RSR04E_08E_16E

1. ..... **4**

1.1. 4
1.2. 5
1.3. TAB 8
1.4. show 8
1.5. set 10
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2. RSR **14**

2.1. 14
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4.7.5. 50
4.7.6. 54

1.

RSR CLI(command-line interface) web

console telnet
console telnet IP
telnet root

1.1.

CLI >,
configure edit

user@host> #

5

5

5

1.2.

RSR protocols

bgp isis ospf ospf

area traceoptions area interface area-range

dead-interval hello-interval

5

5

5

5

1.3.

```
    Logical interface fe-1/3/0.0 (Index 83) (SNMP ifIndex 71)
      Flags: SNMP-Traps 0x4000 VLAN-Tag [ 0x8100.33 ]    Encapsulation: ENET2
      Input packets : 0
      Output packets: 0
      Protocol inet, MTU: 1500
        Flags: None

    Logical interface fe-1/3/0.12 (Index 84) (SNMP ifIndex 23)
      Flags: SNMP-Traps 0x4000 VLAN-Tag [ 0x8100.100 ]    Encapsulation: ENET2
      Input packets : 0
      Output packets: 0
      Protocol inet, MTU: 1500

lab@M7i_GZ>
```

show　　show interface　　interface

```
lab@M7i_GZ# show interfaces
fe-1/3/0 {
    accounting-profile test;
    vlan-tagging;
    unit 0 {
        vlan-id 33;
        family inet;
    }
    unit 200 {
        vlan-id 200;
        family inet {
            address 202.103.224.1/24;
        }
    }
}

[edit]
lab@M7i_GZ#
```

show
run

```
lab@M7i_GZ# run show interfaces

Physical interface: fe-1/3/0, Enabled, Physical link is Up
  Interface index: 142, SNMP ifIndex: 31
```

Link-level type: Ethernet, MTU: 1518, Speed: 100mbps, Loopback: Disabled, Source filtering: Disabled,

Flow control: Enabled

Device flags : Present Running

Interface flags: SNMP-Traps Internal: 0x4000

CoS queues : 4 supported, 4 maximum usable queues

Current address: 00:05:85:dc:cc:db, Hardware address: 00:05:85:dc:cc:db

Last flapped : 2007-06-29 20:37:17 HKT (1w2d 00:36 ago)

Input rate : 792 bps (0 pps)

Output rate : 672 bps (0 pps)

Active alarms : None

Active defects : None

Logical interface fe-1/3/0.0 (Index 83) (SNMP ifIndex 71)

Flags: SNMP-Traps 0x4000 VLAN-Tag [0x8100.33] Encapsulation: ENET2

Input packets : 0

Output packets: 0

Protocol inet, MTU: 1500

Flags: None

[edit]

lab@M7i_GZ#

lab@M7i_GZ# **run ping 172.27.69.8**

PING 172.27.69.8 (172.27.69.8): 56 data bytes

64 bytes from 172.27.69.8: icmp_seq=0 ttl=64 time=5.118 ms

64 bytes from 172.27.69.8: icmp_seq=1 ttl=64 time=7.949 ms

64 bytes from 172.27.69.8: icmp_seq=2 ttl=64 time=7.018 ms

^C

--- 172.27.69.8 ping statistics ---

3 packets transmitted, 3 packets received, 0% packet loss

round-trip min/avg/max/stddev = 5.118/6.695/7.949/1.178 ms

[edit]

