



CE FC

# TSG 550 Fingerprint Reader









#### **Contents**

- **★ TSG 550 LES** (Light Emitting Sensor)
- **★ TSG 550 Dual (Optical + AES 1711)**
- **★ TSG 550 Standard (Optical sensor)**
- **★** Product Features
- **★ System Structure**
- **★ ACCESS CONTROL / TIME &** ATTANCE S/W

The leading Security company , TRUSTONE FINGER Reader SYSTEM.









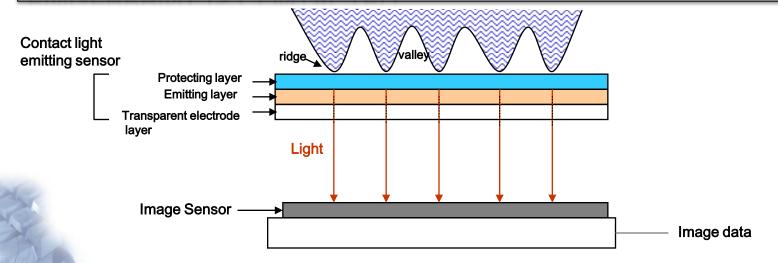




# LE SENSOR

**CONTACT LIGHT SENSOR?** 

# IT IS A POLYMER BASED SENSOR THAT EMITS LIGHT WHEN FINGERPRINT IS CONTACTED.

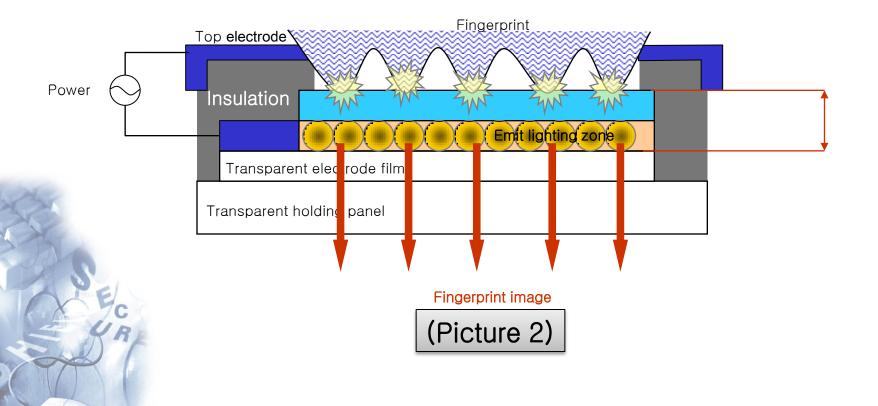


(Picture 1)



# LE SENSOR

### BASIC CONFIGURATION FOR THE OPERATION



















### Hacking Comparison optical & our LE sensor

#### 1. Optical fingerprint reader







### Hacking Comparison optical & our LE sensor



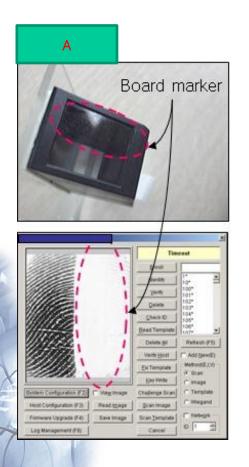


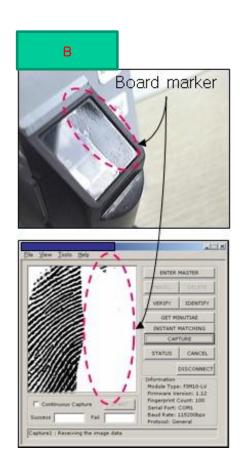


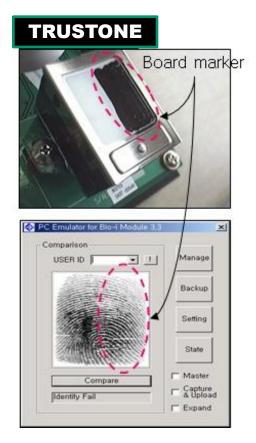


### **Compare SENSOR - 1**

### **Material test 1**





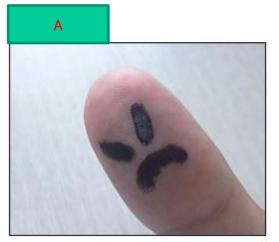






### **Compare SENSOR - 2**

### **Material test 2**

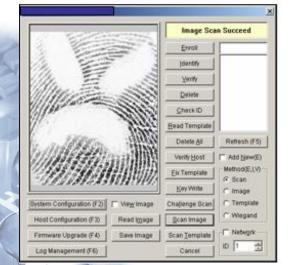




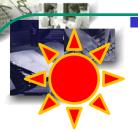


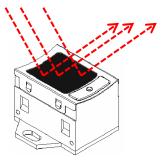








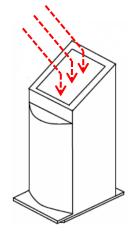




Works well in harsh environments including direct sunlight.

