

BF630 Command Protocol

Version 1.0

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BF630

Revised History

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1. Introduction

Feedback:

CHIYU Technologies Inc. welcomes feedback on both communication specification and this manual. If you have any comments on this book, please send email to tech@chiyu-t.com.tw.

CHIYU Technologies Inc.'s site security solution terminal BF-630) can work in conjunction with a PC, ACU(Access Control Unit) and other devices via its built-in TCP/IP communication. System developers and designers, software developers can utilize this communication feature to integrate terminal into the existing site security hardware systems to develop a total solution.

Network communication type of TCP/IP is used for administration work and system setting configuration. Our terminal can be controlled by PC software when it is connected together in a LAN/WAN. And the terminal's user registration/deletion, administration, and system setting configurations can be performed through of an ACU, PC or other existing hardware. Terminal stand-alone type is capable of keeping record and this log data can be downloaded to PC through the TCP/IP communication feature.

Following are the standard command packet to the terminal.

	Size (bytes)
ACK (0x06) : ASCII Character	1
STX (0x02) : ASCII Character	1
LENGTH : length from ACK to ETX	4
TID : system unique I.D.	1
COMMAND	1
Access Key(Optional)	6
DATA : command parameter	N
CHECKSUM : byte sum from ACK to DATA	1
ETX (0x03) : ASCII Character	1

- Unique value can be assigned to each BF630's TID. And available value is from 0x01 to 0xFF. 1 is assigned as initial value.
- This packet starts from ACK.
- In this packet, multiple byte value must be started from MSB. For example, if length was 10, LENGTH is 0x00 0x00 0x00 0x0a.
- When calculate CHECKSUM, if a carry occurs, please discard.

Following are the standard return packet from the machine that is connected to CHIYU's terminal.

	Size (bytes)
BS (0x08) : ASCII Character	1
STX (0x02) : ASCII Character	1
LENGTH : length from BS to ETX	4
TID : system unique I.D.	1
RESULT	1
DATA : returned parameter	N
CHECKSUM : byte sum from BS to DATA	1
ETX (0x03) : ASCII Character	1

2. System settings configuration

2.1 Date and time

Terminal has its own built-in RTC(Real Time Clock). Terminal can use the RTC to log users' entry/exit date and time. When it is necessary needed, the date and time setting of the RTC can be asked and manipulated from a connected remote device such as PC or ACU.

2.1.1 Asking the date setting of the terminal from a linked device(0x10)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x10	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 14	4
TID	1
RESULT	1
YYMMDDYY	4
CHECKSUM : byte sum from BS to YYMMDD	1
ETX (0x03)	1

- **RESULT**

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

- **YYMMDD**

- Current date on the terminal
- YY – Year
- MM – Month
- DD – Date
- DY – Day

2.1.2 Manipulating the date from a linked device(0x11)

- Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 14+6(Optional)	4
TID	1
COMMAND : 0x11	1
Access Key(Optional)	6
YYMMDDYY	4
CHECKSUM : byte sum from ACK to YYMMDD	1
ETX (0x03)	1

- **YYMMDD**

New date for the terminal

YY – Year

MM – Month

DD – Date

DY – Day

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; this value is returned when an invalid date is entered

2.1.3 Asking the time on the terminal from a linked device(0x12)

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x12	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 13	4
TID	1
RESULT	1
HHMMSS	3
CHECKSUM : byte sum from BS to HHMMSS	1
ETX (0x03)	1

- **RESULT**

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

- **HHMMSS**

- Current time on the terminal
- HH – Hour
- MM – Minute
- SS – Second

2.1.4 Manipulating the time from a linked device(0x13)

- Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 13+6(Optional)	4
TID	1
COMMAND : 0x13	1
Access Key(Optional)	6
HHMMSS	3
CHECKSUM : byte sum from ACK to HHMMSS	1
ETX (0x03)	1

- **HHMMSS**

The new time setting for the terminal

HH – Hour

MM – Minute

SS – Second

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; this value is returned when an invalid time is entered

2.2 Terminal I.D. change(0x27)

Each terminal can be assigned its own unique I.D. Terminal I.D.'s are important when multiple terminals are interconnected through ACU. Every BIOFINGER-880 terminal is initially assigned an I.D. number of 1. This I.D number can be changed when it is necessary.

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0x27	1
Access Key(Optional)	6
NT	1
CHECKSUM : byte sum from ACK to NT	1
ETX (0x03)	1

● **NT**

New terminal I.D.

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● **TID**

Old terminal I.D.

