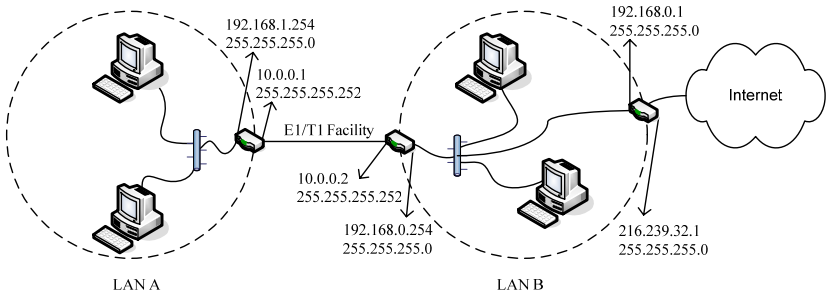
Routing Example #2
In the following example, the LAN B has two routers, one generic or enterprise router for Internet access (default gateway 192.168.0.1) and one for LAN-to-LAN connection (192.168.0.254), ET100R. In this scheme, the LAN B routers must have their routing tables modified to recognize packets destined for the 192.168.1.0 subnet.



Configure the ET100R in LAN B

```
ET100R>enable
  Enter Password:
ET100R#config system name Moogle
Moogle#config ip rip off
Moogle#config interface eth1 off
Moogle#config interface hdlc1 off
Moogle#config interface eth1 ip 0 addr 192.168.0.254 netmask 255.255.255.0
Moogle#config interface hdlc1 encap hdlc [or ppp or cisco]
Moogle#config interface hdlc1 ip 0 addr 10.0.0.2 netmask 255.255.255.252
Moogle#config ip route add net 192.168.1.0 netmask 255.255.255.0 gw 10.0.0.1 if
hdlc1
Moogle#config ip route add net 0.0.0.0 netmask 0.0.0.0 gw 192.168.0.1 if eth1
Moogle#config interface hdlc1 on
Moogle#config interface eth1 on
Moogle#config save
  Saving configuration... Please wait!
  Configuration saved.
```

Now in the LAN B default gateway router, a route must be added to point 192.168.1.0/24 packets to the ET100R at 192.168.0.254.

Web Based Management
The ET100R supports management via Internet Browser. To enable do the following:

```
ET100R>enable
  Enter Password:
ET100R#config web on
ET100R#config save
```

SNMP Management
The ET100R supports SNMP via standard MIB-II. To configure SNMP community strings, do the following:

```
ET100R>enable
  Enter Password:
ET100R#config snmp on
ET100R#config snmp read_only_community public
ET100R#config snmp read_write_community secret
ET100R#config save
```


Quick Start Guide

ET100R

The ET100R is a Router Module designed for CTC Union's E1 and T1 Access Units and Multiplexers. The module uses embedded processor technology based on the Samsung ARM9 RISC communications processor and Linux kernel version 2.6 for its operating system core. The module plugs into the access unit or multiplexer just like any other replaceable interface module and provides a 10/100Base-TX, auto-negotiation, auto-MDIX Ethernet interface as well as an RS-232 asynchronous console port via a mini-DIN 9pin connector. The router module, whether delivered as a component or already installed in an access unit, should include the following:

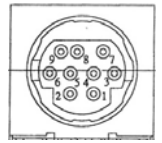
1. Mini-DIN 9Pin Male to DB9 Female adapter cable, 1 meter long.
2. CDROM containing User Manual, pre-written scripts, and software tools.
3. Rear panel beauty plate (included if this is a component)
4. This hardcopy Quick Guide

Module Installation:
1. With all power disconnected, open the access unit.
2. Locate any previously installed module, remove the rear cover plate and the module's 3 securing screws.
3. Pull the module out of the main PCBA's connector, and lift it out of the access unit.
4. Install the router module as pictured, aligning all pins and seating the module.
5. Carefully inspect all pins for proper seating.
6. Install the 3 securing screws and the rear beauty plate.
7. Close the access unit.

Provisioning
1. Configure a terminal (HyperTerminal™ is included with Windows®) for 115.2K, 8 bits, no parity, 1 stop bit and no flow control.
2. Connect the console cable between the router's DIN connector and the PC's COM port.

Pin	Circuit	Direction	Description
1	NC		
2	RD	Output	Receive Data
3	TD	Input	Transmit Data
4	DTR	Input	
5	GND	--	Signal Ground
6	DSR	Output	Data Set Ready
7	RTS	Input	Request To Send
8	CTS	Output	Clear To Send
9	NC		

Factory Reset Procedure
1. To start the router with factory default settings, press and hold the reset switch while powering on the access unit. Hold the reset switch after powering on for about 8 seconds, then release.



```
Checking...
Initialing...  2 1 0
Loading BIOS ...
Verifying Checksum ... OK
Uncompressing ... OK
Processor: Samsung Arm940Tsi revision 2
%< SNIP
Mounted devfs on /dev
Reset the system to the manufacturing defaults <<< Release the reset switch now
```

