

ezTCP/Ethernet(EZL - 200)

# User's Manual

Revision B



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1.

1.1.

EZL-200  
RS232  
DC 5V SMPS

1.2.

Processor : Am188ES  
Memory : ROM 128K / RAM 128K  
Interface : 10Base-T, 9Pin D-Sub Male  
Protocols : TCP/UDP/IP/ICMP, Ethernet, ARP, PPPoE,  
DHCP, TELNET server/client  
Power : DC 5V ±10%

1.3.

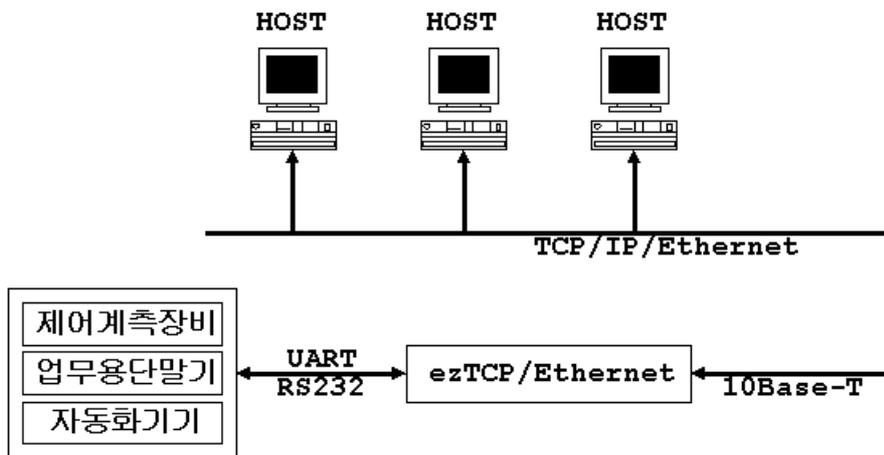


1.4.

가 RUN LED가 . LED  
 가 .  
 LED , RS232 10Base-T  
 EZL-200 가 .

1.5.

EZL-200( ezTCP) 1 (10Base-T)  
 TCP/IP .  
 ezTCP ( DTE)  
 10Base-T가 .  
 ezTCP /



( )가 ezTCP TCP  
 DTE TCP 가 가  
 가 , ezTCP TCP

## 2. ezTCP

### 2.1. ezTCP

ezTCP 가 T2S

#### 2.1.1. ezConfig

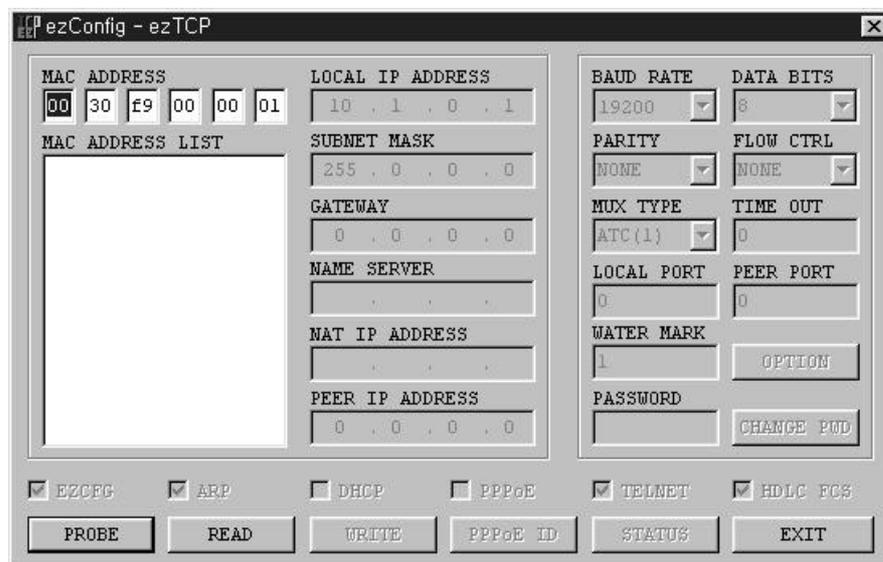
EZL-200 console, telnet, DHCP, ARP, ezConfig

가

ezConfig

ezConfig Microsoft Windows

ezConfig



ezConfig

**PROBE** ezTCP  
MAC ADDRESS LIST

ezTCP MAC ADDRESS , ezTCP

**READ** MAC ADDRESS ezTCP  
6 16 , ezTCP  
ezTCP가  
LIST

**WRITE** ezTCP  
ezTCP

**EXIT** ezConfig ESC  
ezConfig가

**CHANGE PWD** ezTCP  
가 , ezTCP  
PASSWORD

**STATUS** ezTCP  
IP  
/ MAC ADDRESS LIST

```
ezConfig ezTCP IP
, ezTCP
. ezTCP T2S
```

LOCAL IP ADDRESS	ezTCP IP
SUBNET MASK	
GATEWAY	
BAUD RATE	
DATA BITS	
PARITY	
FLOW CTRL	
MUX TYPE	ezTCP
TIMEOUT	
LOCAL PORT	TCP

