# USER GUIDE ACCESS POINT (AP300\_Ethernet Setting)



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We have our development center in South Korea to provide technical support. For any technical assistance can contact our technical support team as below;

E-mail: passtech@esmartlock.com



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## **1. Components Preparation**

#### 1.1 SETUP Components







```
DC12V POWER SUPPLY ADAPTOR
```

RJ11 POWER CABLE (12V)

AP 300

RJ45 LAN CABLE

#### 1.2 Setting Diagram





## 2. AP Setting

#### 2.1 SERVER & AP300 Communication Diagram



#### 2.2 AP Setting

Before creating AP account, please check PC IP and TCP/IP first by running 'Command Prompt' and inputting 'ipconfig' command as below.

Command Prompt		×
Microsoft Windows [Version 10.0.17763.503] (c) 2018 Microsoft Corporation. All rights reserved.		^
C:₩Users₩WIN10>ipconfig		
Windows IP Configuration		
Wireless LAN adapter 로컬 영역 연결* 3:		
Media State Media disconnected Connection-specific DNS Suffix . :		
₩ireless LAN adapter 로컬 영역 연결* 2:		
Media State Media disconnected Connection-specific DNS Suffix . :		
Ethernet adapter 이더넷:		
Connection-specific DNS Suffix .: Link-local IPv6 Address: fe80::1c6a:de1b:720:3b2f%6 IPv4 Address: 192.168.0.52 Subnet Mask: 255.255.255.0 Default Gateway: 192.168.0.1		
Wireless LAN adapter Wi-Fi:		
Media State Media disconnected Connection-specific DNS Suffix . :		~





			- 🗆 X
		GEMENT(HOTEL)	V1.6
ETHERNET SETTING		WIFI SETTING	AP SETTING
Version       Mac Addr         Search Direct IP       192       186       0       255       0       255         IP Configuration       Operation Mode       Operation Mode       0       0       255         IP Configuration       Operation Mode       Operation Mode       0       0       0         Subnet       Operation       Operation Mode       Operation Mode       0       0       0         Subnet       Operation       Operation Mode       Operation Mode       0       0       0         Gateway       Operation       Operation       Operation       0       0       0         BaudRate       Operation       Operation       0       0       0       0       0         Data Packing Condition       Time       (0 ~ 65536 sec)       0       0       0       0         Size       (0 ~ 255 Byte)       Operation       0       0       0       0       0	AP LIST	AP ID O DHCP O STATIC IP O O O O O O O O O O O O O O O O O O O	AP Name Server1_AP1 RF Channel BUILDFLOOR LOCKER RANGE BUILDD 01 FLOOR 001 ROOMS 001 ~ 001 SSMART CLOCK
Search Setting		CONN WRITE RE	CLEAR EXIT

② Click 'Search' button.

Mac address and IP of connected AP200 will be shown on AP List.

🛜 Hotel AP Management(V1.6)					- 🗆 X
	AP MANA	GEMENT(HOTE	EL)		V1,6
ETHERNET SETTING		WIFI SE	TTING	AP SET	ПNG
Version       Mac Addr         Search Direct IP       192       168       0       255       0       255         IP Configuration       Operation Mode       Operation Mode       0       255       0       255         IP Configuration       Operation Mode       Operation Mode       0       0       200       0       255         Subnet       Image: Configuration       Image: Configur	AP LIST 54:104EC:20:17:59 80:1F1:270:82:D6 80:1F1:270:82:D6 80:1F1:270:87:D0 80:1F1:270:87:D0 80:1F1:270:87:D0 80:1F1:270:87:53 80:1F1:270:87:53 80:1F1:270:87:53 80:1F1:270:75:4F 80:1F1:270:75:4F 80:1F1:270:76:47	AP ID O DHO IP II NET MASK II GATEWAY II SERVER IP II SERVER IP SSID PASSWORD II	CP STATIC	AP Name Serve RF Channel BUILD OILOCKI BUILD 01 F ROOMS 001 ~	ILAP1 RRANGE OOR 001 001
Search Setting	1	CONN	RITE RE	AD CLEAR	EXIT
Search OK !! 192,168,0,200 Search OK !! 192,168,0,189 Search OK !! 192,168,0,189 Search OK !! 192,168,0,189 Search OK !! 192,168,0,180 Search OK !! 192,168,0,180 Search OK !! 192,168,0,180 Search OK !! 192,168,0,186 Search OK !! 192,188,0,181 Search OK !! 192,188,0,181 Search OK !! 192,188,0,181 Search OK !! 192,188,0,181 Search OK !! 192,188,0,191 Search OK !! 192,188,0,191					



③ Select an AP which you want to configure from the AP list, and input values in 'Ethernet Setting' referring to the description below.