● **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid terminal I.D. value is entered

2.3 Terminal Reboot(0x28)

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x28	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to NT	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid terminal I.D. value is entered

2.4 Set Function Key Definition(0x29)

➤ Supported model:BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 26+6(Optional)	4
TID	1
COMMAND : 0x29	1
Access Key(Optional)	6
Function Key Index	1
Definition	15
CHECKSUM : byte sum from ACK to NT	1
ETX (0x03)	1

● Function Key Index

Key	None	1	2	3	4	5	6	7	8	9
None	0	X	X	X	X	X	X	X	X	X
F1	1	5	6	7	8	9	10	11	12	13
F2	2	14	15	16	17	18	19	20	21	22
F3	3	23	24	25	26	27	28	29	30	31
F4	4	32	33	34	35	36	37	38	39	40

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid terminal I.D. value is entered

2.5 Delete Function Key Definition(0x2A)

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0x2A	1
Access Key(Optional)	6
Function Key Index	1
CHECKSUM : byte sum from ACK to NT	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid terminal I.D. value is entered

2.6 Change Terminal Password(0x2B)

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 16+6(Optional)	4
TID	1
COMMAND : 0x2B	1
Access Key(Optional)	6
Terminal Password (ASCII, digital(0~9) only)	6
CHECKSUM : byte sum from ACK to Terminal Password	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● RESULT

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid terminal I.D. value is entered

2.7 Checking security level setting(0x24)

➤ Supported model: BF630 Only

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x24	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
SL	1
CHECKSUM : byte sum from BS to SL	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **SL**

Security level specifies FAR(False Acceptance Ratio), from 1 to 5

	Level 1	Level 2	Level 3	Level 4	Level 5
FAR	1/10,000	1/100,000	1/1,000,000	1/10,000,000	1/100,000,000

2.8 Security level adjustment(0x25)

➤ Supported model: BF630 Only

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0x25	1
Access Key(Optional)	6
SL	1
CHECKSUM : byte sum from ACK to SL	1
ETX (0x03)	1

- **SL**

Desired security level setting: 1~5

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully adjusted

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid security level value is entered

2.9 Duplicate FP Enrolled (0x2C)

➤ Supported model: BF630 Only

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0x2C	1
Access Key(Optional)	6
Allow/Disallow(0/1)	1
CHECKSUM : byte sum from ACK to Allow/Disallow	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● RESULT

0x00 : Successfully adjusted

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid security level value is entered

2.10 Get Terminal Password(0x2E)

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x2E	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to Command	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 16	4
TID	1
RESULT	1
Terminal Password (ASCII, digital(0~9) only)	6
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● RESULT

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter; when an invalid terminal I.D. value is entered

2.11 Configure system parameter (0x26)

CHIYU's Terminal has several parameters. You can configure the parameter with respect to your own.

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+N+6(Optional)	4
TID	1
COMMAND : 0x26	1
Access Key(Optional)	6
Terminal Parameter	1
VALUE	N
CHECKSUM : byte sum from ACK to VALUE	1
ETX (0x03)	1

● PARAMETER

- 0x00: Title on LCD
- 0x01: Terminal Description
- 0x02: FP Verification Mode
- 0x03: Working Role
- 0x04: RESV
- 0x05: RESV
- 0x06: RESV
- 0x07: RESV
- 0x08: WG Format
- 0x09: WG Output
- 0x0a: WG Output Format
- 0x0b: Maintenance Time
- 0x0c: Card ID Display Format
- 0x0d: Double Clock IN Control
- 0x0e: Clock Interval
- 0x0f: Disable Key-In ID
- 0x10: Illegal Access Event
- 0x11: Allowed Late IN Limit
- 0x12: Function Key Trigger Mode
- 0x13: LCD Sleep Time
- 0x14: Terminal IP Address
- 0x15: Terminal Subnet Mask
- 0x16: Terminal Gateway
- 0x17: Terminal DNS Server
- 0x18: Software Connection Mode
- 0x19: Software Connection Port Number

● **VALUE**

Terminal Parameter	VALUE (Byte)
0x00	15
0x01	15
0x02	1(0/1: 1:N/1:1)
0x03	1(0/1: Standalone/FP Reader Only)
0x04	RESV
0x05	RESV
0x06	RESV
0x07	RESV
0x08	1(0/1: WG 26/WG 34)
0x09	1(0/1: disable/enable)
0x0a	1(0/1: WG 26/WG 34)
0x0b	2(HHMM, e.g. 23:00 should be filled as 17 00 in hex)
0x0c	1(0/1: Raw Data/Facility Code+ Card ID)
0x0d	1(0/1: disable/enable)
0x0e	4 (max is 86400)
0x0f	1(0/1: No/Yes)
0x10	1(0/1: Ignored/Recorded)
0x11	1(max is 255 minutes)
0x12	1(0/1: Auto/Manual)
0x13	1(max is 255 minutes)
0x14	4(e.g. 192.168.1.10 should be filled as C0 A8 01 0A in hex)
0x15	4(e.g. 192.168.1.10 should be filled as C0 A8 01 0A in hex)
0x16	4(e.g. 192.168.1.10 should be filled as C0 A8 01 0A in hex)
0x17	4(e.g. 192.168.1.10 should be filled as C0 A8 01 0A in hex)
0x18	1(0/2: TCP Server/UDP Server)
0x19	2

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

- 0x00 : Successfully changed
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command
- 0x09 : Unacceptable parameter

2.12 Get System Parameter (0x2D)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0x2d	1
Access Key(Optional)	6
Terminal Parameter	1
CHECKSUM : byte sum from ACK to Terminal Parameter	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11+N	4
TID	1
RESULT	1
Terminal Parameter	1
Value	N
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

- 0x00 : Successfully changed
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command
- 0x09 : Unacceptable parameter