lab@M7i_GZ#

lab@M7i_GZ# **run ping 172.27.69.8** lab@M7i_GZ> **ping 172.27.69.8**

1.5. set

show show configure “

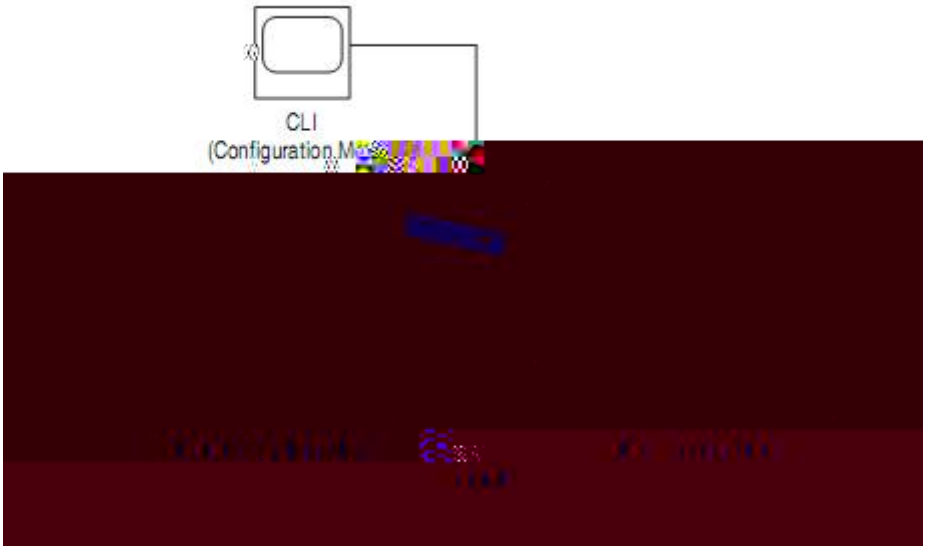
” show

display set set

```
lab@M7i_GZ# show protocols ospf
export Test_Policy_1;
area 0.0.0.0 {
    interface fe-1/3/0.0 {
        hello-interval 10;
    }
}

[edit]

lab@M7i_GZ# show protocols ospf | display set
set protocols ospf export Test_Policy_1
set protocols ospf area 0.0.0.0 interface fe-1/3/0.0 hello-interval 10

[edit]
lab@M7i_GZ#
```

1.6. commit rollback

cisco f ضخ



commit commit check

RE commit synchronize

rollback rollback 1
rollback 2 2

```
lab@M7i_GZ# show system host-name
host-name M7i_GZ;

[edit]
lab@M7i_GZ# set system host-name R1

[edit]
lab@M7i_GZ# commit
commit complete

[edit]
lab@R1# show system host-name
host-name R1;

[edit]
lab@R1# rollback 1
load complete

[edit]
lab@R1# show system host-name
host-name M7i_GZ;
```

[edit]
lab@R1# commit
commit complete

[edit]
lab@M7i_GZ#

2.

set system services ftp

ftp ftp ftp

set system name-server 192.168.1.1

2.2. SNMP

set snmp community <community> authorization < read-only/ read-write> clients
<prefix> # SNMP
set snmp tra M /P <</MCID 17an502 R(e)18() 0.502 rg0T1 0 0 1 163.7604.67Tm80 Tc502 rg0To<</MCI

2.3.

IP Cisco RSR
unit vlan

set interface *so-*

```
unit 0 {
    family inet {
        address 59.43.17.1/30;
    }
    family iso;
    family inet6 {
        address 2001:C68:100::3b2b:1101/126;
    }
    family mpls;
}
}
```

set chassis aggregated-devices ethernet device-count <count> #

```
        }
    }
```

2.4. VLAN

vlan

```
#                    100
set                          unit 0 family inet address 10.1.1.1/24 vrrp-group 0 preempt hold-time 30
#                           30
set                          unit 0 family inet address 10.1.1.1/24 vrrp-group 0 accept-data
```

```
                :
                    {
        vlan-tagging;
        unit 0 {
            vlan-id 10;
            family inet {
                address 10.1.1.1/24{
                    vrrp-
```

2.6.

