**ThingMagic M6E Micro API Instruction**

**API Jar：**

aeitagdecoder.jar

d2xx.jar

gson-2.8.5.jar

jmdns-3.4.1.jar

ltkjava-1.0.0.6.jar

uhf\_magic\_1.1.jar

1 **Power supply**

Power on：

|  |  |
| --- | --- |
| Function | xt\_PowerOn()  serialPort.rfid\_poweron(); |
| Description | Power on the UHF module |
| Parameter | None |
| Return | True or False |

Power off ：

|  |  |
| --- | --- |
| Function | public void close() |
| Description | Power off the UHF module |
| Parameter | None |
| Return | Null |

2 **Hardware Module**

Create Reader Object

|  |  |
| --- | --- |
| Function | Reader.create(query); |
| Description | Create reader object |
| Parameter | Serial port address |
| Return | Reader object instance |

Connect the hardware

|  |  |
| --- | --- |
| Function | reader.connect(); |
| Description | Connect the reader |
| Parameter | None |
| Returen | Null |

Create read plan

|  |  |
| --- | --- |
| Function | SimpleReadPlan plan = new SimpleReadPlan(antennaList, TagProtocol.GEN2, null, null, 1000); |
| Description | Create read plan by paramSet |
| Parameter | antennaList ---  int[] antennaList = {1}; protocol ---  agProtocol.GEN2 filter ---  op --- |
| Return | SimpleReadPlan object |

Set read power

|  |  |
| --- | --- |
| Function | reader.paramSet(TMConstants.TMR\_PARAM\_RADIO\_READPOWER, readpower); |
| Description | Set read power |
| Parameter | Int |
| Return | Null |

Set write power

|  |  |
| --- | --- |
| Function | reader.paramSet(TMConstants.TMR\_PARAM\_RADIO\_WRITEPOWER, writepower); |
| Description | Set write power |
| Parameter | Int |
| Return | Null |

Set BLF

|  |  |
| --- | --- |
| Function | Gen2.LinkFrequency blf = Gen2.LinkFrequency.LINK250KHZ; reader.paramSet(TMConstants.TMR\_PARAM\_GEN2\_BLF, blf); |
| Description | Set BLF |
| Parameter | Gen2.LinkFrequency |
| Return | Null |

Set TARI

|  |  |
| --- | --- |
| Function | Gen2.Tari tari = Gen2.Tari.TARI\_6\_25US; reader.paramSet(TMConstants.TMR\_PARAM\_GEN2\_TARI, tari); |
| Description | Set TARI |
| Parameter | Gen2.TagEncoding |
| Return | Null |

Set Tagencoding

|  |  |
| --- | --- |
| Function | Gen2.TagEncoding tagEncoding = Gen2.TagEncoding.FM0; reader.paramSet(TMConstants.TMR\_PARAM\_GEN2\_TAGENCODING, tagEncoding); |
| Description | Set Tagencoding |
| Parameter | Gen2.TagEncoding |
| Return | Null |

Set Session

|  |  |
| --- | --- |
| Function | Gen2.Session session = Gen2.Session.S0; reader.paramSet(TMConstants.TMR\_PARAM\_GEN2\_SESSION, session); |
| Description | Set Session |
| Parameter | Gen2.Session |
| Return | Null |

Set Target

|  |  |
| --- | --- |
| Function | Gen2.Target target = Gen2.Target.A; reader.paramSet(TMConstants.TMR\_PARAM\_GEN2\_TARGET, target); |
| Description | Set Target |
| Parameter | Gen2.Target |
| Return | Null |

Start reading

|  |  |
| --- | --- |
| Function | r.startReading(); |
| Description | Start reading |
| Parameter | None |
| Return | Callback Readlistener |

Get data

|  |  |
| --- | --- |
| Function | ReadListener rl = new PrintListener();  r.addReadListener(rl);  static class PrintListener implements ReadListener  {  public void tagRead(Reader r, TagReadData tr)  {  System.out.println("Background read: " + tr.toString());  }  } |
| Description | Get the tag data |
| Parameter | None |
| Return | Tag data |

Stop reading

|  |  |
| --- | --- |
| Function | r.stopReading(); |
| Description | Stop reading |
| Parameter | None |
| Return | Null |

Set write data and block

|  |  |
| --- | --- |
| Function | Gen2.BlockWrite tagop = new Gen2.BlockWrite(Gen2.Bank.USER, 0, (byte) 2, writeData); |
| Description | Set block information of the data to be written |
| Parameter | Parameter 1：Block  Parameter 2：starting address  Parameter 3：data length  Parameter 4：write data |
| Return | Gen2.BlockWrite object |

Set the tag to be written

|  |  |
| --- | --- |
| Function | Gen2.Select select = new Gen2.Select(false, Gen2.Bank.EPC, 32, 96, tagReads[0].getTag().epcBytes()); |
| Description | Select the tag to be written |
| Parameter | Parameter 1：false by default  Parameter 2：select bank  Parameter 3：starting address with unit of bit  Parameter 4：data size with unit of bit  Parameter 5：data |
| Return | Gen2.Select object |

Write data

|  |  |
| --- | --- |
| Function | r.executeTagOp(tagop, select); |
| Description | Execute write data |
| Parameter | Gen2.BlockWrite Gen2.Select |
| Return | Null |

Set data read block and length

|  |  |
| --- | --- |
| Function | Gen2.ReadData readOp = new Gen2.ReadData(Gen2.Bank.USER, 0, (byte) 0x02); |
| Description | Set data read block and length |
| Parameter | Parameter 1：set the block  Parameter 2：starting address  Parameter 3：data length |
| Return | Gen2.ReadData |

Single read

|  |  |
| --- | --- |
| Function | r.executeTagOp(tagop, select); |
| Description | Read data of specified block |
| Parameter | Parameter 1：Gen2.ReadData object  Parameter 2：Gen2.Select object |
| Return | Data read |