2.13 Set WEB Log-on Password (0x14)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 93+6(Optional)	4
TID	1
COMMAND : 0x14	1
Access Key(Optional)	6
Level(0/1: User Level/Administrator Level)	1
Account	47
Password	35
CHECKSUM : byte sum from ACK to Terminal Parameter	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter

2.14 Get WEB Log-on Password (0x15)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0x15	1
Access Key(Optional)	6
Level(0/1: User Level/Administrator Level)	1
CHECKSUM : byte sum from ACK to Terminal Parameter	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 92	4
TID	1
RESULT	1
Account	47
Password	35
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● RESULT

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter

2.15 Set Administrator ID (0x16)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+4*N+6(Optional)	4
TID	1
COMMAND : 0x16	1
Access Key(Optional)	6
Administrator Count (N)	1
Administrator ID List	4*N
CHECKSUM : byte sum from ACK to Terminal Parameter	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter

2.16 Get Administrator ID (0x17)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x17	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to Terminal Parameter	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11+4*N	4
TID	1
RESULT	1
Administrator Count (N)	1
Administrator ID List	4*N
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter

2.17 Save Configuration (0x18)

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x18	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully changed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09 : Unacceptable parameter

3. Retrieving functions

3.1 Retrieving user I.D. list(0x40)

This command will be used when you wish to receive user I.D. list which is registered at the terminal.

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x40	1
Access Key(Optional)	6
CHECKSUM - byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10 + N	4
TID	1
RESULT	1
LISTS	N
CHECKSUM : byte sum from BS to LISTS	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **LISTS**

User list

Ex) If registered users are 2,8, 10, the LISTS is as follows

0x00	0x00	0x00	0x02	0x00	0x00	0x00	0x08	0x00	0x00	0x00	0x0a
------	------	------	------	------	------	------	------	------	------	------	------

3.2 Get Passcode (0x62)

This command will be used when you wish to read unique passcode.

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x62	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 26	4
TID	1
RESULT	1
Passcode	16
CHECKSUM : byte sum from BS to VERSION	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **Passcode**

Unique Passcode, ex)ABCDEF12345

3.3 Set Passcode (0x63)

This command will be used when you wish to read unique passcode.

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 26+6(Optional)	4
TID	1
COMMAND : 0x63	1
Access Key(Optional)	6
Passcode	16
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to VERSION	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **Passcode**

Unique Passcode, ex)ABCDEF12345

3.4 Get Serial Number (0x61)

This command will be used when you wish to read unique serial number.

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x61	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 16	4
TID	1
RESULT	1
Serial Number	6
CHECKSUM : byte sum from BS to Serial Number	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **Serial Number**

Unique Serial Number, e.g. 00 0E E3 00 76 FA

4. Setup Time Set

4.1 Add Time Set (0xA6)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11 + N * 5+6(Optional)	4
TID (Master)	1
COMMAND : 0xA6	1
Access Key(Optional)	6
Count Of Time Set : N	1
Time Sets	N * 5
CHECKSUM	1
ETX (0x03)	1

Time Sets Format :

	Size (bytes)
Index	1
Start Hour	1
Start Minute	1
End Hour	1
End Minute	1

Return :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xA6	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result :

0x00 : Successful

0x09 : Parameter Error

4.2 Delete One Time Set (0xB6)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0xB6	1
Access Key(Optional)	6
Index	1
CHECKSUM	1
ETX (0x03)	1

Return :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xB6	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result :

0x00 : Successful

0x09 : Parameter Error

4.3 Delete All Time Set (0xC6)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID (Master)	1
COMMAND : 0xC6	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xC6	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

4.4 Get One Time Set (0xD6)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0xD6	1
Access Key(Optional)	6
Index	1
CHECKSUM	1
ETX (0x03)	1

Return (successful) :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 17	4
TID	1
RESULT : 0x00	1
COMMAND:0xD6	1
Time Sets	5
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Time Sets :

	Size (bytes)
Index	1
Start Hour	1
Start Minute	1
End Hour	1
End Minute	1

Return (Error) :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xD6	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x09 : Parameter Error

5. Setup Time Zone**5.1 Add Time Zone (0xA7)****Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11 + N * 40+6(Optional)	4
TID (Master)	1
COMMAND : 0xA7	1
Access Key(Optional)	6
Count Of Time Zone : N	1
Time Zones	N * 40
CHECKSUM	1
ETX (0x03)	1

Time Zones Format:

	Size (bytes)
Index	1
Name	15
Time Sets	3 * 8

Time Sets Of Every Day (Include Holiday : Mon. ,Tus. ,Wed. ,Thur. ,Fri. ,Sat. ,Sun. ,Holi)

	Size (bytes)
Time Set 1 (T.S Index)	1
Time Set 2 (T.S Index)	1
Time Set 3 (T.S Index)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xA6	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

5.2 Delete One Time Zone (0xB7)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID (Master)	1
COMMAND : 0xB7	1
Access Key(Optional)	6
Time Zone Index	1
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xB7	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

5.3 Delete All Time Zone (0xC7)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID (Master)	1
COMMAND : 0xC7	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xC7	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