Item	Description
	AP IP
LOCALIP	Make sure this IP is only assigned to this AP
Local Port	Assign the port number on your own (Default: 5000)
Subnet	Input the value (Subnet Mask) checked in Command Prompt
Gateway	Input the value (Default Gateway) checked in Command Prompt
Server IP	Input the value (IPv4 Address) checked in Command Prompt
Server Port	Input the port number as set in Server program (Default 2274)

④ Click 'Setting' button to save the information to the selected AP, and check the message 'Setting OK' from the message box below.

Hotel AP Management(V1.6)				-	- X
		GEMENT(HO	TEL)		V1.6
E IHERNE I SE I IING	101107	WIFI	SETTING	AP SET I	ING
Version         02.07         Mac         Addr         54:10:EC:20:17:59           Search Direct IP         192         168         0         255         0         255           IP Configuration Method © Static         DHCP         © Client         © Server         Mixed           Local IP         192         168         0         20C         Port         5000           Subnet         255         255         255         0         1         5erver         Mixed           Server IP         192         168         0         20C         Port         5000           Server IP         192         168         0         52         Port         2274           Serial Configuration         BaudRate         230400              Data Packing Condition          0         (0 ~ 65536 sec)             Size         0         (0 ~ 255 Byte)	AP LIST Ed. 10/E0/2001 / 1/500 2001 FF: 12: 70: 84: 05 8001 FF: 12: 70: 84: 05 8001 FF: 12: 70: 84: 05 8001 FF: 12: 70: 87: 05 8001 FF: 12: 70: 70: 72: 57 8001 FF: 12: 70: 87: 53 8001 FF: 12: 70: 87: 53 8001 FF: 12: 70: 75: 44 8001 FF: 12: 70: 76: 71 8001 FF: 12: 70: 76: 71 8001 FF: 12: 70: 76: 71	AP ID IP NET MASK GATEWAY SERVER IP SERVER IP SSID PASSWORD	DHCP STATIC	AP Name Server1 RF Channel BUILD 01 FL ROOMS 001 ~ (	
Search Setting	g	CONN	WRITE RE	AD CLEAR	EXIT
Setting OK !!					



Select RF Channel and then click 'Conn' button and check the message 'Connected OK' from the message box.

Hotel AP Management(V1.6) AP MANAGEMENT(HOTEL) V1,6 ETHERNET SETTING WIFI SETTING AP SETTING Version 02.07 Mac Addr 54:10:EC:20:17:5 AP LIST 20:17:59 :70:AA:05 :70:80:D6 :70:8A:F9 :70:A2:BF :70:A2:BF :70:AD:CA :70:97:A7 :70:75:AF :70:5D:1F :70:5D:1F :70:52:3F AP ID O DHCP O STATIC AP Name Server1\_AP Search Direct IP 192 166 0 255 0 255 RF Channel 11 IP Configuration Operation Mode Method ● Static ● DHCP ● Client ● Server ● Mixed IP BUILD/FLOOR LOCKER RANGE NET MASK 
 BUILD
 01
 FLOOR
 001

 ROOMS
 001
 ~
 050

 Local IP
 192
 168
 0
 200
 Pont
 5000

 Subnet
 255
 255
 0

 </t GATEWAY :70:76:71 :70:8F:DD :70:87:53 SERVER IP WEP SERVER IP Serial Configuration SSID BaudRate 230400 ~ SMART PASSWORD Data Packing Condition Time 0 (0 ~ 65536 sec) Size 0 (0 ~ 255 Byte) Search Setting CONN WRITE READ CLEAR EXIT Setting OK !! AP setting server start! ==> IP : 192,168,0.52, Port : 2274

If it is connected well, 'WRITE' and 'READ' buttons will be activated.