Because direct sunlight cannot penetrate the surface of the LE sensor.





Works poorly in harsh environments including direct sunlight.

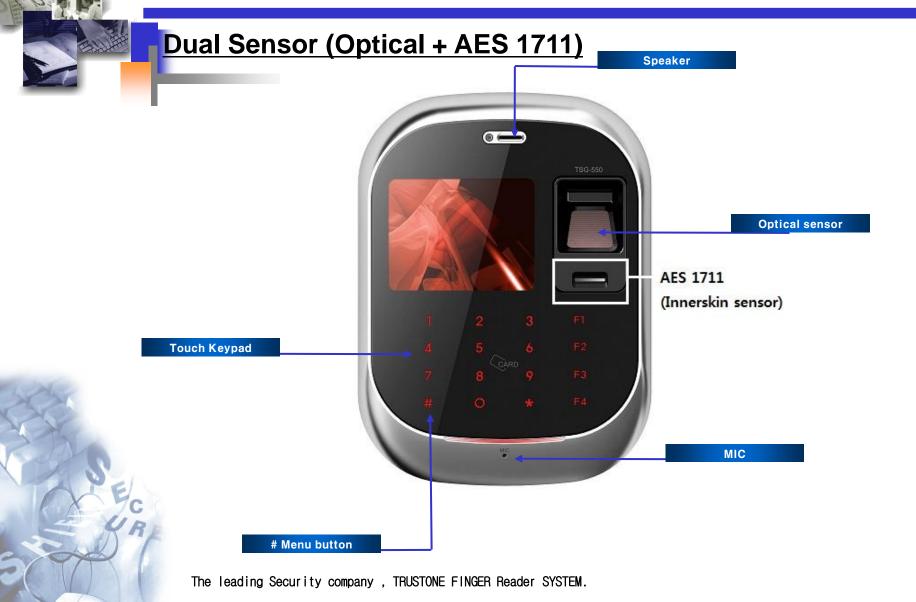
Because direct sunlight can penetrate the surface of the optical sensor.

Simulation Test (Direct sun light)



Please see attached movie.









# **Dual Sensor (Optical + AES 1711)**

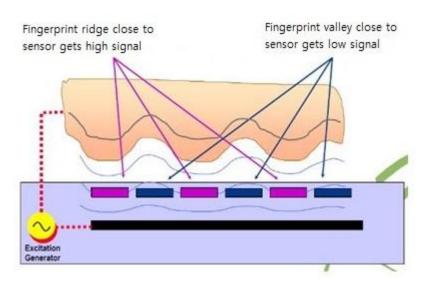
Category	Model	Features
Sensor's comparison	Optical Sensor	<ul> <li>Principle: Prism of total reflection</li> <li>Features: <ul> <li>Comparatively a big size</li> <li>High durability</li> </ul> </li> <li>*Weakness: <ul> <li>Geometric distortion</li> </ul> </li> <li>Afterimage on glass</li> <li>Low authentication rate in case of dry, wet, heavy sunlight, dirt, etc</li> </ul>
	Authentec Sensor (AES 1711)	<ul> <li>Principle: RF type inner-skin sensor method</li> <li>Features: <ul> <li>Innerskin Authentication</li> <li>Perform well even in bright sunlight, dusty, dirty and dry conditions</li> <li>Can be used for fake fingerprint detection</li> <li>Weakness: <ul> <li>Not popular in the market</li> <li>No user friendly</li> </ul> </li> </ul></li></ul>





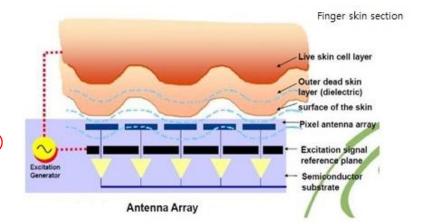


AES1711 Sensor (12mm \* 5.2mm \* 0.2mm)



#### •Features - Can read inner layer skin

- -No effect from outer condition (dry, sunlight, dusty, etc)
- -No effect from contaminated condition
- -Detection for fraud fingerprint
- -Relatively small size
- \* Capturing inside fingerprint (Scratched/Damaged FP OK!)





### **Optical Sensor (500 dpi)**

TSG 550 OPTICAL SENSOR IS...



#### **DURABILITY**

TSG-550

OPTICAL FINGERPRINT SENSOR FOR TSG-550 IS PRISM SENSOR AND STRONG FOR ANY CIRCUMSTANCES AND CONDITIONS.

