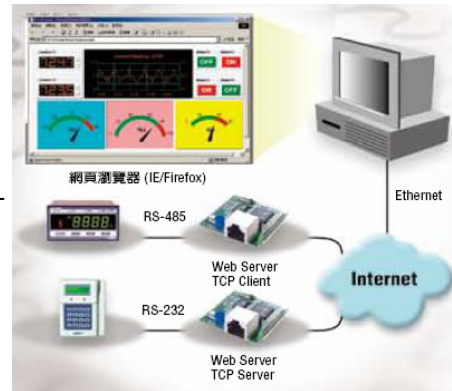
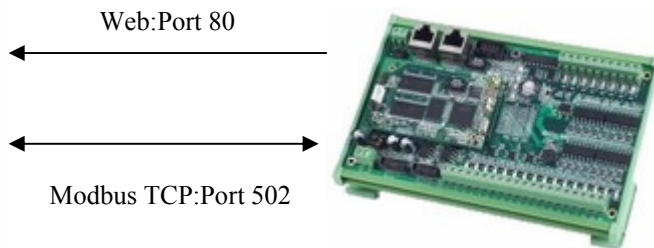


## Web-based Remote I/O Implementation

To access your devices anywhere at any time, Web technology provides the best solution to those who only know how to surf the web. iPAC-5010 comes with Linux OS, web server and industrial digital I/O which serve as an ideal solution for web-based remote I/O control. We implements a demo of web-based I/O controls on IPAC-5010. A Modbus/TCP I/O control program, mtcp is installed and run at background of iPAC-5010. Now user can use Modbus/TCP protocol to control the digital I/O of iPAC-5010. The web page, index.html contains a java applet program, iPAC\_mgr.jar which includes a click button user interface and a Modbus/TCP client program. When the web browser visits the web server of iPAC-5010, the home page, index.html which embedded the java applet program will be loaded to user computer and iPAC\_mgr.jar will be opened and run at user's computer. Now you can perform an On/Off control with iPAC-5010 using a web browser anywhere.



DI Number	DI Status	DO Number	DO Status
DI-1	LOW	DO-1	ON
DI-2	LOW	DO-2	ON
DI-3	LOW	DO-3	OFF
DI-4	LOW	DO-4	ON
DI-5	LOW	DO-5	OFF
DI-6	LOW	DO-6	OFF
DI-7	LOW	DO-7	OFF
DI-8	LOW	DO-8	OFF
DI-9	LOW		
DI-10	LOW		
DI-11	LOW		
DI-12	LOW		
DI-13	LOW		
DI-14	LOW		
DI-15	LOW		
DI-16	LOW		

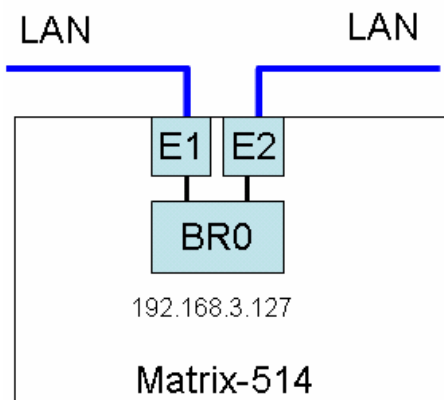


## Daisy chain Ethernet using Software Bridge

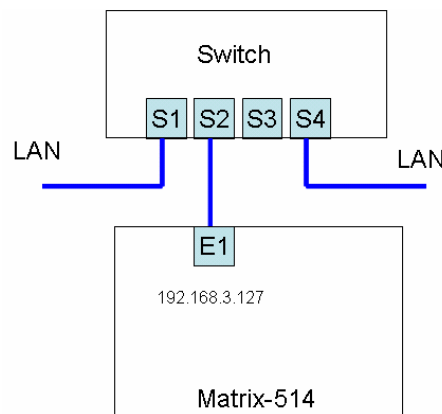
Daisy chain is a widely used wire scheme in SCADA and industrial automation. But when industrial Ethernet is widely used, it became a challenge to use Daisy chain wiring in Ethernet. Ethernet uses switch or hub to extend the nodes of the network but to use switches for Daisy chain connection is not cost effective solution. To avoid this, Matrix-512 uses its dual Ethernet ports and software bridge function to implement a Daisy chain wiring without using an external switch. The two Ethernet ports of Matrix-512 can be configured as a Bridge. The Bridge combines one or more Ethernet interface and bridging them under a single bridge interface. Therefore Matrix-512 can use two Ethernet ports as a bridge and make a daisy chain connection in the network. To configure bridge function, please use command **brctl** as follow:

```

/brcctl addbr br0
/ifconfig eth1 0.0.0.0
/ifconfig eth2 0.0.0.0
/brcctl addif br0 eth1
/brcctl addif br0 eth2
/ifconfig br0 192.168.3.127 up
    
```



Use Software Bridge



Use Hardware Switch