

# **Communication SDK manual**

**BIO REP-200**

## 1. SDK Introduction

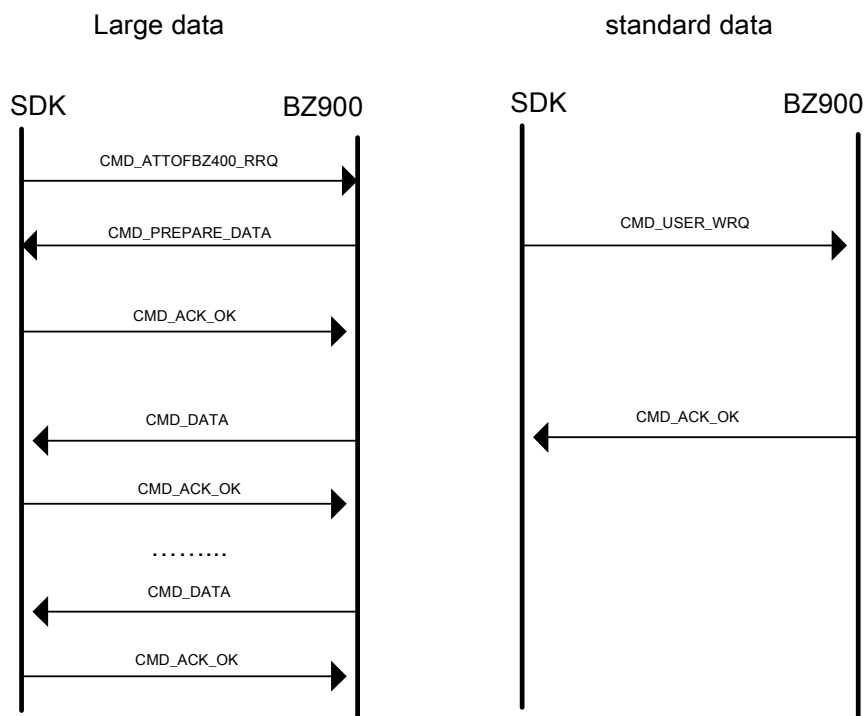
The offline communication SDK is an interface for data communication with BZ900 device. It can be used to conveniently manage user information and fingerprints, download attendance records, operation records, user information, and fingerprint templates, etc. Base on Linux socket network communication with TCP protocol. The SDK mainly have the function as below:

- 1) Download records from MRP board.
- 2) Upload and download user information, card information, fingerprints.
- 3) Set device time.

## 2. SDK Communication Structure

Diagram for data transmissions in SDK protocol:

Data length less than 1024 bytes will be reckoned as standard data length, can be send directly, otherwise, large data process must be applied.



## **SDK Main Function Introduction**

### 1. SetAesPassword(BSTR CommKey)

**Function:** Set aes key. Now the aes pwd is 'trix2016'.

**Parameter description:**

**CommKey:** communication cryptography key value.

### 2. bool Connect\_Net(string IP, int port);

**Function:** connect the device by TCP/IP.

**Parameter description:**

**IP:** the IP address of device.

**port:** the port of device.

### 3. SetCommPassword(LONG ComKey)

**Function:** set communication key.

**Parameter description:**

**ComKey:** communication key value.

### 4. SetOprateCPF(LONG dwMachineNumber, string CPF)

**Function:** set a operating CPF.

**Parameter description:**

**dwMachineNumber:** device ID.

**CPF:** the CPF number.

### 5. bool Disconnect();

**Function:** disconnect the TCP/IP, only call this function directly, don't need parameter.

### 6. bool SSR\_GetAllUserInfoEx\_BZ900(int dwMachineNumber, out string dwEnrollNumber, out string Name, out string Password, out int Privilege, out string PIS, out string CPF, out string CARD)

**Function:** download the user of device.

**Parameter description:**

**dwEnrollNumber:** user ID get from device.

**Name:** user name get from device.

**Password:** the password of user get from device.

**Privilege:** user's privilege get from device.

**PIS:** user's PIS number get from device.

**CPF:** user's CPF number get from device.

**CARD:**ID card number.

7. bool SSR\_SetUserInfoEx\_BZ900(int dwMachineNumber, string dwEnrollNumber, string Name, string Password, int Privilege, string PIS, string CPF, string CARD)

**Function:**register user to device.

**Parameter description:**

**dwEnrollNumber:**the userID you want to set.

**Name:**the user's name you want to set.

**Password:** user's password.

**Privilege:**user's privilege.

**PIS:**user's PIS number you set.

**CPF:**user's CPF number.

**CARD:**ID card number.

8. bool SetEmployer(int dwMachineNumber, string Name, int CertType, string Tax, string CEI, string Addr)

