Additional Inherited Members

#### 5.12.1 Detailed Description

Represents an AT Command packet

Test...

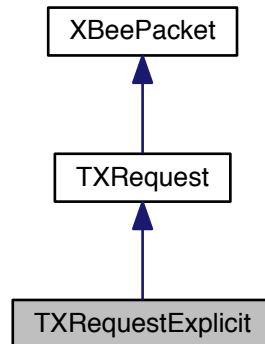
The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/TXRequest.h



## 5.13 TXRequestExplicit Class Reference

Inheritance diagram for TXRequestExplicit:



### Public Member Functions

- virtual uint8\_t **getFrameType** () const
- uint8\_t **getSourceEndpoint** ()
- uint8\_t **getDestinationEndpoint** ()
- QByteArray **getClusterID** ()
- QByteArray **getProfileID** ()
- QByteArray **getFrameData** ()
- void **setSourceEndpoint** (uint8\_t endpoint)
- void **setDestinationEndpoint** (uint8\_t endpoint)
- void **setClusterID** (QByteArray id)
- void **setProfileID** (QByteArray id)
- void **setFrameData** (QByteArray data)

### Additional Inherited Members

#### 5.13.1 Detailed Description

Represents an AT Command packet

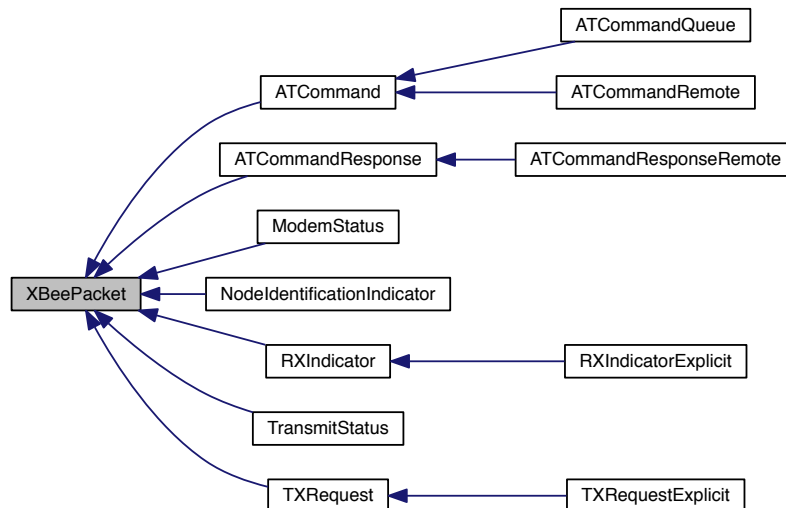
Test...

The documentation for this class was generated from the following file:

- src/QXBee/XBeePacket/TXRequestExplicit.h

## 5.14 XBeePacket Class Reference

Inheritance diagram for XBeePacket:



### Public Types

- enum [FrameType](#) {  
**ATCommand** = 0x08, **ATCommandQueue** = 0x09, **TXRequest** = 0x10, **TXRequestExplicit** = 0x11,  
**ATCommandRemote** = 0x17, **ATCommandResponse** = 0x88, **ModemStatus** = 0x8A, **TransmitStatus** =  
0x8B,  
**RXIndicator** = 0x90, **RXIndicatorExplicit** = 0x91, **NodeIdentificationIndicator** = 0x95, **ATCommandResponseRemote** = 0x97 }  
*Values for API frame types. Requests are less than 0x80 and responses are more than 0x80.*

### Public Member Functions

- virtual uint8\_t **getFrameType** () const =0
- virtual QByteArray **getFrameData** ()=0
- virtual void **setFrameData** (QByteArray data)=0
- virtual [operator int](#) ()

*Overload of int() so one can use this object directly in switch statements about the frame type.*

#### 5.14.1 Member Function Documentation

##### 5.14.1.1 virtual XBeePacket::operator int ( ) [inline], [virtual]

Overload of int() so one can use this object directly in switch statements about the frame type.

Example:

```
switch (packet)
{
    case XBeePacket::ATCommandResponse:
        ...
        break;
    case XBeePacket::ATCommandQueue:
        ...
        break;
    case XBeePacket::TXRequest:
        ...
        break;

    ...

    default:
        ...
}
```

The documentation for this class was generated from the following file:

- `src/QXBee/XBeePacket/XBeePacket.h`



# Index

- ATCommand, [9](#)
- ATCommandQueue, [10](#)
- ATCommandRemote, [11](#)
- ATCommandResponse, [12](#)
- ATCommandResponseRemote, [13](#)
- ModemStatus, [14](#)
- NodeIdentificationIndicator, [15](#)
- operator int
  - XBeePacket, [22](#)
- QXBee, [7](#), [16](#)
- RXIndicator, [17](#)
- RXIndicatorExplicit, [18](#)
- TXRequest, [20](#)
- TXRequestExplicit, [21](#)
- TransmitStatus, [19](#)
- XBeePacket, [8](#), [22](#)
  - operator int, [22](#)