TSG 550 OPTICAL SENSOR DULY TESTED UNDER SEVERAL CIRCUMSTANCES SUCH AS TEMPERATURE, HIMIDITY AND OUTDOOR USAGE
IT ACQUIRED CE AND FCC CERTIFICATION.

#### **ACCURACY**

TSG-550

TSG-550 GUARANTEE HIGH ACCURACY. NO DISTORTION, CLEAR FINGERPRINT IMAGE ENABLE LOW FAR AND FRR.

#### **SPEED**

TSG-550

WORLD BEST TSG-550 FINGERPRINT MODULE ENABLES ULTRA HIGH FINGERPRINT IDENTIFICATION SPEED AND IT IS ALMOST CLSOE TO RF CARD.





### TSG 550 Fingerprint Sensor Selection

Function	Sensor Type						
Outlook				•	1		
Туре	Optical Sensor (Individual)	LE Sensor (Individual)	Live-layer fingerprint sensor (Individual)	Dual Inner- skin Sensor	Dual Inner- skin Sensor		
Resolution(dpi)	500dpi	500dpi	500dpi	500dpi	500dpi		
Pixel	288*288	288*352	128*8	288*288 + 128*8	288*288 + 128*8		
Inner-skin Verification	No	No	Yes	Yes	Yes		
Fake F/P detection	No	Yes	Yes	Yes	Yes		



#### **Product Features**

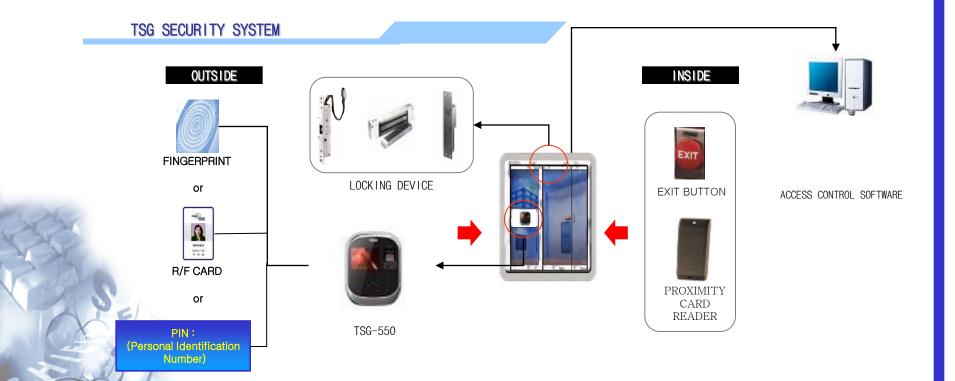
- \* 2.8 inch TFT Color LCD Screen
- Easy installation using PoE and WiFi
- Data backup by SD memory card
- \* TCP/IP, RS -485, Wiegand Protocol
- \* Highest level of spoofing detection
- \* Fast and accurate user authentication
- \* 2,000/ 10,000/ 30,000/ 50,000 user registration
- \* Sufficient event logs (500,000 save)
- \* RF Card (EM/HID/Mifare/HID iClass)
- Door Phone Function (Voice only)

The leading Security company, TRUSTONE FINGER Reader SYSTEM.



TRUSTONE GIODAI CO., Ltd PROVIDES TOTAL SOLUTIONS FOR ACCESS TECHNOLOGIES FROM MANUFACTURING TO INSTALLATION.

WITCH ACCUMULATED TECHNOLOGY AND KNOW-HOW FOR A LONG PERIOD OF TIME, TRUSTONE HAS WORKED FOR GOVERNMENT OFFICES, MAJOR R&D CENTERS, BANKS WHICH REQUIRES HIGH SECURITY SUCCESSFULLY.

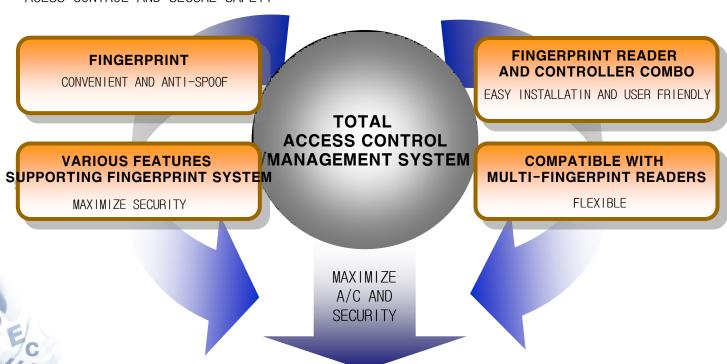




#### **SYSTEM OVERVIEW**

→ INSTALL ACESS CONTROL / MANAGEMENT SYSTEM USING FINGERPRINT SENSOR AND CONTRIBUTE EFFECTIVE

ACESS CONTROL AND SECURE SAFETY



CONTRIBUTE EFFECTIVE ACESS CONTROL AND SECURE SAFETY

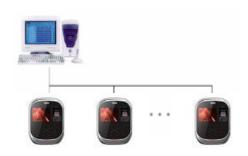


#### SYSTEM FEATURES

- → FINGERPRINT RECOGNITION
- FINGERPRINT MODULE DEVELOPPED BY TRUSTONE GLOBAL
- FINGERPRINT IDENTIFICATION SPEED: AMOST CLOSE TO RF Card
- 1: N MATCHING
- USER: 2,000/10,000/30,000/50,000
- ACCURACY: FAR 0.0001%, FRR 0.01%
- OPERATION MODE: SELECTABLE (FINGEPRINT, PIN, CARD)