5.4 Get One Time Zone (0xD7)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0xD7	1
Access Key(Optional)	6
Index	1
CHECKSUM	1
ETX (0x03)	1

Return (Success)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 51	4
TID	1
RESULT : 0x00	1
COMMAND:0xD7	1
Time Zones	40
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Time Zones :

	Size (bytes)
Index	1
Name	15
Time Sets	3 * 8

Time Sets Of Every Day (Include Holiday : Mon. ,Tus. ,Wed. ,Thur. ,Fri. ,Sat. ,Sun. ,Holi)

	Size (bytes)
Time Set 1 (T.S Index)	1
Time Set 2 (T.S Index)	1
Time Set 3 (T.S Index)	1

Return (Error)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xD7	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x01 : failure

0x09 : Parameter Error

6. Setup Group**6.1 Add Group (0xA8)****Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11 + N * 25+6(Optional)	4
TID (Master)	1
COMMAND : 0xA8	1
Access Key(Optional)	6
Count Of Group : N	1
Groups	N * 25
CHECKSUM	1
ETX (0x03)	1

Group Format :

	Size (bytes)
Group Index	1
Name	15
Time Zone (T.Z Index)	1
Accessible Door : 0/1 unaccessible/accessible	1
Resv	7

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xA8	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

6.2 Delete One Group (0xB8)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID (Master)	1
COMMAND : 0xB8	1
Access Key(Optional)	6
Group Index	1
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xB8	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

6.3 Delete All Group (0xC8)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID (Master)	1
COMMAND : 0xC8	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xC8	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

6.4 Get One Group (0xD8)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID (Master)	1
COMMAND : 0xD8	1
Access Key(Optional)	6
Index	1
CHECKSUM	1
ETX (0x03)	1

Return (Success)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 36	4
TID	1
RESULT : 0x00	1
COMMAND:0xD8	1
Time Zones	25
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Time Zones :

	Size (bytes)
Index	1
Name	15
Time Zone	1
Accessible Door: 0/1 unaccessible/accessible	1
Resv	7

Return (Error)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xD8	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x01 : failure

0x09 : Parameter Error

BF630

7. Door

7.1 Door Setting (0xA9)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 48+6(Optional)	4
TID	1
COMMAND : 0xA9	1
Access Key(Optional)	6
RESV(must be filled with 0)	1
Door(must be filled with 1)	1
Location	20
Door Open delay Time	1
Lock Release Time	1
Card + Pin Time Zone (Index)	1
lock Release Time Zone (Index)	1
Push Button Time Zone (Index)	1
FP + PIN time zone (Index) (reserved in BF880)	1
Anti Pass Back Level	2
Relay Trigger(0/1/4 : None/BF20 /Built IN)	1
Resv	1
Resv	1
Resv	1
Double Badge Control Time Zone(Index)	1
Double Badge Applied(0/1/2: both/IN/OUT)	1
Record Transaction(0/1:disable/enable)	1
RESV	1
CHECKSUM : byte sum from ACK to FD	1
ETX (0x03)	1

Door : Main Door – 1

Anti Pass Back Level

IN	1
OUT	1

IN,OUT : 1 ~ 9, 0 - None

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xA9	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

7.2 Get Door Setting (0xD9)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 12+6(Optional)	4
TID	1
COMMAND : 0xD9	1
Access Key(Optional)	6
RESV(must be filled with 0)	1
Door(must be filled with 1)	1
CHECKSUM	1
ETX (0x03)	1

Return (Success):

	Size (bytes)
ACK (0x08)	1
STX (0x02)	1
LENGTH : 49	4
TID	1
RESULT : 0x00	1
COMMAND:0xD9	1
RESV	1
Door	1
Location	20
Door Open Time	1
Lock Release Time	1
Card + Pin Time Zone (Index) (Main door only)	1
Unlock Time Zone (Index)	1
Button Open Time Zone (Index)	1
FP + PIN time zone (Index) (Main door only)	1
Anti Pass Back Level	2
Relay Trigger(0/1/4 : None/BF20/Built IN)	1
Resv	1
Resv	1
Resv	1
Double Badge Control Time Zone(Index)	1
Double Badge Applied(0/1/2: both/IN/OUT)	1
Record Transaction(0/1:disable/enable)	1
RESV	1
CHECKSUM : byte sum from ACK to FD	1
ETX (0x03)	1

Return (Error)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xD9	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x09 : Parameter Error

7.3 Security By Pass (0xB9)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 13+6(Optional)	4
TID	1
COMMAND : 0xB9	1
Access Key(Optional)	6
RESV	1
Resv	1
By Pass(0/1: Off/On)	1
CHECKSUM	1
ETX (0x03)	1

Return (Success):

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xB9	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result :

0x00 : Successful

0x09 : Parameter Error

7.4 Set Event on BF20-E relay trigger (0x69)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 13+6(Optional)	4
TID	1
COMMAND : 0x69	1
Access Key(Optional)	6
Event Type	1
BF20-E Relay NO.(0/2/3: None/Relay No.2/Relay No.3)	1
Hold Time(second)	1
CHECKSUM	1
ETX (0x03)	1

Event Type:

- 0: door open too long
- 1: Unauthorized Badge
- 2: Anti Passback Reject
- 3: Intruded Door
- 4: Tamper Switch Breakdown
- 5: Anti Duress

