Expansion Module ESM18-LCD
User Manual

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1. Getting Started

About

Expansion Module ESM18-LCD greatly improve the features and extensibility of ESCENE IP Phones (ES680). Each Expansion Module ESM18-LCD support upto 36 programmable keys (one page is 18 programmable keys, Dual-color LEDs), Conecting to IP Phone through RJ-45 Straight-Through Wired Cable. ES680 support upto 2pcs Expansion Modules ESM18-LCD including paperless programmable keys (Please refer to IP Phone User Manual to learn paperless programmable keys). Combined with IP-PBX, each programmable key can support speed-dial, BLF, and collaborate with the server to achieve call forwarding, call transfer, call holding, call pick-up, and other functions.

Expansion Module ESM18-LCD is suitable for the front desk attendant, administrative assistants, call center agents and the user who needs to monitor or manage a large number of calls.

Technical features

Items	ESM18-LCD
Keys	36 programmable keys (Dual-color LEDs)
Interface	2xRJ-45 with IN& OUT ports, is easily connect IP Phones and other Expansion Modules ESM18-LCD 1xRJ45 with LAN port, can connect with PC, for upgrade Firmware.
Maintain	IP Phone keypad installation maintenance of all data via Web page
Physical Specifications	Storage Temperature: 0℃ ~ 60℃ Operating Humidity: 10% ~ 90%
Support Model	ES680

2. Connecting Expansion Module ESM18-LCD

Generallly Speaking, system administrator will install your new Expansion Module ESM18-LCD to IP phone. If not, please read as below.

1）Open the packing box of Expansion Module ESM18-LCD. Compare with the packing list and check whether the related accessories of ESM18-LCD are complete, the packing list is as follows:

- 1x Expansion Module ESM18-LCD

- 1x RJ-45 network cable
- 1x metal mounting fasteners (including 4 mounting screws)

2）shown in Figure 2.1, connect IP phone and Expansion Module ESM18-LCD by a metal mounting fasteners , and install by mounting screws.

*More description of Interface, please refer to 3. ESM18-LCD Expansion Module Overview - Buttons and Hardware

Figure 2.1　ESM18-LCD connect to ES680 IP Phone A

3）Use RJ-45 network cable(Straight-Through Wired Cable). One side for ESM18-LCD "IN" interface，another side for IP Phone "EXT" interface，Figure 2.1 as follows:

Figure 2.2　ESM18-LCD connect to ES680 IP Phone B

4）If you need to connect other Expansion Modules, please connect via metal mounting fasteners, and install via mounting screws. Figure 2.3 as follows:

Figure*2.3　ESM18-LCD connect to ESM18-LCD*

5）On the back of ESM18-LCD, press the button on the side of the bracket, then adjust the angle to make it as same as the angle of IP Phone. Figure 2.4 as follows:

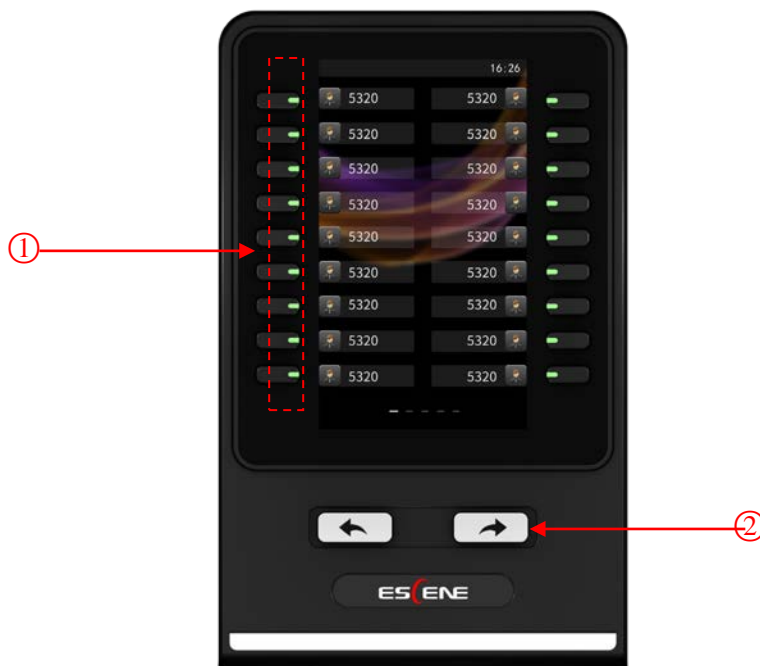***Figure2.4   ESM18-LCD Expansion Module bracket angle adjustment***

6）After connecting, you can install and set Expansion Modules ESM18-LCD , more detials please refer to the following sections.