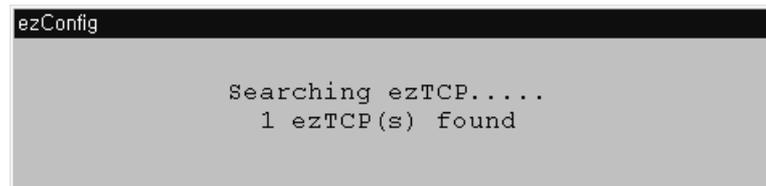
2.1.2.

```
ezTCP
ezTCP
```

```
ezTCP ezConfig
[PROBE] [READ]
```

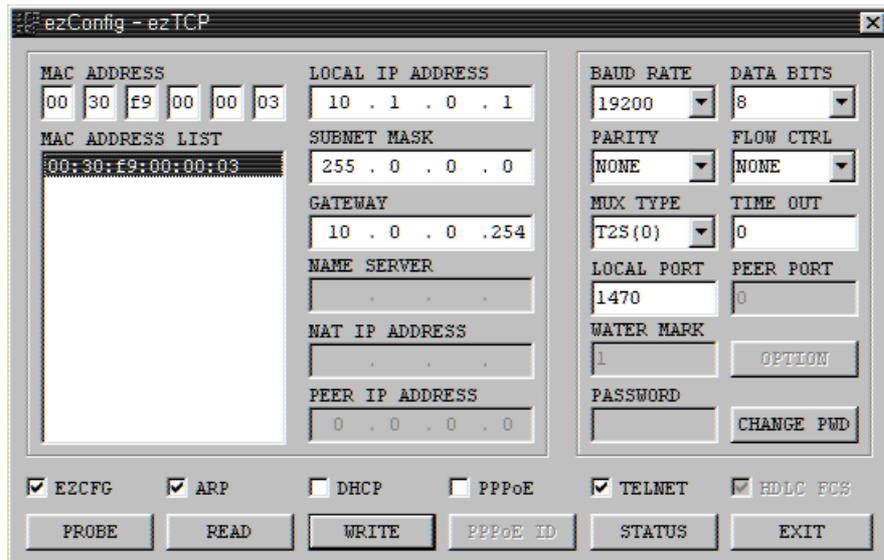
```
ezConfig
Reading ezTCP's environment variables.....
MAC address 00:30:f9:00:00:01
```

ezTCP가 ezTCP [PROBE] 가 ezTCP [READ]



1 ezTCP가 ezConfig [MAC ADDRESS LIST] ezTCP MAC ADDRESS가 [MAC ADDRESS LIST]

ezConfig



ezConfig [MUX TYPE] T2S(0) [LOCAL IP ADDRESS], [LOCAL PORT], [WRITE]

ezTCP 가 ezTCP

```

PING
가 IP
ezTCP IP 가
ezTCP IP 가
PING
가 IP
'Request timed out"

```

```

C: \>ping a.b.c.d
Pinging a.b.c.d with 32 bytes of data:
Reply from a.b.c.d: bytes=32 time=1ms TTL=64

```

## 2.2.

```

ezConfig ezTCP IP

```

```

ezTCP PC

```

```

ezConfig

```

```

a.b.c.d ezTCP IP , xxxx ezTCP [LOCAL PORT]

```

```

C: \>telnet a.b.c.d xxxx

```

ezTCP RUN LED가

RUN LED가

ezTCP

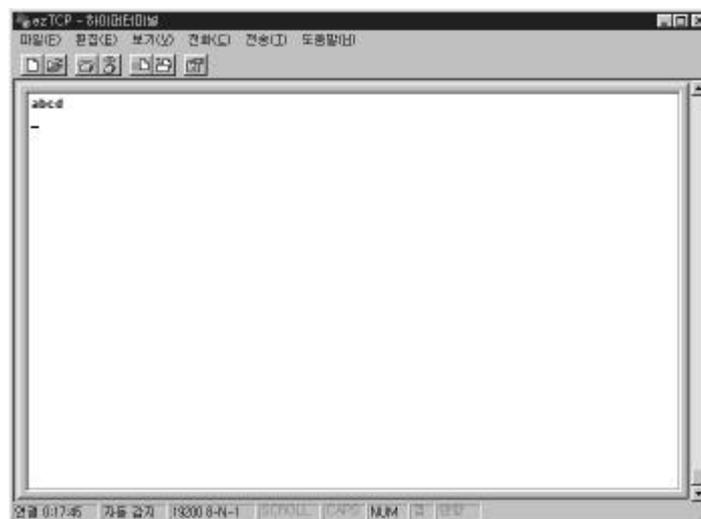
ezTCP

가



"abcd"