The router will now have the default factory settings and will continue by rebooting. Wait for the login prompt.

```
Checking...
Initialing...  2 1 0
Loading BIOS ...
Verifying Checksum ... OK
%< SNIP
IP Protocols: ICMP, UDP, TCP, IGMP
Mounted devfs on /dev
ET100R login: _
```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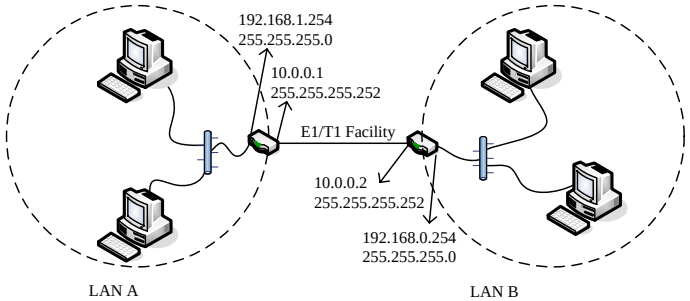
CTC union CTC Union Technologies Co., Ltd.

The default username to login to the router is 'admin'. No password is required by default.

```
ET100R>admin
Welcome to
     CTC UNION TECH. CO., LTD.
          ET100R  Router

ET100R>show system
  Model: ET100R
  Serial Number : none
  Firmware Version: 1.00.b76 <<<< this is the current f/w version
  Firmware Build Time: Sat Jun 10 02:34:14 PDT 2006
  TxClk invert: off
  System Name: ET100R
  Login Name: admin
  Session Timeout: 10 min
  System Time: Thu Jan 01 12:00:45 AM 1970
  System Up Time:  00:00:45 up 0 min, load average: 1.50, 0.38, 0.12
```



Routing Example #1: Point to Point connection of two LANs, A and B. Note the LAN and WAN IPs, use the example below to provision LAN A's router and then repeat on LAN B's router with its values. (Keyin values are in Bold.)

```
ET100R>enable
  Enter Password:
ET100R#config system name Google
Google#config ip rip off
Google#config interface eth1 off
Google#config interface hdlc1 off
Google#config interface eth1 ip 0 addr 192.168.1.254 netmask 255.255.255.0
Google#config interface hdlc1 encap hdlc [or ppp or cisco]
Google#config interface hdlc1 ip 0 addr 10.0.0.1 netmask 255.255.255.252
Google#config ip route add net 0.0.0.0 netmask 0.0.0.0 gw 10.0.0.2 if hdlc1
Google#config interface hdlc1 on
Google#config interface eth1 on
Google#config save
  Saving configuration... Please wait!
  Configuration saved.
```


Note: Three WAN encapsulation protocols are available in the ET100R; PPP, Raw HDLC and Cisco header HDLC. When connecting the ET00R by WAN to a Cisco router using HDLC, you must configure the Cisco HDLC (cisco) protocol, not the raw HDLC (hdlc) protocol.

Use the 'ping' command to test the interfaces for proper configuration.

```
Google#ping 192.168.1.254
PING 192.168.1.254 (192.168.1.254): 56 data bytes
64 bytes from 192.168.1.254: icmp_seq=0 ttl=64 time=12.5 ms
64 bytes from 192.168.1.254: icmp_seq=1 ttl=64 time=9.0 ms
64 bytes from 192.168.1.254: icmp_seq=2 ttl=64 time=9.0 ms
64 bytes from 192.168.1.254: icmp_seq=3 ttl=64 time=9.1 ms
--- 192.168.1.254 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 9.0/9.9/12.5 ms

Google#ping 10.0.0.1
PING 10.0.0.1 (10.0.0.1): 56 data bytes
64 bytes from 10.0.0.1: icmp_seq=0 ttl=64 time=9.3 ms
64 bytes from 10.0.0.1: icmp_seq=1 ttl=64 time=9.0 ms
64 bytes from 10.0.0.1: icmp_seq=2 ttl=64 time=9.0 ms
64 bytes from 10.0.0.1: icmp_seq=3 ttl=64 time=2.2 ms
--- 10.0.0.1 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 2.2/7.3/9.3 ms
```

RIP Provisioning
For RIP provisioning, refer to the previous script example, but instead of adding the route, follow the script example below.

```
Google#config interface hdlc1 on <<< continue the example from here.
Google#config interface hdlc1 ip 0 peer 10.0.0.2
Google#config ip rip ifaddr eth1
Google#config ip rip ifaddr hdlc1
Google#config ip rip on
Google#config ip rip version 1 [or version 2]
Google#config save
Google#reboot
```

DHCP Provisioning
After doing the previous configuration, do the following to enable the DHCP server function for the LAN.

```
Google#config ip dhcp on
Google#config ip dhcp pool 0 on
Google#config ip dhcp pool 0 dns 216.239.32.10
Google#config ip dhcp pool 0 net 192.168.1.0
Google#config ip dhcp pool 0 gw 192.168.1.254
Google#config ip dhcp pool 0 lease_time 3600
Google#config ip dhcp pool 0 netmask 255.255.255.0
Google#config ip dhcp pool 0 range_start 192.168.1.20
Google#config ip dhcp pool 0 range_end 192.168.1.200
Google#config save
```