6 Click 'READ' button to check current saved information.

🛜 Hotel AP Management(V1.6)			– 🗆 X
	AP MANA	GEMENT(HOTEL)	V1.6
ETHERNET SETTING		WIFI SETTING	AP SETTING
Version         02.07         Mac Addr         54-10:EC:20:17:59           Search Direct IP         192         168         0         255           IP Configuration Method o Static         Operation Mode         0         255           Up Configuration Method         Operation Mode         0         200         Mixed           Local IP         192         168         0         200         Port         5000           Subnet         252         255         0         1         5000         52         Port         5000           Gateway         192         166         0         52         Port         2274           Server IP         192         166         0         52         Port         2274           Servial Configuration	AP LIST R410 EC 2001 7/59 801 FF12:70:84:05 801 FF12:70:84:05 801 FF12:70:84:05 801 FF12:70:84:05 801 FF12:70:84:05 801 FF12:70:75:AF 801 FF12:70:85:05 801 FF12:70:87:53 801 FF12:70:87:53 801 FF12:70:87:53	AP ID O DHCP O ST IP ID I I I I I I IP II I I I I I I I GATEWAY II I I I I I I SERVER IP II I I I I I I SERVER IP II I I I I I I SERVER IP II I I I I I I SSID I I I I I I I I I I PASSWORD	ATIC AP Name AP1 RF Channel 23 ~ BUILDFLOOR LOCKER RANGE BUILD 01 FLOOR 01 ROOMS 0001 ~ 650 EP
Search Setting	J	CONN WRITE	READ CLEAR EXIT
Setting OK !! AP setting server start! ==> IP : 192.168.0.52, Port : 2274 Client Connected OK !!! 192.168.0.200 R>< 0520378000000000000000000 R<= 1rAP 1.23.0101001.010050↓x Configration Reading OK!! Iter //saccologic/cologic/saccolo	203031303130303035302	:C2C2C0678	



1 Input values in 'AP Setting' referring to the description below.

Item	Description
	AP name that will be inputted into AP Account in Client program
	Assign AP ID on your own, but do not duplicate
AF Name	Only English alphabet and number are available
	(Any space or special characters cannot be contained)
RF Channel	RF Channels you would like to connect (11~25)
BUILD	Building number (1~50)
FLOOR	Floor number (1~99)
ROOMS	Room numbers (1~999)

8 Click 'WRITE' button to save the information of the selected AP, and check the message 'Configuration writing OK' from message box.

Hotel AP Management(V1.6)		- 🗆 X
AP MAN	AGEMENT(HOTEL)	V1.6
ETHERNET SETTING	WIFI SETTING	AP SETTING
Version         02:07         Mac Addr         54:10:EC:20:17:59         AP List           Beach Direct IP         192         166         0         255         0         255         60:17:12:70:62:06	AP ID O DHCP O STATIC IP O DHCP O STATIC NET MASK GATEWAY SERVER IP O D O DHCP SSID PASSWORD	AP Name AP1 PF Channel 23 V BUILD 01 FLOOP 01 ROOMS 0001 ~ 050 SSMART CLOCK
Search Setting	CONN WRITE RE	AD CLEAR EXIT
Setting OK !! AP setting server start! =⇒ IP : 192,168,0,52, Port : 2274 Client Connected OK !!! 192,168,0,200 R -> 0252078000000000000000000 R -> 10AP 1.23,01010001.01010050 <sup>L</sup> x Configration Reading OK!! OVER 2020202202202202204150312032332030313031303030312030313030051 Configration Writing OK!!	02C2C2C0378 303035502C0378	

- 9 Click 'READ' button again to check if the setting values are properly saved.
- 0 If you want to set another AP, follow the steps from 2.
- 1 After setting is completed, click 'EXIT' to close the window.
- (2) Click 'New' button from AP account window to enter new information.
- Input the following items and click 'Save' button to save the entered information.

Item	Description
AP Name	Input AP Name which you set in AP Settings
Server IP Update Flag	Check to update the information into Server program automatically
AP IP	Input AP IP address which you set in AP Settings
Server IP	Input IP address of a PC which Server is installed in
Server Port	Input server port (Default: 2274)
Channel	Input RF Channel which you set in AP Settings
Building No.	Select Building number which you set in AP Settings
Group ID	Input Group number which you set in AP Settings
Lock Start	Input Starting Room number of the lock which you set in AP Settings
Lock End	Input Ending Room number of the lock which you set in AP Settings
AP Status	Waiting / Connect OK / Connect Error
AP Layout ID	Select AP Layout ID same as you set in Custom Layout

- If you want to update the information, select the AP account from the list and click 'Update' button to activate the input boxes. Input the updated information and click 'Save' button to update.
- If you want to delete the information, select the AP account from the list and click 'Delete' button to delete.