가



"1234"

가



가

ezTCP

ezConfig [TIME OUT] 0 ,

### 3. ezTCP

#### 3.1.

ezTCP T2S, ATC, COD 3가  
 . T2S, COD  
 ezTCP 가 , ATC  
 . ATC ezTCP  
 AT emulation .  
 ezTCP  
 . EZL-200 3가 , telnet  
 AT emulation, console, ezConfig  
 .  
 ezConfig

#### 3.1.1. T2S(TCP to Serial)

ezTCP PC  
 가 .  
 ezTCP TCP ezTCP  
 TCP ,  
 TCP , TCP  
 . COD  
 ezTCP .  
 T2S PC ezTCP TCP  
 DTE  
 가 .  
 : [TIME OUT], [LOCAL PORT]

#### 3.1.2. ATC(AT Command)

ezTCP . ezTCP  
 IP ATD(T)

ATA 가 ezTCP

: [TIME OUT]

### 3.1.3. COD(Connect On Demand)

COD ezTCP가 PC TCP  
 . DTE  
 ezTCP IP TCP  
 TCP T2S 가 TCP  
 . COD  
 가 (water mark)  
 TCP 가 (  
 1 ). 0

: [TIMEOUT], [WATER MARK], [PEER PORT], [PEER IP ADDRESS]

### 3.1.4. TCP (TIME OUT)

ezTCP / 가 TCP  
 . 1~600 가  
 0  
 10 , 가 10 가  
 , ezTCP  
 가 ezTCP TCP  
 가  
 . 0  
 TCP keep-alive . keep-alive  
 / 가 keep-alive  
 . 5 keep-alive

TCP . TCP  
가 . keep-alive  
TCP/IP . COD ezTCP



ATC

+PLIP	local IP address	
+PSM	subnet mask	
+PGIP	default router	
+PLP	listening TCP port	
+PTO	timeout	
+PRIP	Remote machine IP address	
+PRP	Remote machine TCP port	
+PWP	Write configuration	

ON/OFF : PRC(EZCFG), PARP(ARP), PDC(DHCP), PPE(PPPoE), PRL(TELNET)

ON/OFF 1 ON, 0 OFF

3.2.3. AT COMMAND escape sequence

ezTCP TCP '+++ ' escape sequence  
 online online command . online  
 command ATH TCP ATO  
 online . '+++ ' / guard  
 time .

' + '	500ms
' + '	0 ~ 500ms
' + '	500ms

guard time 500ms .

### 3.2.4. ATC

telnet (client mode)

AT+PRIP=aa.bb.cc.dd	telnet	IP address	
AT+PRP=23	telnet		
ATDT			
CONNECT			
/			

\* telnet 가

NO CARRIER		
------------	--	--

\* DTE가

<guard time> '+++' <guard time>		
OK		
ATH		
OK		

TCP 6000

AT+PRIP=aa.bb.cc.dd	IP address	
AT+PRP=6000		
ATDT		
CONNECT		
/		

AT+PLP=6000		
OK		

ATA	
.....	
CONNECT	ezTCP
/	
NO CARRIER	

command

ezTCP

. echo ,  
 , TCP 6000 .

ATE	echo
OK	
ATV+PRIP=aa.bb.cc.dd+PRP=6000DT	echo .
1	
/	

### 3.3.

IP , , ,  
 AT command, ezTCP shell ,  
 ezConfig .

#### 3.3.1. ATC

ATC +PWP  
 . +PWP가 EEPROM  
 . ezTCP +PWP EEPROM  
 NO CARRIER 가 .

AT +PLIP=aa.bb.cc.dd	ezTCP IP address	
OK		
AT +PGIP=bb.cc.dd.ee	gateway IP address	
OK		
AT +PSM=255.255.255.0	subnet mask	
OK		
AT +PLP=1470	ezTCP listening TCP port	
OK		
AT +PTO=10		
OK		
AT +PWP		
OK		
NO CARRIER		

### 3.3.2. ARP IP

Windows, UNIX(Linux)

arp

arp cache table

. arp cache table

telnet

ping

ezTCP IP

가

. arp

IP

EEPROM

ezTCP IP

telnet

"env if"

IP

. ezTCP

1 IP

IP

IP

ezTCP

.

Windows DOS

Linux

arp cache table

. ezTCP

가 00:30:f9:00:00:01

IP 가 a.b.c.d

IP

.