Return:

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0x69	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result :

- 0x00 : Successful
- 0x09 : Parameter Error

7.5 Get All Event on BF20-E relay trigger (0x79)

Command Format :

	Size (bytes)
BS (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND:0x79	1
Access Key(Optional)	6
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Return:

	Size (bytes)
ACK (0x08)	1
STX (0x02)	1
LENGTH : 12+N*3	4
TID	1
Result	1
COMMAND : 0x79	1
Total Event Type (N, current N is 6)	1
Event Type Setting	N*3
CHECKSUM	1
ETX (0x03)	1

Event Type Setting:

Event Type	1
BF20-E Relay NO.(0/2/3: None/Relay No.2/Relay No.3)	1
Hold Time(second)	1

Event Type:

- 0: door open too long
- 1: Unauthorized Badge
- 2: Anti Passback Reject
- 3: Intruded Door
- 4: Tamper Switch Breakdown
- 5: Anti Duress

Result :

0x00 : Successful

0x09 : Parameter Error

7.6 Set Door Anti Passback(0xE9)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 13+6(Optional)	4
TID	1
COMMAND : 0xE9	1
Access Key(Optional)	6
Anti Passback (0/1: Disable/Enable)	1
Tolerance Time	2
CHECKSUM	1
ETX (0x03)	1

Return:

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xE9	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result :

0x00 : Successful

0x09 : Parameter Error

7.7 Get Door Anti Passback status (0xF9)

Command Format :

	Size (bytes)
BS (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND:0xF9	1
Access Key(Optional)	6
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Return:

	Size (bytes)
ACK (0x08)	1
STX (0x02)	1
LENGTH : 14	4
TID	1
Result	1
COMMAND : 0xF9	1
Anti Passback (0/1: Disable/Enable)	1
Tolerance Time	2
CHECKSUM	1
ETX (0x03)	1

7.8 Get Security By Pass Status (0x98)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x98	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return (Success):

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 12	4
TID	1
RESULT	1
COMMAND:0x98	1
Security Status	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Security Status

0/1/2: Off/On/not used

Result :

0x00 : Successful

0x09 : Parameter Error

7.9 Set Anti Duress(0x96)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 14+6(Optional)	4
TID	1
COMMAND : 0x96	1
Access Key(Optional)	6
Anti Duress (0/1: Disable/Enable)	1
Password(3 digits in ASCII)	3
CHECKSUM	1
ETX (0x03)	1

Return:

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0x96	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result :

0x00 : Successful

0x09 : Parameter Error

7.10 Get Anti Duress status (0x97)**Command Format :**

	Size (bytes)
BS (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND:0x97	1
Access Key(Optional)	6
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Return:

	Size (bytes)
ACK (0x08)	1
STX (0x02)	1
LENGTH : 15	4
TID	1
Result	1
COMMAND : 0x97	1
Anti Duress (0/1: Disable/Enable)	1
Password (in ASCII)	3
CHECKSUM	1
ETX (0x03)	1

8. Holiday

8.1 Add Holiday(0xAA)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11 + 23 * N+6(Optional)	4
TID (Master)	1
COMMAND : 0xAA	1
Access Key(Optional)	6
Count Of Holiday : N	1
Holiday	23 * N
CHECKSUM : byte sum from ACK to FD	1
ETX (0x03)	1

Holiday Format

	Size (bytes)
Holiday Index	1
Month	1
Date	1
Comment	20

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xAA	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

8.2 Delete One Holiday (0xBA)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0xBA	1
Access Key(Optional)	6
Holiday Index	1
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xBA	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

8.3 Delete All Holiday (0xCA)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0xCA	1
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xCA	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

8.4 Get All Holiday (0xDA)**Command Format :**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0xDA	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return (Success)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 12 + N *23	4
TID	1
RESULT : 0x00	1
COMMAND:0xDA	1
Total Count of Holiday : N	1
Time Zones	N * 23
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Holiday Format

	Size (bytes)
Holiday Index	1
Month	1
Date	1
Comment	20

Return (Error)

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xDA	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x09 : Parameter Error

P.S : All Index Are In (0,1, ... ,255) , 256 – None ,

But Holiday Index In (0,1, ... , 99) , 100 – None

8.5 Get Door Sensor status (0x54)(for BF20 only)**Command Format :**

	Size (bytes)
BS (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND:0x54	1
Access Key(Optional)	6
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Return:

	Size (bytes)
ACK (0x08)	1
STX (0x02)	1
LENGTH : 12	4
TID	1
Result	1
COMMAND : 0x54	1
Door Sensor Status	1
CHECKSUM	1
ETX (0x03)	1

Door Sensor Status:

0x00: not used.

0x01: open

0x02: close

0x03: open too long

0x04: No response

0x05: Intruded

9. User Data

There are two different methods to register or delete a user. First method is to register or delete fingerprint data on the terminal. However this method requires presence of both the new user and the system administrator. Also, when multiple terminals are used together, the registration must be repeated for each terminal. Second method is to register to a PC and then send the data (user I.D. and fingerprint data) to the terminal via the serial communication. To perform second method of registration, following procedure should be conducted.