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### 3. Server Setting

#### 3.1 Server pre-setting (DB Connection)

① Change the environmental files for DB connection before executing the communication Server Program. Run "ConfigSetting.exe" in the folder where the program is installed.



② Input the Connect information to connect DB.



③ Run the Server Program (PTHMS\_Server.exe).





④ Click "Config" and put information as below;

Server IP/Port List							Ch	annel							
ex S	Server Name	Server IP	Port No.	Index	AP Name	AP IP	Channel ID	Build	Floor	S-Room	E-Room	Server IP	Server Port	Status	AP-FW Ver
					Config Edit	SQL Server	<u> </u>	DB.(	Connect Te	×					
Add IP/Por	rt	Delete IP/Port	]		DB Connect String	192.168.0.52,1433	2 $-$	DBC	Johnect R	est					
_	1				Database Name	PTHMS_DB	<u> </u>								
e-Sn	nart Lock	C/T	Config		Login ID	sa									
1	_	U-			Login Password		<b>N</b>								
ay Debug					Local Server IP	192.168.0.52									
					Write Event Comm	unication Log									
						ОК	Cancel								

→ Put information same as the one you put for config setting above. (Local Server IP will be your PC IP)





#### 3.2 Server Connection



① Run the Server Program (PTHMS\_Server.exe). PTHMS\_Server.exe).



② The program is started as shown below.

	Server IP/Port	t List		AP List				Lock List					
ndex	Server Name	Server IP	Index	Server AP Name	AP IP		Index	Lock Name	Channel ID	Build			
Add IP	Port	Delete IP/Port	Index	Add AP Char AP Name	Delete AP	Build							
5	e-Smart Loc PASS	ĸ FECH	•	TT Add Channel	Delete Chan	nel .	•						



③ If the SQL DB is not accessible, the above program will not be executed.

The DB Connection Configuration screen will appear, and you have to enter the DB connection value as shown below. (Refer to contents 4-1)

Config Edit		×
DB Connect String		
	OK	

④ The Server Account is the part which sets the communication port to receive or send data form the AP.

Server	IP/Port List		Channel												
ex Server Name	Server IP	Port No.	Index	AP Name	AP IP	Channel ID	Build	Floor	S-Room	E-Room	Server IP	Server Port	Status	AP-FW Ver	
e-Smart Lock PASS TEC	Delete IP/Port	Config													
yy Debug 🗹				Add Channel	Delete Channel										

Dialog X	Dialog ×	PTHMS_ServerPro X
Name IP Edit	Name         Server1           IP Edit         192.168.0.52	Data storage OK!!!
OK Cancel	2 OK Cancel	Зок

5 Click "Add IP/Port", and once you see a Dialog screen, input server name, IP address where the server is installed, and the port number. Then, click "OK" to create a server account.



6 Once the server account is created successfully, you will see a screen below.

	Server	IP/Port List		Channel Index: AP Name AP TP Channel TD Build Floor S-Room F-Room Server TP Server Port Status AP-FM											
ndex	Server Name Server1	Server IP 192, 168, 0, 52	Port No. 2274	Index	AP Name	AP IP	Channel ID	Build	Floor	S-Room	E-Room	Server IP	Server Port	Status	AP-FW Ver
Add IP,	Port	CH	Config		Add Channel	Delete Channel									

⑦ This is the part where you can register the AP information that connects to Server, which you have set from AP Management Program. (AP Client has to be set up before this. – please refer to 3-2)

	Server	IP/Port List		Channel												
Index	Server Name Server1	Server IP 192.168.0.52	Port No. 2274	Index	AP Name	AP IP	Channel ID	Build	Floor	S-Room	E-Room	Server IP	Server Port	Status	AP-FW Ver.	
Add IF	-Smart Lock	CH	Config													
play Deb	ug 🗹				Add Channel	Delete Channel										

8 Click "Add Channel"



9 Put all the information same as AP Client.



1	AP Name (must be same as AP Client)
2	Channel number (must be same as AP Client)
3	AP IP Address (same IP as Local IP in AP Client)
4	Lock Info. (Building#, Floor#, Start/End Room# -> must be same as AP Client)
5	Server IP (Your PC IP)
6	Server Port (Default: 2274)

(1) Once it is connected, you will see it on Channel box.