Windows

C: \>arp -s a.b.c.d 00-30-f9-00-00-01 table

C: \>arp -a

Interface: xxx.xxx.xxx.xxx on Interface xxxxxxxx

Internet Address	Physical Address	Type
a.b.c.d	00-30-f9-00-00-01	static

C: \>telnet a.b.c.d ezTCP

C: \>

Linux

rtos: ~>arp -s a.b.c.d 00:30:f9:00:00:01 table

rtos: ~>arp

Address	HWtype	HWaddress	FLags	Mask	Iface
a.b.c.d	ether	00:30:f9:00:00:01	CM		eth0

rtos: ~>telnet a.b.c.d ezTCP

Trying a.b.c.d...

Connected to a.b.c.d.

Escape character is '^'.

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msh>

### 3.3.3. DHCP IP

DHCP 가 ezTCP IP ,  
 , , DHCP  
 . DHCP  
 ezConfig [DHCP] . DHCP  
 [ARP]

### 3.3.4. ADSL IP

ADSL PPPoE IP  
 / . ezTCP PPPoE  
 ezConfig [PPPoE] PPPoE .  
 ADSL PPPoE IP  
 [PPPoE] IP DHCP

### 3.3.5. telnet console

AT COMMAND ezTCP shell  
 가 . ezTCP shell  
 2가 가 .

EZL-200 console  
 . JP1 'C'  
 EZL-200 가 console . console  
 PC  
 . JP1 N'

```

ezTCP가 . console
19200bps .

ezTCP IP 가 telnet
ezTCP . telnet ezTCP shell
, telnet
. ARP DHCP
AT command console ezTCP IP

shell (if),
(pwd), ezTCP (ezl) 3가 가 . shell
env . env if, pwd,
ezl 3가

```

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msh>

msh>env if

MAC ADDR ( XX:XX:XX:XX:XX:XX)

EZCFG ( Yes)

ARP ( Yes)

DHCP ( No)

PPPOE ( No)

USERNAME ( No) PPPoE Enabled

PASSWORD ( no passwd) PPPoE Enabled

LOCAL IP ( 10.1.0.1) DHCP/PPPoE Disabled

SUBNET MASK ( 255.0.0.0) DHCP/PPPoE Disabled

GATEWAY ( 0.0.0.0) DHCP/PPPoE Disabled

msh>

msh>env pwd

PASSWPRD ( no passwd)

```
msh>
msh>env ezl
BAUD RATE      (      19200)
PARITY         (          0)
DATA BITS      (          8)
RTSCTS        (        No)
TELNET         (        Yes)
MUX TYPE       (          1)
TIME OUT      (          10)
LOCAL PORT     (          0)      MUX_TYPE / T2S(0)
WATER MARK    (          1)      MUX_TYPE / COD(2)
PEER IP       (      0.0.0.0)    MUX_TYPE / COD(2)
PEER PORT     (          0)      MUX_TYPE / COD(2)
msh>
```

가

### 3.4. ezTCP

#### 3.4.1.

EZCFG*	ezConfig 가 (Y/N)
ARP**	ARP IP 가 (Y/N)
DHCP	DHCP IP (Y/N)
PPPOE	PPPoE (Y/N)
USERNAME	ADSL(PPPoE) ID
PASSWORD	ADSL(PPPoE)
LOCAL IP	ezTCP IP
SUBNET MASK	IP
GATEWAY	

\* EZCFG NO ezConfig ezTCP

\*\* DHCP DHCP ARP  
 "YES" 가

#### 3.4.2.

BAUD RATE	(1200 ~ 115200)
PARITY	: 0( ), 1( ), 2( )
DATA BITS	: 7 ~ 8
RTSCTS*	(Y/N)

STOP bit 1bit  
 XON/OFF

3.4.3.

TIME OUT	
MUX TYPE	T2S(0), ATC(1), COD(2)
LOCAL PORT	T2S TCP
WATER MARK	COD water mark 가
PEER IP	COD ezTCP가 TCP IP
PEER PORT	COD ezTCP가 TCP

3.4.4.

TELNET	telnet ezTCP (Y/N)
PASSWORD*	telnet ezConfig

password 8 가 console “.”  
password가 telnet ezConfig  
password .

3.4.5.

ezTCP  
(JP1)가 ezTCP system  
console ezTCP .  
ezConfig telnet NO  
(JP1)가 telnet ezConfig  
가 , telnet ezConfig  
 (JP1)

### 3.4.6. STATUS LED

IP : 1  
 DHCP : IP 4 , IP  
 1  
 PPPoE : 4 , ATC/COD  
 IP 1 .  
 IP 4 .  
 IP TCP [STATUS LED]가  
 , TCP