9.1 User deletion(0x01)

This command deletes a registered user on the terminal.

- **Command**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 14+6(Optional)	4
TID	1
COMMAND : 0x01	1
Access Key(Optional)	6
USERID	4
CHECKSUM : byte sum from ACK to USERID	1
ETX (0x03)	1

- **USERID**

Unique user I.D. number

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

- **RESULT**

0x00 : User deletion was successful

0x02 : Unknown error has occurred

0x03 : Not a registered user

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

9.2 All users deletion(0x02)

This command deletes all registered users on the terminal. Use this function with caution since it completely deletes all registered users.

➤ Supported model:BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x02	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● RESULT

- 0x00 : User was deleted successfully
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

9.3 Query that a user I.D. is already assigned(0x03)

This command can query the registration status of a particular user I.D.

➤ Supported model:BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 14+6(Optional)	4
TID	1
COMMAND : 0x03	1
Access Key(Optional)	6
USERID	4
CHECKSUM : byte sum from ACK to USERID	1
ETX (0x03)	1

● USERID

Unique user I.D. number

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

● RESULT

0x00 : User I.D. was assigned.

0x02 : Unknown error has occurred

0x03 : User I.D. is not assigned

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

9.4 Query the number of already registered users(0x04)

At times, it is important to know the total number of currently registered users. When this command is used, the terminal returns the number of currently registered users.

➤ Supported model: BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x04	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 12	4
TID	1
RESULT	1
NU	2
CHECKSUM : byte sum from BS to NU	1
ETX(0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **NU**

Number of currently registered users

9.5 Query of maximum number of users that can be registered(0x05)

This query will return the maximum number of users that can be registered.

➤ Supported model:BF630

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x05	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

The return packet for this command is as follows.

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 12	4
TID	1
RESULT	1
MU	2
CHECKSUM : byte sum from BS to RF	1
ETX (0x03)	1

- **RESULT**

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

- **MU**

Maximum allowed number of registering user

9.6 Reg/Modify User Data (0xAB):

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 100+ Template size * NF+6(Optional)	4
TID	1
COMMAND : 0xAB	1
Access Key(Optional)	6
CARDID	4
OVERWRITE	1
Title	1
Department	1
RESV	8
First NAME	15
Last Name	15
Group	1
Status	1
WORK MODE	1
Working time-Start	2
Working time-End	2
Employee ID	15
Resv	2
Register Mode(FPC)	1
CARD EXPIRE DATE	7
PP	10
NF	1
Template size	2
FD	Template size x NF
CHECKSUM : byte sum from ACK to FD	1
ETX (0x03)	1

CARDID

Unique Card I.D. number

OVERWRITE

0: no overwrite. If ID is already registered, return with result 06.

1: overwrite. If ID is already registered, overwrite it.

USERID

User I.D

First/Last NAME

Name of user, the rest of bytes is filled by 0x00

GROUP

Set User to Group ,2 – 255 , 0 and 1 are default used Disallowed and Any Time.

Status

1 : Activate

0 : Deactivate

WORK MODE

The mode of opening door: finger+pass (0), finger (1), pass(2) , finger or pass(3), Only Crad(4), Only from external Reader(5) , Matching on Mifare card(6), MAX number is 6

WORK Time-Start

Hour Minute

WORK Time-End

Hour Minute

Register Mode(FPC)

Each bit means the type of registration. Bit 0/1/2 , fingerprint/password/card.

1: used, 0: unused.

Ex. Finger =1, Password = 2, Finger and Password = 3, Card=4

Max=4

CARD EXPIRE DATE

Valid Time For Card

	Size(Bytes)
State	1
Start Year	1
Start month	1
Start Day	1
End Year	1
End Month	1
End Day	1

State : Use or Not / 1 or 0

PP

User password; ASCII characters,

Ex) if user's password is '123456', PP should be 0x31 0x32 0x33 0x34 0x35 0x36 0x00 0x00 0x00 0x00

NF

Number of fingerprint data per user (Max. 2)

Maximum number of BIOFINGER-660M's NF is 2.

FD

User Fingerprint data (total size depends on the number of fingerprints registered per user)

The size of each fingerprint data is 256 bytes.

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xAB	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x03 : Not a registered user

0x04 : Check sum error

0x05 : Other packet error

0x06: Already registered ID

0x08 : Unknown command

0x09: Unacceptable parameter; occurs when invalid ID, invalid fingerprint data, COUNT is not 1~2, or TYPE not 0 or 1

0x30: Terminal is busy

9.7 Get User Data (0xDB)

Command Format :

	Size (bytes)
BS (0x06)	1
STX (0x02)	1
LENGTH : 14+6(Optional)	4
TID	1
COMMAND:0xDB	1
Access Key(Optional)	6
Card ID	4
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Return

	Size (bytes)
ACK (0x08)	1
STX (0x02)	1
LENGTH : 100+ Template size*Nf	4
TID	1
RESULT	1
COMMAND : 0xDB	1
CARDID	4
Title	1
Department	1
RESV	8
First NAME	15
Last Name	15
Group	1
Status	1
WORK MODE	1
Working time-Start	2
Working time-End	2
Employee ID	15
Resv	2
Register Mode(FPC)	1
CARD EXPIRE DATE	7
PP	10
NF	1
Template size	2
FD	Template size x NF
CHECKSUM : byte sum from ACK to FD	1
ETX (0x03)	1

CARDID

Unique Card I.D. number

OVERWRITE

0: no overwrite. If ID is already registered, return with result 06.