3. ESM18-LCD Expansion Module Overview

3.1. Buttons and Hardware

Figure 3.1 - 3.2, you can learn the buttons and hardware of Expansion Module ESM18-LCD

Figure 3.1   Expansion Module ESM18-LCD front view

No.	Buttons and Hardware	Functional Description
1	programmable buttons	Used to bind the speed-dial number to achieve Speed-dial; Used to set the function code and achieve this function with SIP Server; After opening BLF * (busy line detection), can view the state of corresponding number： 1）Red, steady: Remote line is busying. 2）Red, flashing: There is an incoming call. 3）Yellow-green, steady: Remote line is idle. Sorting programmable keys： Left (from top to bottom): 1 to 9; Right (from top to bottom): 10 to 18
2	Programmable Navigation key	Switch another programmable key page. From left top to bottom: 19 to 27; From right top to bottom: 28 to 36;

		Left Navigation key press and hold for a second, can check status with IP address, firmware version etc.

*BLF is "off" - No light.

**"BLF" default is off, please turn on "BLF". More details refer to the section of 6.Web setting

Fiture 3.2   Expansion Module ESM18-LCD Rear view

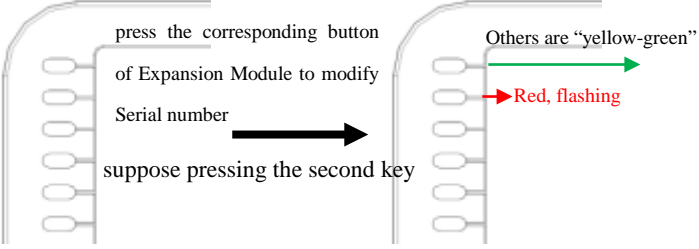| No.	Hardware components	Function Description
1	OUT Interface	used to connect "IN" interface of Expansion Module ESM18-LCD
2	IN Interface	used to connect EXT interface or Expansion Module ESM18-LCD "OUT" interface
3	Fastening screw	used to install the metal fasteners
4	Bracket	Two-angle adjustable bracket.

5	LAN port & Power Adapter Port	LAN Port connect to PC, for upgrade firmware. Power Adapter Port connect with power adapter when up to 2 expansion module.

4. Installing Expansion Module ESM18-LCD

Currently Expansion Module ESM18-LCD is only supported to install by IP phone keypad. Besides, the more important is, In the telephone keypad configuration menu, you can diagnose Expansion Module LED to check if the LED is normal; but if you want to set the buttons of Expansion Module, you can configure on the IP phone Web.

After connecting with Expansion Module ESM18-LCD, you need to choose serial number to install Expansion Module and make IP Phone recognize the serial number of the corresponding Expansion Module. After the successful installation, you could check Expansion Module state from the page"IP phone state ":

implemented function	Specific operation
Install Expansion Module	--1）Connect Expansion Module ESM18-LCD to IP Phone ES680 with network cable； --2）Select **Function Setting**> **Expansion Module Installation** on ES680's menu; --3）IP Phone will prompt "Please select serial number from buttons "1-2", press button"finish" to complete the modification" (generally, set Expansion Module as "Expansion Module1" to directly connect IP Phone, the Expansion Module next to Expansion Module "1" is "Expansion Module2", and so on, of course, you can also define by yourself); --4) Now all buttons with optional serial number on Expansion Module will be " yellow-green" (Left from top to bottom: 1 to 2), the corresponding button of Expansion Module serial number is "Red, flashing".Pressing the corresponding button, you can determine or modify the Expansion Module Serial number:

	press the corresponding button of Expansion Module to modify Serial number → suppose pressing the second key Others are "yellow-green" → Red, flashing --5）Press button "OK" or the "Enter" to submit**。 *The serial number of Expansion Module is default "1", Don't install when there is only one Expansion Module **If not press button "OK" or "Enter" within 35seconds, it will automatically save the Serial number of Expansion Module
Check the status of the Expansion Module	--1）select **viewing state** on the page； --2）If successfully installed and connected to Expansion Module, it will show "online", otherwise show "offline".