📳 HMS	<->AP Commur	nication(2.0.0.7)												-	□ X	
	Server	IP/Port List		Channel												
Index	Server Name Server 1	Server IP 192.168.0.52	Port No. 2274	Index	AP Name AP 1	AP IP 192.168.0.200	Channel ID 11	Build	Floor 1	S-Room 1	E-Room 999	Server IP 192.168.0.52	Server Port 2274	Status 1	AP-FW Ver. -	
Add IF	-Smart Lock	CH	Config													
RCV LEN[0 RCV LEN[0 RCV LEN[0 SND LEN[0 SND LEN[0 RCV LEN[0 OnAccept	001] [2020/07/24 1 015] [2020/07/24 1 019] [2020/07/24 1 019] [2020/07/24 1 019] [2020/07/24 1 019] [2020/07/24 1 010] [2020/07/24 1 010] [2020/07/24 1 010] [2020/07/24 1	7:46:18] Thread RX 7:46:17] Thread RX 7:46:17] Thread RX 7:46:17] Thread RX 7:46:17] Thread RX 7:46:17] Thread RX 7:46:17] Thread SE ] Client ID:[0], Client	Server ID:[0] (Server ID:[0] and Server ID:[0] (Server ID:[0] (Server ID:[0] (Server ID:[0] (Server ID:[0] (Server ID:[0] (Server ID:[0]) (Server ID:[0]) (Ser	Client IP [192.] Client IP [192.]	Add Channel 166.0.200] =>> CMD:[f 168.0.200] =>> CMD:[6 168.0.200] =>> CMD:[6 168.0.200	Delete Channel FFFF MSG-Len : [0000] MSG: 050] MSG-Len : [0014] MSG: 050] MSG-Len : [0014] MSG: 050] MSG-Len : [0014] MSG: 010] MSG-Len : [0012] MSG: 011] MSG-Len : [0002] MSG:	00 20 04 21 10 31 27 40 10 00 51 60 00 20 04 21 10 31 27 40 10 00 51 60 06 41 50 31 00 00 00 40 07 00 11 60 02	FF 00 011 9 00 00 00 FF 00 01 0 00 00 00 0 00 00 00 0 00 00 00 0 00 00 00	01 00 00 0 20 20 07 2 01 00 00 0 20 20 07 2 00 00 00 0 73	0 00 C2 24 17 46 17 0 00 C2 24 17 46 17 0 00 00 00 00 00 00	7 30 30 5F 7 30 30 5F 0B 01 01 0	00 01 01 01 09 99 (	23			



ltem	Description
1 1	Connected
<b>1</b>	Disconnected Check if AP information in AP Setting and Client program are same, and AP cable is connected well
1	Not Connected

#### 3.3 Server Startup and Shutdown

#### 1) Server Program Startup

① Run Server Program (PTHMS\_Server.exe).



② When the program is running, a Tray-Icon is created as below.



#### 2) Program Shutdown

To exit the program, right-click the Server Icon on the Tray-Icon and click "Exit"., or can be forced to terminate in the Task Manager.





# 6. Specification

Item	Detail
Material	ABS
Communication	2.4Ghz Zigbee(ONLINE LOCK COMM)
	TCP/IP(SERVER COMM)
Security	AES128
Power Supply	DC 12V ADAPTOR & POE(IEEE802.3af)
Indicator	LED
Dimension	101.60mm * 101.60mm * 27.50mm
Operation TEMP	0°C ~ 50°C
Certification	CE, FCC

\*\*\*\*\*This furniture lock system is using in Hotel, Office and any place which is without residential area.



## 7 Regulatory Statement

#### FCC Part 15.105 statement (Class A)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### FCC Part 15.21 statement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

#### **RF Exposure Statement (MPE)**

The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times.

#### **Supplier's Declaration of Conformity**

47 CFR § 2.1077 Compliance Information

Responsible Party – Cardcom Address: 1301 S. Beach Blvd. Ste-P La Habra, CA 90631 Tel.: 562-943-6300 E-mail: esmartlock@cardcom.com