



AMASP JAVA Serial Library  
1.0.0

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# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

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

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AMASPJava.AMASPSerialMaster . . . . .	8
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AMASPJava.AMASPSerial.PacketType . . . . .	13



## Chapter 2

# Class Index

### 2.1 Class List

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

<a href="#">AMASPJava.AMASPSerial</a>	5
<a href="#">AMASPJava.AMASPSerialMaster</a>	8
<a href="#">AMASPJava.AMASPSerialSlave</a>	9
<a href="#">AMASPJava.AMASPSerial.ErrorCheckType</a>	11
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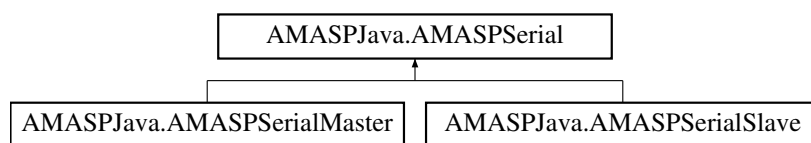


## Chapter 3

# Class Documentation

### 3.1 AMASPJava.AMASPSerial Class Reference

Inheritance diagram for AMASPJava.AMASPSerial:



#### Classes

- enum [ErrorCheckType](#)
- class [PacketData](#)
- enum [PacketType](#)

#### Public Member Functions

- void [setErrorCheckType](#) ([ErrorCheckType](#) errorCheckType)
- [ErrorCheckType](#) [getErrorCheckType](#) ()
- boolean [begin](#) (SerialPort serialCom)
- void [end](#) ()
- void [sendError](#) (int deviceId, int errorCode)
- [PacketData](#) [readPacket](#) ()

#### Public Attributes

- final int **MSGMAXSIZE** = 4096

## Protected Member Functions

- int **CRC16ModbusCheck** (byte[] data, int dataLength)
- int **LRC16Check** (byte[] data, int dataLength)
- int **XORCheck** (byte[] data, int dataLength)
- int **checksum16Check** (byte[] message, int dataLength)
- int **fletcher16Check** (byte[] data, int dataLength)
- int **errorCheck** (byte[] data, int dataLength, [ErrorCheckType](#) eCheckType)

### 3.1.1 Detailed Description

AMASP Abstract class

Author

Andre L. Delai

### 3.1.2 Member Function Documentation

#### 3.1.2.1 begin()

```
boolean AMASPJava.AMASPSerial.begin (
    SerialPort serialCom )
```

Establishes a serial connection.

Parameters

<i>serialCom</i>	A JSerialComm object to serial communication.
------------------	---

Returns

True if the serial connection was stablished or false if not.

#### 3.1.2.2 end()

```
void AMASPJava.AMASPSerial.end ( )
```

Closes the serial connection.

### 3.1.2.3 getErrorCheckType()

```
ErrorCheckType AMASPJava.AMASPSerial.getErrorCheckType ( )
```

Gets the current error checking algorithm to be used in the sent packets.

#### Returns

The current error checking algorithm.

### 3.1.2.4 readPacket()

```
PacketData AMASPJava.AMASPSerial.readPacket ( )
```

Check if a valid packet is available and read it.

#### Returns

A [PacketData](#) Object which contains the information and data from a packet.

### 3.1.2.5 sendError()

```
void AMASPJava.AMASPSerial.sendError (
    int deviceID,
    int errorCode )
```

Send a CEP packet (Communication Error Packet).

#### Parameters

<i>deviceID</i>	Id of the target device in communication.
<i>errorCode</i>	The communication error code (0 to 255).

### 3.1.2.6 setErrorCheckType()

```
void AMASPJava.AMASPSerial.setErrorCheckType (
    ErrorCheckType errorCheckType )
```

Sets the error checking algorithm to be used in the sent packets.

#### Parameters

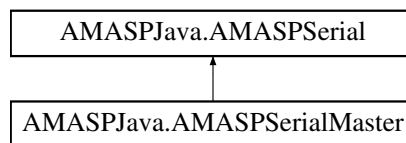
<i>errorCheckType</i>	The error checking algorithm.
-----------------------	-------------------------------

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

- C:/Users/delai/Documents/Repositorio/amaspjavalib/AMASPJava/src/AMASPJava/AMASPSerial.java

## 3.2 AMASPJava.AMASPSerialMaster Class Reference

Inheritance diagram for AMASPJava.AMASPSerialMaster:



### Public Member Functions

- void [sendRequest](#) (int deviceId, byte message[], int msgLength)
- void [sendRequest](#) (int deviceId, String message, int msgLength)

### Additional Inherited Members

#### 3.2.1 Detailed Description

AMASP Master class

#### Author

Andre L. Delai

#### 3.2.2 Member Function Documentation

##### 3.2.2.1 [sendRequest\(\)](#) [1/2]

```
void AMASPJava.AMASPSerialMaster.sendRequest (
    int deviceId,
    byte message[],
    int msgLength )
```

Send a MRP packet to a slave computer.

## Parameters

<i>deviceId</i>	Id of the requested device in slave.
<i>message</i>	The message in bytes to be send.
<i>msgLength</i>	The message length.

3.2.2.2 `sendRequest()` [2/2]

```
void AMASPJava.AMASPSerialMaster.sendRequest (
    int deviceId,
    String message,
    int msgLength )
```

Send a MRP packet to a slave computer.