**Function:**register the employer to device.

**Parameter description:**

**Name:** the name of employer you want set.

**CertType:** choose the type of using cnpj\_cpf or cei.

**Tax:** cnpj\_cpf number of employer.

**CEI:** CEI number.

**Addr:** the addr of employer.

9. bool GetEmployer(int dwMachineNumber, out string Name, out string CertType, out string Tax, out string CEI, out string Addr)

**Function:** get employer information from device.

**Parameter description:**

**Name:**the name of the employer from device.

**CertType:** the type of using cnpj\_cpf or cei.

**Tax:**cnpj\_cpf of the employer from device.

**CEI:**the CEI number.

**Addr:** Address of the employer.

10. bool GetDevOpLog\_BZ900(int dwMachineNumber, out string nsr, out string year, out int month, out int day, out int hour, out int min, out int sec, out int optype)

**Function:** download the device records from device.

**Parameter description:**

**nsr:** the nsr number of device record.

**year,month,day,hour,min,sec:**the datetime of thr record.

**optype:**the type of the record,such as power-on record,this value is 1.

11. bool GetAttLogs\_BZ900(int dwMachineNumber, out string NSR, out string PIS, out int dwYear, out int dwMonth, out int dwDay, out int dwHour, out int dwMinute, out int dwSecond)

**Function:**download the attence record from the device.

**Parameter description:**

**NSR:** the nsr number of device record.

**PIS:** the PIS number of device record.

**dwYear, dwMonth, dwDay, dwHour, dwMinute, dwSecond:**the datetime of th record.

12. bool GetDatetimeOpLog\_BZ900(int dwMachineNumber, out string nsr, out string OldDatetime, out string NewDatetime, out string OpTCPF)

**Function:**download the operating-time record from device.

**Parameter description:**

**nsr:** the nsr number of device record.

**OldDatetime:**the old datetime.

**NewDatetime:**the new datetime.

**OpTCPF:**the CPF who had done this operation.

13. bool GetEmployeeOpLog\_BZ900(int dwMachineNumber, out string nsr, out int year, out int month, out int day, out int hour, out int min, out int sec, out string optype, out string pis, out string cpf, out string name, out int mark)

**Function:** download the operating-user record from device.

**nsr:** the nsr number of device record.

**year,month,day,hour,min,sec:** the datetime of the record.

**optype:** the type of the operation,example,add a new user is 'I'.

**pis:** the pis number of the employee who is operated.

**cpf:** the operator's cpf number.

**name:** the name of the employee.

**mark:** which item of employee is modified.

14. bool GetEmployerOpLog\_BZ900(int dwMachineNumber, out string nsr, out int year, out int month, out int day, out int hour, out int min, out int sec, out string cnpj\_cpf, out string opecpf, out string cei, out string name, out string address, out int Optype)

**Function:** download the operating-employer record.

**year,month,day,hour,min,sec:** the datetime of record.  
**cnpj\_cpf:** employer's cnpj\_cpf number.  
**opecpf:** the operator's CPF number.  
**cei:** the CEI number of the employer.  
**name:** name of the employer.  
**address:** the address of employer.  
**Otype:** the type of the operation.

15. bool SetDeviceTime(int dwMachineNumber)

**Function:** syn the time of device with PC system time.

16. bool SetSeekPosition(int dwMachineNumber, int Position)

**Function:** you can input the nsr of attendance record, and you will start to download the records from this position.

**Parameter description:**

**Position:** the NSR of the record.

17. bool SetUserTmpExStr\_BZ900(int dwMachineNumber, string dwEnrollNumber, int dwFingerIndex, int Flag, string TmpData)

**Function:** update the finger template to device.

**dwEnrollNumber:** User ID.

**dwFingerIndex :** finger template number.

**Flag:** flag of the user.

**TmpData:** finger template data.

18. bool SSR\_DeleteEnrollDataExt\_BZ900(int dwMachineNumber, string dwEnrollNumber, int dwBackupNumber)

**Function:** delete the user's finger template.

**Parameter description:**

**dwEnrollNumber:** user ID.

**dwBackupNumber:** dwBackupNumber=13 -> delete the all finger data of the user.

19. bool GetUserTmpExStr\_BZ900(int dwMachineNumber, string dwEnrollNumber, int dwFingerIndex, out int Flag, out string TmpData, out int TmpLength)

**Function:** download the finger template from the device.

**Parameter description:**

**dwEnrollNumber:** user ID.

**dwFingerIndex**:finger ID.

**Flag**:Judging whether the finger template is valid.

**TmpData**:finger template data.

**TmpLength**:template data length.