#### **→** CONVENIENCE

- MASTER CAN ENROLL/DELET THE USER ( ALL USER COULD BE MASTER)
- LCD DISPLAY: DATE, TIME, MODE, USER
- TIME ZONE SETTING AVILABLE
- FUNCTION BUTTON
- ID: 0 9 DITIGS
- AUTOMATIC SENSOR: NO NEED START BUTTON
- → HIGHER SECURITY
- FREE FROM LOST / SPOOF
- AUTOMATIC ROCK SETTING ( USING ELECTRIC LOCK )
- POWER OUT: BATTERY, IDC-INDOOR CONTROLLER
- **▼ NETWORK**
- CONNECTABLE EXISTING ACCESS CONTROLLER SYSTEM 26bit WIEGAND PROTOCO
- INTEGRATION WITH ACCESS CONTROL, TIME AND ATTENDANCE, CASHLESS FOOD









A. WiFi, TCP/IP, RS-485 COMMUNICATION: Max 400 readers,

B. 2 LED COLOR (GREEN, RED

- RED : ACCESS DENIED, GREEN : ACCESS APPROVED

C. SPEED: 2,000 TEMPLATES: 0.3SEC / 0.5SEC FOR 10,000 TEMPLATES

D. 12 DIGIT KEY PAD , 40 CUSTOMIZABLE FUNCTION KEY

