

UniFinger SFM3500 Series

Firmware Revision Notes

Version 1.6



Revision Notes

Firmware Version 1.6

Build Number 06031900

2006-3-23

- WSL and RSL commands are added. Security level can be assigned per user basis for 1:1 matching. The minimum security level is lowered to 1/1,000 for 1:1 matching.
- To make use of the reserved field of log records, CL command is added.
- To provide real-time monitoring, CCL and RCL commands are added.
- In Normal mode, 1:N matching algorithm gets much faster without any performance degradation. The new algorithm is about two times faster than older versions. Since new Normal mode is faster than old Fast mode 1 for FL, FC and TC2 models, fast mode settings for these three models are adjusted accordingly. New Fast mode 1 is equivalent to old Fast mode 2, new Fast mode 2 to old Fast mode 3, and so on. The Fast modes for OP and TC models haven't been changed.
- Automatic security levels are added. In these modes, the module changes the security level for 1:N matching automatically according to the number of enrolled templates.
- **SFM3500-FL and SFM3520-OP** By tuning the sensor driver, the authentication performance is enhanced especially for dry fingers.
- The following bugs are fixed.
 - It takes long time to process DT command when DELETE_MULTIPLE_ID option is given.
 - When two commands are sent to the module simultaneously both from host and aux ports, response packets can be delivered to the wrong port.
 - **SFM3510-FC** The heating mode does not work properly with some sensors.

Firmware Version 1.5

Build Number 05111100

2005-11-11

- ETX and RTX commands are added.
- ADD_CHECKSUM option is added to ST command.
- DELETE_ONLY_ONE and DELETE_MULTIPLE_ID options are added to DT command.
- RS command is added.
- System Started output event added.
- Watchdog system parameter is added.
- The default value of Lighting Condition parameter is changed to Outdoor.
- The default value of Free Scan Delay parameter is changed to 1 second.
- LM, UM and MP commands are added.
- The following bugs are fixed.
 - Encryption mode does not work correctly.
 - EIX command does not return the image quality.
 - **SFM3550-TC** RI and SI commands return rotated images in Freescan mode.
 - **SFM3550-TC** In rare occasions, CS(Calibrate Sensor) command fails.

Firmware Version 1.4.5 **Build Number 05100600** 2005-10-06

- **SFM3510-FC, SFM3520-OP and SFM3550-TC** The sensor driver is updated to accommodate the changes in the revised hardware. These changes are only applied to Rev. G or later versions of hardware.
- **SFM3550-TC** The sensor driver is updated to enhance sensitivity to dry fingers.

Firmware Version 1.4 **Build Number 05070800** 2005-07-08

- Broadcast Packet Protocol is changed from 13 bytes to 15 bytes.

- In network mode, the modules only respond to 15 byte network packets.
- Fast Mode system parameter is added. In Fast Mode, 1:N matching time is 2 ~ 7 times faster than normal mode with little degradation of authentication performance.
- Lighting Condition system parameter is added for SFM3520-OP.
- Sensor heating mode is added for SFM3510-FC.
- Firmware version starts with 'B'.
- Extended Wiegand protocol is added. It supports up to 64 bit Wiegand formats. For this protocol, WWX, WRX, WGX, WSX, WFW, WFR, WPW, and WPR commands are added.
- Duress finger is supported.
- Tamper switch input is supported.
- UG command is added.
- LTX command is added.
- ST command returns the quality score of scanned image.
- The following bugs are fixed.
 - When enroll mode is one time(0x30) and CHECK_FINGER option is given, existing templates of same ID are replaced with new one.
 - CHECK_FINGER option is not applied to EIX command.
 - **SFM3510-FC** In two times II and two templates II modes, ES command fails with BUSY error code.

Firmware Version 1.3.1

Build Number 05060100

2005-06-01

- Freescan Delay system parameter is added.
- The following bugs are fixed.
 - When enroll mode is two times II or two templates II, ADD_NEW option does not

work.

- When an input port is set to NO_ACTION, IG command does not work.
- After a broadcast packet is processed, normal packet protocol – 13 byte packet without network ID – is not handled properly.

Firmware Version 1.3

Build Number 05042900

2005-04-29

- Broadcast Packet Protocol is added.
- ID command is added for Broadcast Packet Protocol.
- CHECK_FINGER and CHECK_FINGER_AUTO_ID options are added for enroll commands. With these options, if a finger is already enrolled, EXIST_FINGER error will be returned.
- Block index and block size parameters are added to LT command.
- Minimum security level is changed to 1/10,000.
- The following bugs are fixed.
 - When a corrupted template is received in enrollment or verification, the module cannot finish the matching process.

Firmware Version 1.2.1

Build Number 05021400

2005-02-14

- The following bugs are fixed.
 - ST command does not return the scanned template.
 - When Encryption Mode is on and Template Size is not a multiple of 32, the encrypted templates might be corrupted. It is fixed so that Template Size will be adjusted to a multiple of 32 when Encryption mode is on.
- As a result of fine-tuning the indexing scheme, identification time is improved between heterogeneous templates captured by optical sensors and semiconductor sensors.

Firmware Version 1.2

Build Number 05011800

2005-01-18

- Time for template extraction and matching is greatly reduced as a result of improving fingerprint authentication algorithm and optimizing it for DSP processor.
- Rotation system parameter is added.
- TemplateSize system parameter is added.
- Enroll command (ES, EW, ESA, EWA, EI) returns image quality score.
- Unused trailing area of templates returned by RT command is filled with 0 instead of garbage.
- SI, ST, KS command can initiate required output port.
- The following bugs are fixed.
 - Communication via auxiliary port loses some packets.
 - RT command cannot return the latest fingerprint template when Param is NULL.
 - First response command has wrong command ID field when FreeScan and AutoResponse is on
 - EW, VW, DW command returns TIMEOUT error when Wiegand ID 0 is input.
 - EI, VI, II command uses some portion of images transmitted previously when the size of image is smaller than expected.
 - Above limited number of templates (10 templates) can be enrolled to the same user ID when ADD_NEW option is used and EnrollMode is 2 templates.
 - **SFM3510-FC** TIMEOUT error doesn't occur when sensor is not connected.
 - **SFM3520-OP** TIMEOUT error doesn't occur when sensor is not connected.

Firmware Version 1.1

Build Number 04120600

2004-12-06

- **SFM3510-FC**

Firmware Version V1.1B

- **SFM3520-OP** Firmware Version V1.1C
- Abort Processing command is added.
- Abort Capturing command is added.
- Busy status is supported in SS command.
- Administrator functions are added.
- Wiegand mapping functions are added.
- Extended image transfer commands are added.

Firmware Version 1.0

Build Number 04102900

2004-10-29

- Created.
- **SFM3500-FL** Firmware Version V1.0A