Diagnose Expansion Module LED	--1）hold down button"C" to enter **Diagnostics> Expansion Module> Indicator**；
	
	 --2）Press Button **OK** to start：
	
	   Press 1st: LED, all " red"
	
	   Press 2nd: LED, all "off"
	
	   Press 3rd: LED, all "yellow-green"
	
	   Press 4th: LED, all "off"
	
	   Press 5th: LED, all "orange"
	
	   Press 6th: LED, all "off"
	
	   And so on……Press C key to exit diagnostic procedures

Diagnose Expansion Module buttons*	--1）hold down button "C" to enter Diagnostics> Expansion Module>Button； --2）Press Button button "**OK**" to start，Press different buttons on Expansion Module, the corresponding number will disappear in the

	LCD screen to test if the button is normal.
	*when diagnosing, the relation of he corresponding number of each button, the buttons (left from top to bottom & right from top to botton) need to correspond with the numbers.

After installing Expansion Module (designating the corresponding ID for each Expansion Module)， In order to facilitate the user to know the number of each Expansion Module, when turning on Expansion Module, the corresponding button will quickly flash "red" in 2 seconds. Like, Expansion Module with serial number "1" will flash firstly, Expansion Module with serial number "2" will flash secondly,

Specific button configuration of Expansion Module, please refer to the next section.

5. Setting Expansion Module

      After installing Expansion Module (setting the serial number for Expansion Module), you can set the buttons on expansion module, also binding the buttons as a remote extension number to achieve speed-dial, or set some function code with SIP Server code.
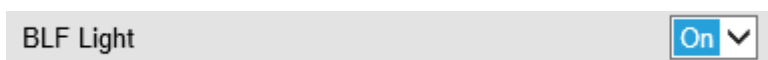
      Of course, you may also need to apply to BLF* function of expansion module keys, to view call state of the corresponding remote extension.

implemented function	Specific operation

Setting Expansion Module	--1）select **function setting**>**Expansion Module setting**；
	
	--2）select Expansion Module you need to configure；
	
	--3）Select the button you need to configure;
	
	--4）Select each parameter, press the corresponding modified soft key on LCD to set and modify：
	
	    -**Mode:** depending whether need to use BLF function, the mode of buttons can be divided into two parts:
	
	        -BLF：Set button to support BLF function and speed-dial；
	
	        -Speed-dial：Set this button to support speed-dila only;
	
	    -**Account:** Select the related outgoing SIP account of this button (call this number or function code through which SIP account)
	
	    -**Name:** Set the Name Description of this button
	
	    -**Number:** Set the speed-dial number for the button or achieve the function code for the certain platform and function.
	
	--5）Press **Submit Soft key** to submit

*Note：About nomal usage of expansion module BLF, please note as follows：

    1）Select "Mode" -"BLF"；

    2）Set the button number as a remote extension number (such as 8888), rather than a function code of SIP server platforms (such as * 97);

    3）The remote extension number set by buttom number and the binding of accounts should be under the same SIP server platform；

4）On the Web: "Phone Settings"> "Features"> "Other features setting", please make sure **"BLF on or off."** to choose **"on"**, like：
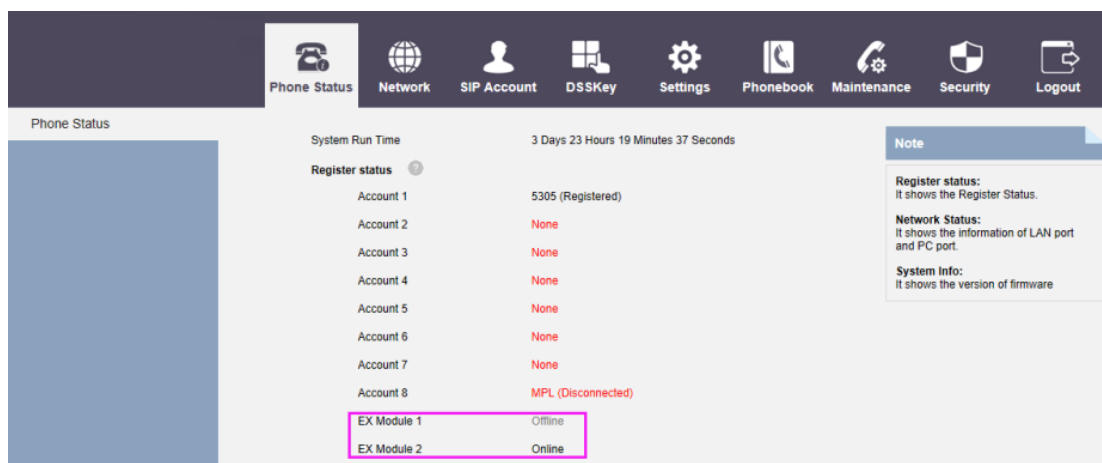