E. READER & CONTROLLER ALL IN ONE

- EXP' 1 Reader (Option), 4/2 In, Out Point

F. CARD : HID, Mifare, iClass, EM Card

G. S/W: TSG-TAP

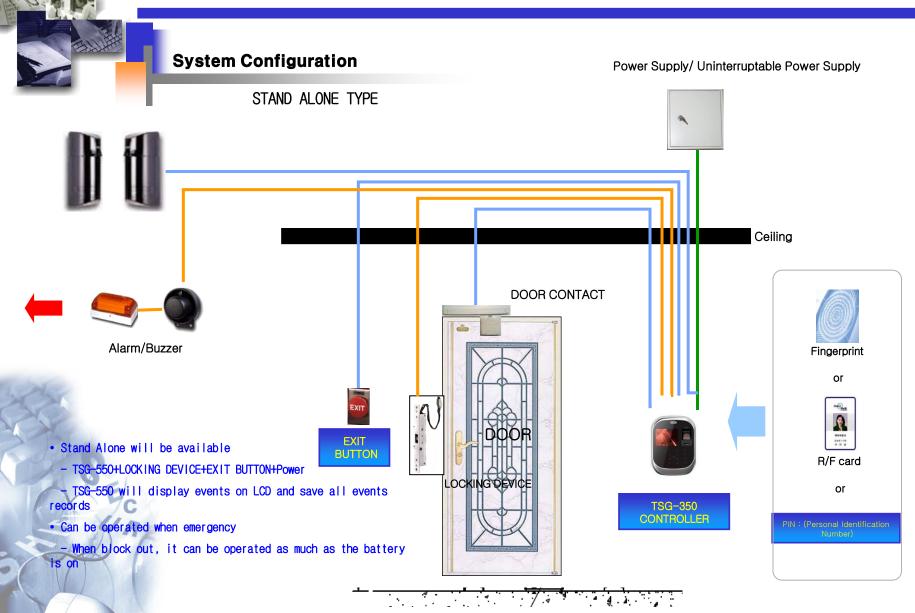
I. OPERATION MODE : FINGERPRINT / PIN / CARD SELECTABIL COMBINATION

J. POE (Power over Ethernet)

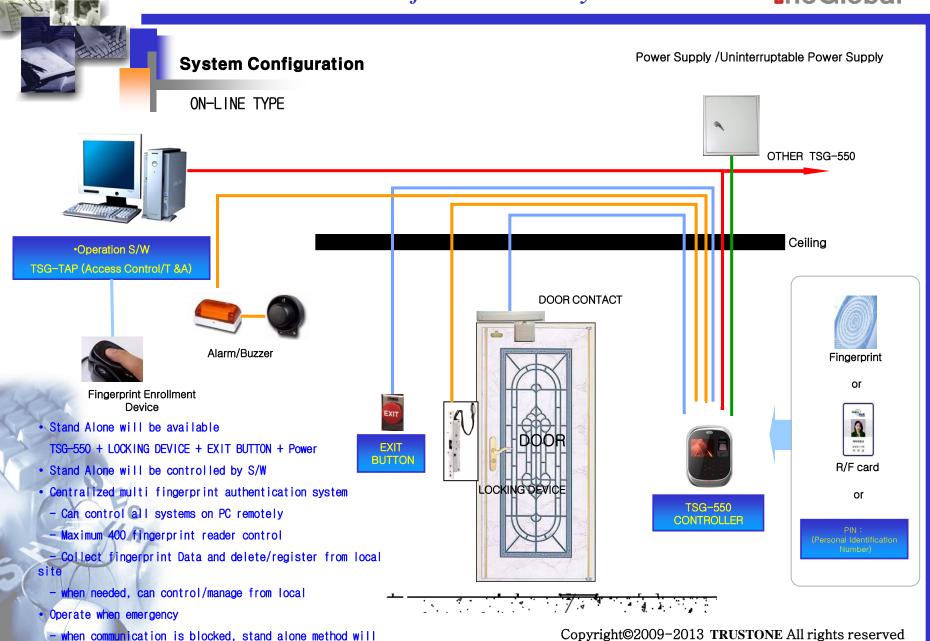
CDLI	201.0	COMMUNICATION	WiFi, TCP/IP, RS-485,		
CPU	32bits	INTERFACE	Wiegand(I/O), SD Memory Card		
POWER	12V DC 3A / PoE	MODE	TSG-550(PF) : FINGEERPINT / PIN TSG-550(PFC) : FINGEERPINT / PIN/ CARD		
IN/OUT POINT	81N / 40UT	USER	2,000, 10,000, 30,000, 50,000		
READEING	5 ~ 10Cm	CERTIFICATION	C€ F©		
SIZE	H148 X W168 X D 30mm				

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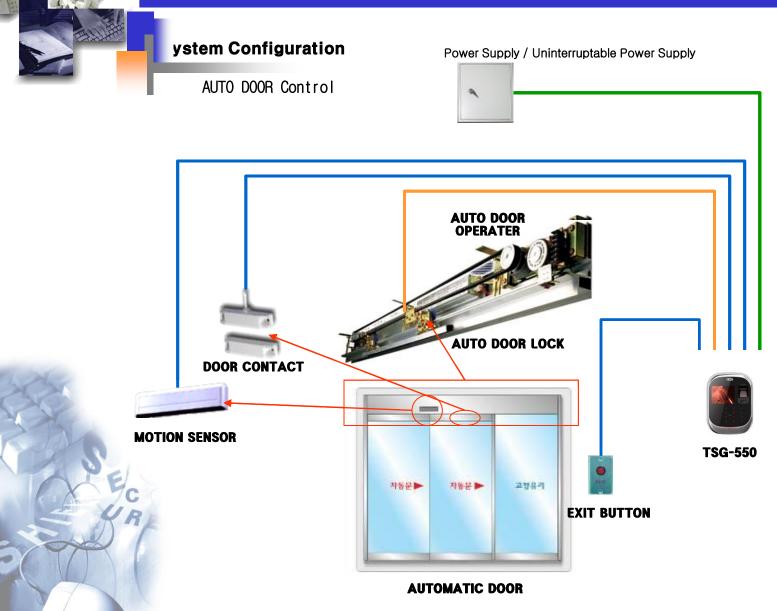