## Parameters

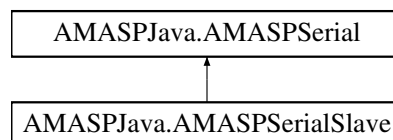
<i>deviceId</i>	Id of the requested device in slave.
<i>message</i>	The string message to be send.
<i>msgLength</i>	The message length.

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

- C:/Users/delai/Documents/Repositorio/amaspjavallib/AMASPJava/src/AMASPJava/AMASPSerialMaster.java

## 3.3 AMASPJava.AMASPSerialSlave Class Reference

Inheritance diagram for AMASPJava.AMASPSerialSlave:



### Public Member Functions

- void [sendResponse](#) (int deviceId, byte[] message, int msgLength)
- void [sendResponse](#) (int deviceId, String message, int msgLength)
- void [sendInterruption](#) (int deviceId, int InterrupCode)

## Additional Inherited Members

### 3.3.1 Detailed Description

AMASP Slave class

Author

delai

### 3.3.2 Member Function Documentation

#### 3.3.2.1 sendInterruption()

```
void AMASPJava.AMASPSerialSlave.sendInterruption (
    int deviceId,
    int InterrupCode )
```

Send a SIP (Slave Interrupt Packet).

Parameters

<i>deviceId</i>	Id of the slave device who generated the interruption.
<i>InterrupCode</i>	The code of the interruption (0 to 255).

#### 3.3.2.2 sendResponse() [1/2]

```
void AMASPJava.AMASPSerialSlave.sendResponse (
    int deviceId,
    byte[] message,
    int msgLength )
```

Send a SRP (Slave Response Packet) to a master computer.

Parameters

<i>deviceId</i>	Id of the slave device who answered.
<i>message</i>	The response message (in bytes) to be send.
<i>msgLength</i>	The message length.

### 3.3.2.3 sendResponse() [2/2]

```
void AMASPJava.AMASPSerialSlave.sendResponse (
    int deviceID,
    String message,
    int msgLength )
```

Send a SRP (Slave Response Packet) to a master computer.

#### Parameters

<i>deviceID</i>	Id of the slave device who answered.
<i>message</i>	The response message (string format) to be send.
<i>msgLength</i>	The message length.

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

- C:/Users/delai/Documents/Repositorio/amaspjavalib/AMASPJava/src/AMASPJava/AMASPSerialSlave.java

## 3.4 AMASPJava.AMASPSerial.ErrorCheckType Enum Reference

### Public Member Functions

- **ErrorCheckType** (int echeckValue)
- int **getValue** ()

### Static Public Member Functions

- static **ErrorCheckType fromValue** (int value)

### Public Attributes

- **None** =(0)
- **XOR8** =(1)
- **checksum16** =(2)
- **LRC16** =(3)
- **fletcher16** =(4)
- **CRC16** =(5)

### 3.4.1 Detailed Description

Enumeration to the error checking algorithms available in AMASP. None(0), XOR8(1), checksum16(2), LRC16(3), fletcher16(4), CRC16(5).

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

- C:/Users/delai/Documents/Repositorio/amaspjavalib/AMASPJava/src/AMASPJava/AMASPSerial.java

## 3.5 AMASPJava.AMASPSerial.PacketData Class Reference

### Public Member Functions

- [PacketType](#) `getType ()`
- `int` `getDeviceId ()`
- `byte[]` `getMessage ()`
- [ErrorCheckType](#) `getErrorCheckType ()`
- `int` `getCodeLength ()`

### 3.5.1 Detailed Description

Store the data and metadata of the packet.

### 3.5.2 Member Function Documentation

#### 3.5.2.1 `getCodeLength()`

```
int AMASPJava.AMASPSerial.PacketData.getCodeLength ( )
```

##### Returns

the codeLength

#### 3.5.2.2 `getDeviceId()`

```
int AMASPJava.AMASPSerial.PacketData.getDeviceId ( )
```

##### Returns

the deviceId

#### 3.5.2.3 `getErrorCheckType()`

```
ErrorCheckType AMASPJava.AMASPSerial.PacketData.getErrorCheckType ( )
```

##### Returns

the errorCheckType



#### 3.5.2.4 getMessage()

```
byte [] AMASPJava.AMASPSerial.PacketData.getMessage ( )
```

##### Returns

the message

#### 3.5.2.5 getType()

```
PacketType AMASPJava.AMASPSerial.PacketData.getType ( )
```

##### Returns

the type

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

- C:/Users/delai/Documents/Repositorio/amaspjavalib/AMASPJava/src/AMASPJava/AMASPSerial.java

## 3.6 AMASPJava.AMASPSerial.PacketType Enum Reference

### Public Member Functions

- **PacketType** (int typeValue)
- int **getValue** ()

### Public Attributes

- **MRP** =(0)
- **SRP** =(1)
- **SIP** =(2)
- **CEP** =(3)
- **Timeout** =(4)

### 3.6.1 Detailed Description

Enumeration to the packet types available in AMASP and the Timeout condition. MRP(0), SRP(1), SIP(2), CEP(3), Timeout(4).

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

- C:/Users/delai/Documents/Repositorio/amaspjavalib/AMASPJava/src/AMASPJava/AMASPSerial.java



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