（More specific web setting, refer to next section）

6. Web Setting

It could make ESM18-LCD configuration and statusmore simple and convenient via web setting. When setting on WEB page, please make sure the following points:

1） Connect Expansion Module ESM18-LCD to IP Phone, then connect IP Phone and computer to the same network. If there is no networking equipment, the computer could be directly connected to the PC interface of IP Phone by Straight-line.；

2） Ensure IP Phone is working, view the IP address of IP phone；

3） Enter IP phone address in address bar of browser ；

4） Enter the administrator user name and password to enter the web configuration page, the default administrator user name is admin, the default password is admin;
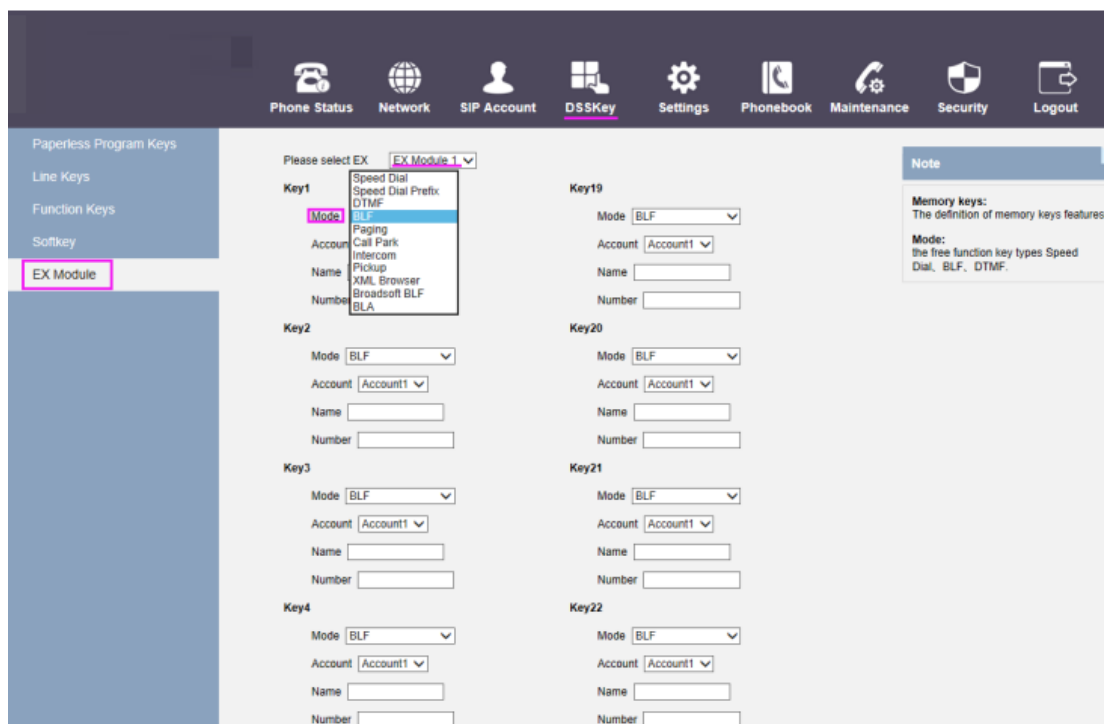
The system after landing as figure：

5） Click on the left navigation bar（"DSS key"> "EX module") to open the settings page of Expansion Module.

Expansion Module provides users with the flexible Extension, like speed-dial, hot keys and function keys and so on. More connecting method refer to Chapter2. Connecting Expansion module ESM18-LCD.

After connecting Expansion Module, it can be installed and set by IP phone keyboard.

After installing, Expansion Module could be configured separately after installing, and configured a variety of speed-dial and speed function code for users' scenarios：

Expansion module n configuration	
Configure n	Each Expansion Module provides 36 programmable hotline in total
Mode	Can setting the mode with Speed Dial, Speed Dial Prefix, DTMF, BLF, Paging, Call Park, Intercom, Group, XML Browser, Broadsoft BLF, BLA.
Account	Select the related outgoing SIP account of the button, through which SIP account to call this number or function code
Name	Setting the key Name Description
Number	E.g Set the speed-dial number for the button or achieve function code for the certain platform and function.

If you want to view the status of Expansion Module, you may open the page "IP Phone status" for viewing, figure as follows:

Online: Expansion Module with the corresponding serial number is installed normally;

Offline: Expansion Module with the corresponding serial number is not normally connected, or did not normally designate the serial number of Expansion module.