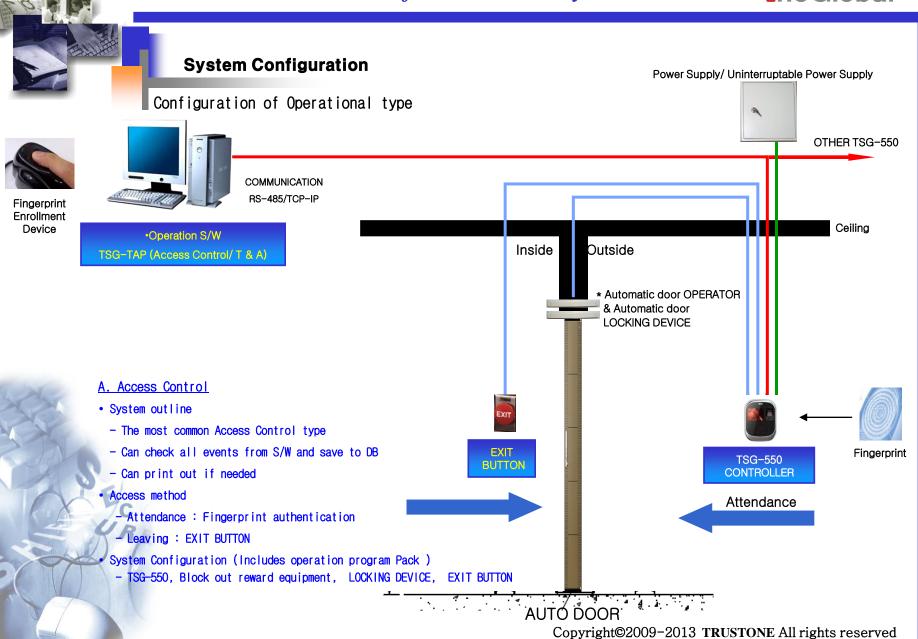
be adapted automatically



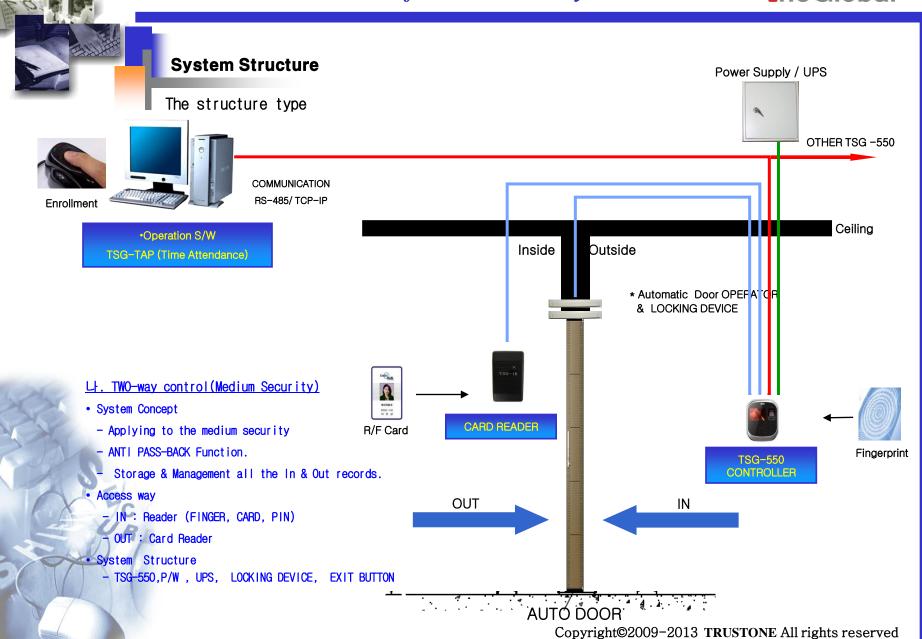


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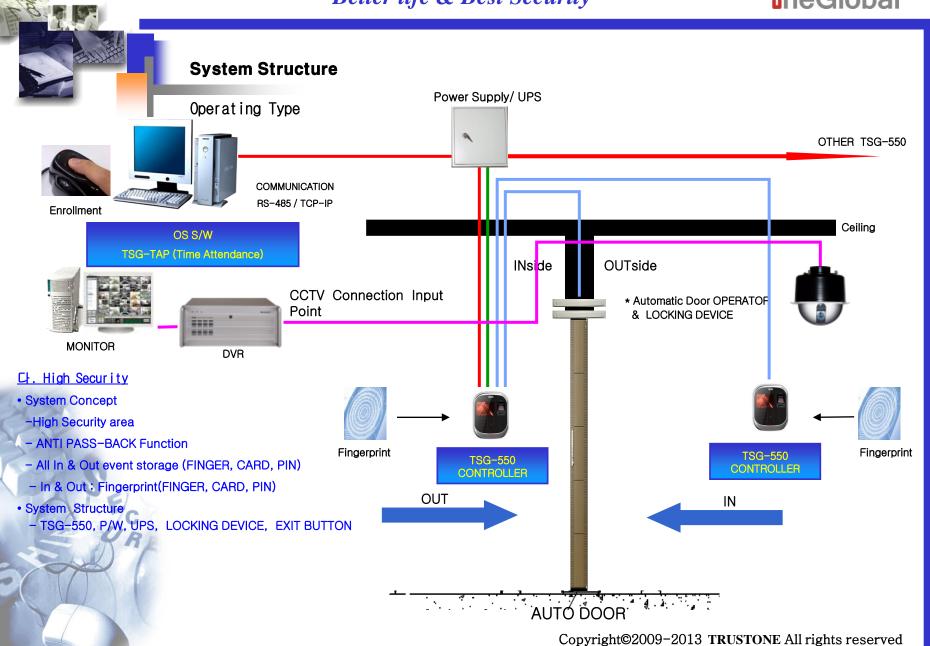