1: overwrite. If ID is already registered, overwrite it.

USERID

User I.D

First/Last NAME

Name of user, the rest of bytes is filled by 0x00

GROUP

Set User to Group ,2 – 255 , 0 and 1 are default used Disallowed and Any Time

Status

1 : Activate

0 : Deactivate

WORK Time-Start

Hour Minute

WORK Time-End

Hour Minute

WORK MODE**Register Mode(FPC)**

Each bit means the type of registration. Bit 0/1/2 , fingerprint/password/card.

1: used, 0: unused.

Ex. Finger =1, Password = 2, Finger and Password = 3, Card=4

Max=4

CARD EXPIRE DATE

Valid Time For Card

	Size(Bytes)
State	1
Start Year	1
Start month	1
Start Day	1
End Year	1
End Month	1
End Day	1

State : Use or Not / 1 or 0

PP

User password; ASCII characters,

Ex) if user's password is '123456', PP should be 0x31 0x32 0x33 0x34 0x35 0x36 0x00 0x00 0x00 0x00

NF

Number of fingerprint data per user (Max. 2)

Maximum number of BIOFINGER-660M's NF is 2.

FD

User Fingerprint data (total size depends on the number of fingerprints registered per user)

The size of each fingerprint data is 256 bytes.

RESULT

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x03 : Not a registered user

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

0x09: Unacceptable parameter; occurs when invalid ID, invalid fingerprint data, COUNT is not 1~2, or TYPE not 0 or 1

0x30: Terminal is busy

9.8 Add Department (0xAD)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 26+6(Optional)	4
TID	1
COMMAND : 0xAD	1
Access Key(Optional)	6
Department Index	1
Department Name	15
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xAD	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

0x10 : Department Index exist

9.9 Delete One Department (0xBD)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0xBD	1
Access Key(Optional)	6
Department Index	1
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xBD	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

9.10 Delete All Department (0xCD)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0xCD	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xCD	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

9.11 Get All Department (0xDD)(New)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0xDD	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 12+16*N	4
TID	1
RESULT	1
COMMAND:0xCC	1
Total(N)	1
Department -N	16*N
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Designation-N

Department Index	1
Department Name	15

Result

0x00 : successful

0x09 : Parameter Error

9.12 Add Designation (0xAC)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 26+6(Optional)	4
TID	1
COMMAND : 0xAC	1
Access Key(Optional)	6
Designation Index	1
Designation Name	15
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xAC	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

9.13 Delete One Designation (0xBC)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 11+6(Optional)	4
TID	1
COMMAND : 0xBC	1
Access Key(Optional)	6
Designation Index	1
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xBC	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

9.14 Delete All Designation (0xCC)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0xCC	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 11	4
TID	1
RESULT	1
COMMAND:0xCC	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Result

0x00 : successful

0x09 : Parameter Error

9.15 Get All Designation (0xDC)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0xDC	1
Access Key(Optional)	6
CHECKSUM	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 12+16*N	4
TID	1
RESULT	1
COMMAND:0xCC	1
Total(N)	1
Designation-N	16*N
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

Designation-N

Designation Index	1
Designation Name	15

Result

0x00 : successful

0x09 : Parameter Error

10. Log Related

10.1 Retrieving an entry/exit log with deletion on the terminal(0x30)

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x30	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 26	4
TID	1
RESULT	1
LOG	16
CHECKSUM : byte sum from BS to LOG	1
ETX (0x03)	1

RESULT

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x03 : No log data left
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

LOG

	Size (bytes)
Sec	1
Min	1
Hour	1
Date	1
Month	1
Year	1
IN/OUT Indication	1
Verification Source	1
Verify	1
Function key	1
USERID	4
RESV	1
Resv	1

IN/OUT Indication (New Added)

0x00 : None

0x01 : Access IN

0x02 : Access OUT

Verification Source (New Added)

0 = None

1=Finger

2=Card

3 = C+F

4=PIN (Password)

5= F+P

6= C+P

7 = C+F+P

Function key

0x00 : None

0x01 : Clock IN

0x02 : Clock OUT

0x10 to 0x19: F1, F1+1 to F1+9(New Added)

0x20 to 0x29: F2, F2+1 to F2+9(New Added)

0x30 to 0x39: F3, F3+1 to F3+9(New Added)

0x40 to 0x49: F4, F4+1 to F4+9(New Added)

Verify

Door mode \ Result	Authentication denied	Authentication success and valid time zone	Authentication success and invalid time zone
Normal(0)	0x00	0x01	0x02
Forced Open(1)	0x10	0x11	0x12
Forced Close(2)	0x20	0x21	0x22

