7188E Series

Quick Start of 7188E Series

7188E Series New Features
1. Virtual COM Technology
2. Ethernet I/O Technology
3. Web-server Technology
4. MiniOS7 & Xserver Inside
5. I/O Expansion Bus Inside
6. Time to market & Cost Effective Solution

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Create New Ideas
Create New Applications

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1. Apply Power to 7188E

Step 1: Apply power (+Vs, GND) to 7188EN, +Vs can be from +30V to +10V
Step 2: Check the 5-digit of 7-SEG LED will show as follows:

The IP is 192.168.255.1

Baud rate of Com1=9600

The important information of 7188E series can be divided as follows:
- Group-ID 11111: IP information of this 7188E
- Group-ID 22222: baud rate of all COM port
- Group-ID 33333: configuration of COM port
- Group-ID 44444: Client-connected information of this 7188E

The IP-information format of 7188E series is given as follows:
- Group-ID of 5-digit LED: 11111
- LED-1: indicator, can be 1 or 2 or 3 or 4
- LED-2~5: IP
  The LED will show Group-ID first, then show its IP as above diagram. If user change IP, the value shown will also change immediately. The default shipping IP = 192.168.255.1 → the LED-show sequence is given as above diagram.

The baud-rate format of COM port is given as follows:
- Group-ID of 5-digit LED: 22222
- LED-1: COM port number
- LED-2~5: value of (baud-rate/100)
  The COM port number is shown in the LED-1 and its baud rate is shown in the LED-2~5. The baud rate = (value of LED-2~5) * 100. So show-value=1.96 means baud rate of COM1=9600 BPS. And show-value=2.1152 means baud rate of COM2=115200 BPS. All baud rates will be shown one by one.

The configuration of COM port is given as follows:
- Group ID of 5-digit LED: 33333
- LED-1: COM port number
- LED-3: data bit, 5 or 6 or 7 or 8
- LED-4: parity bit, 0=no parity, 1=Even parity, 2=Odd parity
- LED-5: stop bit, 1 or 2

The Client-connected information is given as follows:
- LED-1: 1=in the reset state, 0=not in the reset state, default 1
- LED-2/3: number of free sockets are available, default 29
- LED-4/5: number of sockets are used by clients, default 0

When 7188E is first power-up or just reset, the reset state=1. If any clients connect to this 7188E, the reset-state will be changed to 0 & free-sockets will be decreased & used-sockets will be increased. If the free-sockets number is reduced to 0, then no extra clients can link to this 7188E.

**Note: the default free-sockets of 7188E series are different.** Refer to next page for details.
The default free-sockets of 7188E series are given as follows:

- 7188E1 → 30
- 7188E2 → 29
- 7188E3 → 28
- 7188E4 → 27
- 7188E5 → 26
- 7188E8 → 23

So there can be 30 different clients link to single 7188E1 at the same time.

If the 5-digit LEDs do not show as above, you can do the following steps:
- Power off first
- Connect INIT* to VS+
- Power on & double check again

Step 3: There is a red indicator-LED in the 7188E as follows:
- **On/Off**: Xserver is running
- **On/Off**: VxComm is running
- **Always On**: MiniOS7 is running
- **Always Off**: user’s program is running or 7188E is in error states

The default shipping of 7188E will be Xserver or VxComm inside, so the red indicator-LED of 7188E will be **ON 0.5 second then OFF 0.5 second** now.

If the LED is always ON, you can do the following steps:
- Power off first
- Connect INIT* to VS+
- Power on & double check again

Step 4: power off
2. Linking to Program-develop PC

Step 1: Connect download-cable, CA0910, to 7188EN & COM1/2 of program-develop PC as above diagram
Step 2: Connect INIT*-pin to GND-pin as above diagram
Step 3: Install 7188X.EXE to program-develop PC
Step 4: Apply power(+Vs, GND) to 7188E, +Vs can be from +30V to +10V
Step 5: Check the 5-digit of 7-SEG LED will continuously show as follows:

Hour.Minute.Second

Step 6: Execute 7188X.EXE & change baud rate to 115200, N81
Step 7: Press [Enter] twice in program-develop PC as follows:

```
ECP_DAS MinIDS: for I-7188e Ver. 1.00 build 006, Mar 7 2001 15:36:43
SRAM: 256K, FLASH MEMORY: 256K
Serial number= 5A 5A 5A 5A 5A 5A 5A 5A 5A 5A 5A
17188e>
17188e>
17188e>
```

Note: If 7188E series does not equip a hardware serial number, the serial number will be 5A. For 7188EA & 7188EX, the hardware serial number will be shown in the above screen.

Step 8: Read configuration of 7188E as follows:

```
17188e>getip
IP=192.168.188.187
17188e>getmask
MASK=255.255.0.0
17188e>getgateway
Gateway=192.168.0.1
17188e>getmac
Ethernet Address=71:88:c7:02:3b:15
```

Read configuration command
- getip
- getmask
- getgateway
- getmac
Note: You can change the configuration of 7188E as follows:

```
17188E> setup 192.168.255.2
Set IP=192.168.255.2
17188E> setmac 1:2:3:4:5:6
Set Ethernet address=01:02:03:04:05:06
[Read back] Ethernet address=01:02:03:04:05:06
17188E> 
```

- **setup**
- **setmac**
- **setmask**
- **setgateway**
- **setmac**

Step 9: Disconnect INIT*-pin & GND-pin
Step 10: power off then power on
Step 11: execute `ping 192.168.255.1 -t` in host-PC as follows:

![Ping 192.168.255.1 in host-PC](image)

Execute Ping 192.168.255.1 in host-PC

Ping results must be smooth & continuous

Note:
- **192.168.255.1** is the default IP of 7188E, user can change IP (step 8.)
- If host-PC can not ping 7188E OK, please refer to step 8 to change configuration of 7188E to compatible with host-PC (the mask of 7188E must be compatible with mask of host-PC)
- The mac address of 7188E should be unique in the same network. Refer to step 8 for change mac address of 7188E.
- Every mac address of 7188E is unique in the default shipping.

3. In general, if host-PC can ping 7188E smoothly & continuously, all other
software & driver for 7188E will work fine. So user should make sure host-PC can ping 7188E smoothly before any further testing.