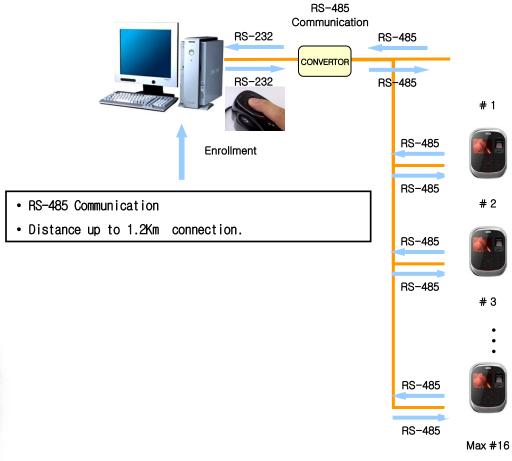






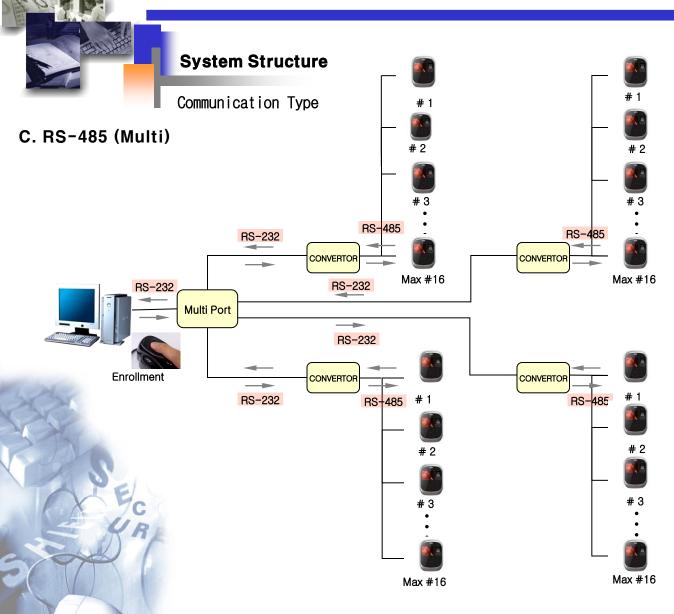
#### **System Structure**

Communication Type RS-485



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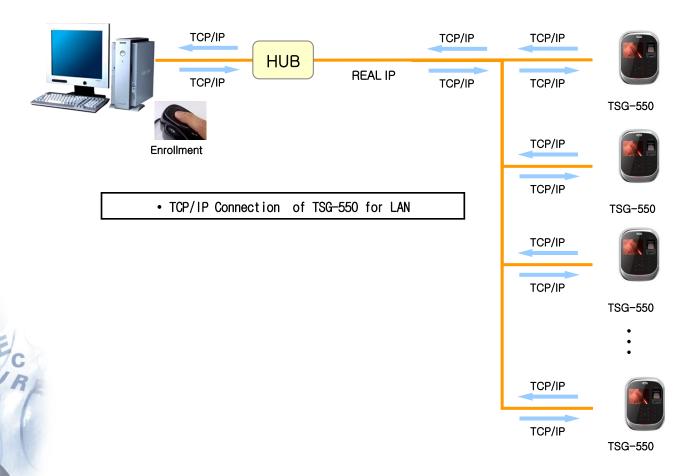
- Main PC controls more than 17 devices
- 1 PORT Up to 16 EA Devices - 16 X 4 = 647H
- Max Comm Distance1.2Km