Verify Code

From external Reader : 0x50

Door open too long: 0x80

Door Closed After Alarm : 0x81

BYPASS ON: 0x82

BYPASS OFF: 0x83

Unauthorized User : 0x84

Unregistered User : 0x85

Deactivate User: 0x86

Expired User: 0x87

Anti Pass back Reject: 0x88

Disallowed Door: 0x89

Door Intruded: 0x8a

Double Badge Control Verification Fail: 0x8b

Tamper Switch Breakdown: 0x8c

Exit Button Pressed: 0x8d

Door Closed Normally: 0x8e

Duress Alarm: 0x8f

Fire Alarm: 0x90

10.2 Retrieving an entry/exit log with no deletion on the terminal(0x31)

This command will be used when you wish to receive an entry/exit log data. Most old log data is retrieved. The terminal doesn't delete a sending log data from the terminal memory. You must delete a received log data using "Deletion an entry/exit log" command. These command pair is useful when you wish to make your time and attendance system more safely.

Command

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x31	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 30	4
TID	1
RESULT	1
LOG	16
LOGINDEX	4
CHECKSUM : byte sum from BS to LOGINDEX	1
ETX (0x03)	1

LOGINDEX

Log data is saved in circular queue. LOGINDEX means the location of the data in circular queue. When you wish to delete a log data, you must use this LOGINDEX as command parameter.

RESULT

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x03 : No log data left
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

10.3 Querying the number of entry/exit log(0x37)

This command will be used when you wish to query the number of saved entry/exit log data.

Command

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x37	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 14	4
TID	1
RESULT	1
LOGn	4
CHECKSUM : byte sum from BS to LOGn	1
ETX (0x03)	1

RESULT

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

LOGn

number of saved log data

10.4 Retrieving all entry/exit Log(0x32)

This command will be used when you wish to receive all entry/exit log data. Retrieved log data are not deleted from the terminal. So you must use delete all command.

Command

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x32	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 14 + LOGn x 16	4
TID	1
RESULT	1
LOGn	4
LOGS	LOGn x 16
CHECKSUM : byte sum from BS to LOGS	1
ETX (0x03)	1

RESULT

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

LOGn

Log number saved in the terminal

LOGS

	Size(bytes)
LOG1	16
LOG2	16
...	...
LOGn	16

LOG(n)

	Size(bytes)
Sec	1
Min	1
Hour	1
Date	1
Month	1
Year	1
IN/OUT Indication	1
Verification Source	1
Verify	1
Function key	1
USERID	4
RESV	1
Door	1

10.5 Deleting all entry/exit log(0x33)

Command

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x33	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 10	4
TID	1
RESULT	1
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

RESULT

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

10.6 Deleting a entry/exit log(0x34)**Command**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 14+6(Optional)	4
TID	1
COMMAND : 0x34	1
Access Key(Optional)	6
LOGINDEX	4
CHECKSUM : byte sum from ACK to LOGINDEX	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 14	4
TID	1
RESULT	1
LOGINDEX	4
CHECKSUM : byte sum from BS to RESULT	1
ETX (0x03)	1

RESULT

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x03 : No log data left
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command
- 0x09 : LOGINDEX is improper position.

10.7 Querying maximum log capacity (0x38)**Command**

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x38	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 14	4
TID	1
RESULT	1
Maximum capacity	4
CHECKSUM : byte sum from BS to LOGS	1
ETX (0x03)	1

RESULT

0x00 : Successfully processed

0x02 : Unknown error has occurred

0x04 : Check sum error

0x05 : Other packet error

0x08 : Unknown command

Maximum capacity

Maximum capacity Log number can be saved in the terminal

10.8 Retrieving the oldest entry/exit log on the terminal (0x2F)

This command will be used when you wish to receive an entry/exit log data. Most old log data is retrieved. The terminal doesn't delete a sending log data from the terminal memory. Terminal will mark this log as invalid and move the index of most old data to next one.

Command Format :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x2F	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 26	4
TID	1
RESULT	1
LOG	16
CHECKSUM : byte sum from BS to LOG	1
ETX (0x03)	1

RESULT

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x03 : No log data left
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

10.9 Retrieving all no ack entry/exit log on the terminal (0x39)

Command :

	Size (bytes)
ACK (0x06)	1
STX (0x02)	1
LENGTH : 10+6(Optional)	4
TID	1
COMMAND : 0x39	1
Access Key(Optional)	6
CHECKSUM : byte sum from ACK to COMMAND	1
ETX (0x03)	1

Return :

	Size (bytes)
BS (0x08)	1
STX (0x02)	1
LENGTH : 14 + LOGn x 16	4
TID	1
RESULT	1
LOGn	4
LOGS	LOGn x 16
CHECKSUM : byte sum from BS to LOGS	1
ETX (0x03)	1

RESULT

- 0x00 : Successfully processed
- 0x02 : Unknown error has occurred
- 0x04 : Check sum error
- 0x05 : Other packet error
- 0x08 : Unknown command

LOGn

Log number saved in the terminal

LOGS

	Size(bytes)
LOG1	16
LOG2	16
...	...
LOGn	16

LOG(n)

	Size(bytes)
Sec	1
Min	1
Hour	1
Date	1
Month	1
Year	1
In_out	1
Pass_mode	1
Verify	1
Function key	1
USERID	4
Slave TID	1
Door	1

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