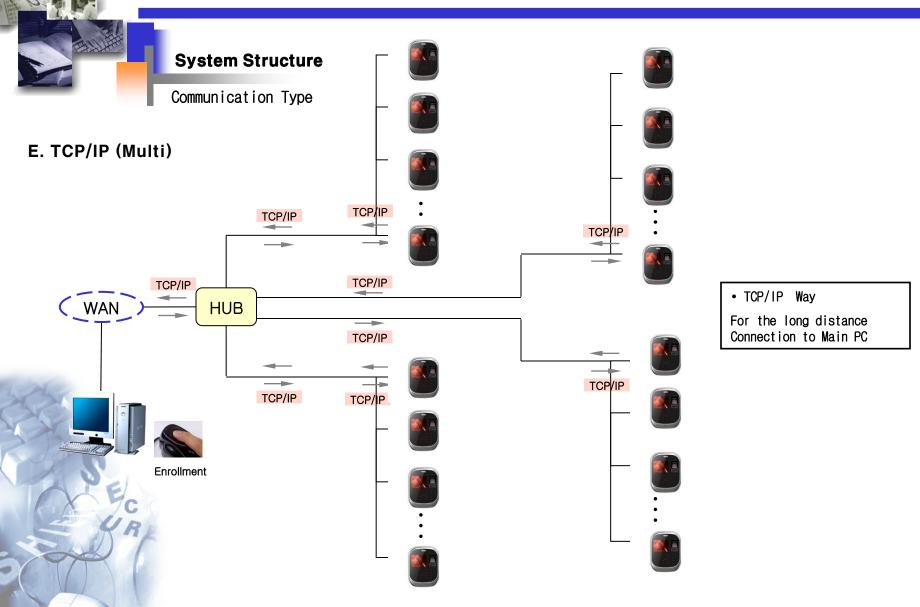
### **System Structure**

Communication Type

#### D. TCP/IP







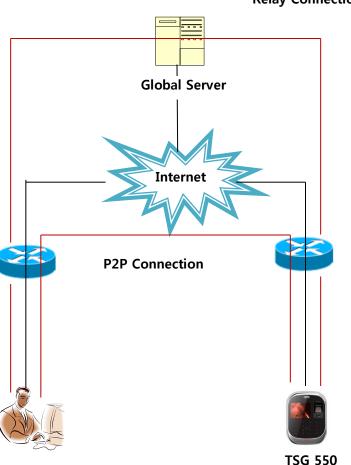




Router

#### **Relay Connection**

Router



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P2P connection type of TSG-TAP program and server program

-It is possible to connect TSG-TAP program to TSG 550/750 without the public IP in broadband network.



#### **ACCESS CONTROL SOFTWARE (TSG-TAP)**

### TSG-TAP

## Time Attendance S/W

MDB, MS SQL, Oracle Version



### General TSG-TAP

- A. TSG-550 Access Control system S/W for the control of the fingerprint devices.
- B. Keep the records & Control of Access door & the sensor device situation.

#### Characteristics TSG-TAP

- A. All the records about the access.
  - Date, Time, Event, Place, ID, Name, Company, Operation Mode.
  - Set up the events & monitoring.(Total 35 items)
- B. The control of all the operation Mode
  - 16 kinds operation Mode for the low, medium & High security mode.
- C. Door control/ auto operation change.
- D. All the attendee's personal record register & management.
- E. The permit to the attendee by the place & time
- F. Control of the access permit set up
  - Master, Route Master, General Users
- G. VOIP & P2P Function

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Class	Contents	Class	Contents	
User Registration	Up to 262,144 people	Comm Type	RS232/485, TCP/IP	
Fingerprint Controller	•Max 64 Ea(RS-485 Comm)  * TCP/IP (no limit)  Operation Choice 16 Type ( Sir		Single, Double, Triple)	
Holidays setting	365 types * Common Holidays/User Holidays	User Fingerprints Enrollment	SAME AS USER REGISTRATION	
Setting of User Attendance	254 Types	IN/OUT Control Capacity	INPUT	8 IN
Access record storage	Hard Disk Capacity	GapaGTty	OUTPUT	4 OUT

#### PC Spec TSG-TAP

가. OS : WINDOW XP & Up

나. CPU: PentiumIII 256 MB & Up

C. Hard Disk

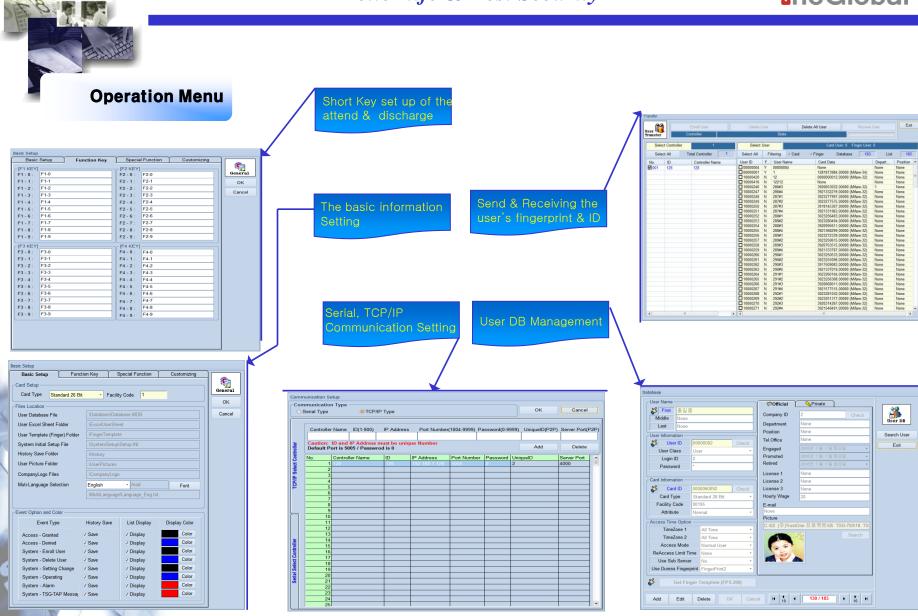
• Min 50MB Plus (Program set up)

• Min 100MB Plus access events storage

라. Comm Port : Min 1 Serial Port











### Thank You!