set routing-options static route *network/mask* next-hop *address*
#

2.7. Policy

user@host# set policy-options policy-statement *policy-name* [term *name*] from *<conditions>*

```
lab@M7i_GZ#
Possible completions:
  area                 OSPF area identifier
+ as-path              Name of AS path regular expression (BGP only)
+ as-path-group        Name of AS path group (BGP only)
  color                Color (preference) value
+ community            BGP community
> external             External route
+ interface            Interface name or address
  level                IS-IS level
  local-preference     Local preference associated with a route
  metric               Metric value
+ neighbor             Neighboring router
+ next-hop             Next-hop router
  origin               BGP origin attribute
+ policy               Name of policy to evaluate
  preference           Preference value
> prefix-list          List of prefix-lists of routes to match
+ protocol             Protocol from which route was learned
> route-filter         List of routes to match
  route-type           Route type
> source-address-filter    List of source addresses to match
+ tag                  Tag string
{master}[edit]
lab@M7i_GZ#
```

policy From From

user@host# set policy-options policy-statement *policy-name* [term *name*] then *<action>*

```
lab@M7i_GZ#
Possible completions:
```

```
  accept                Accept a route
+ apply-groups          Groups from which to inherit configuration data
+ apply-groups-except   Don't inherit configuration data from these groups
> as-path-expand        Prepend AS numbers prior to adding local-as (BGP only)
  as-path-prepend       Prepend AS numbers to an AS path (BGP only)
  class                 Set class-of-service parameters
> color                 Color (preference) value
> community             BGP community properties associated with a route
  cos-next-hop-map      Set CoS-based next-hop map in forwarding table
  damping               Define BGP route flap damping parameters
  default-action        Set default policy action
  destination-class     Set destination class in forwarding table
> external              External route
  forwarding-class
```

```
lab@M7i_GZ#


{master}[edit]
lab@M7i_GZ#


{master}[edit]
lab@M7i_GZ#

{master}[edit]
lab@M7i_GZ#


{master}[edit]
lab@M7i_GZ#


{master}[edit]
lab@M7i_GZ#

{master}[edit]
lab@M7i_GZ#
policy-statement static-to-isis {
    from {
        protocol static;
        route-filter 219.142.80.63/32 exact;
        route-filter 202.97.3.0/24 exact;
    }
    then accept;
}
policy-statement load-balance {
    then {
        load-balance per-packet;
    }
}
policy-statement ldp-filter {
    term a {
        from {
            route-filter 59.43.8.0/21 prefix-length-range /30-/32;
        }
        then accept;
    }
}
```

```
{master}[edit]
lab@M7i_GZ#
```

2.8. GRE Tunnel

user@host#

2.9. NAT

IP 192.200.8.139 202.192.12.245 IP

output

```
set services nat rule nat-output match-direction output
set services nat rule nat-output term a from source-address 192.200.8.139/32
set services nat rule nat-output term a then translated source-prefix 202.192.12.245/32
set services nat rule nat-output term a then translated translation-type source static
```

input

```
set services nat rule nat-input match-direction input
```

3.

3.1.

RSR

1. console CIP CONSOLE
2. CLI
3.

```
user@host>
…
The operating system has halted.
Please press any key to reboot
```

4. console
5.

Juniper TAC JTAC

3.2.

RSR

1. console CIP CONSOLE
2. CLI
3.

```
user@host>
```

4. console
5.

“ ”

60

800

3.3. JUNOS

RSR JUNOS

1. console

7.

```
user@host>
Reboot the system ? [yes,no] (no)
```

```
< Press any key other than return >
ok      –
```

4. **recovery**

```
Enter full pathname of shell or 'recovery' for root password
```

800

3.5.

- _____
- _____
- _____
- _____

- CLI _____
- LED
- _____
- _____ JTAC _____

CLI

JUNOS CLI
CLI ping traceroute

Craft Interface CONSOLE ETHERNET AUXILIARY CLI

CLI “ _____ ”

LED

LED

- Craft Interface LED
- LED

Craft Interface LED

Craft Interface Craft Interface
LED LED Cutoff

LED

LED

- PIC LED——PIC LED
- LED—— OUTPUT OK LED

“ LED ”

Craft Interface LED
Craft Interface `show chassis alarms`

```
uer@host>
```

- Chassis alarms ——
- Interface alarms ——

“ LCD ” LCD “ CLI ”
`show chassis alarms`

3-1

FEB PIC

- FEB
- PIC

FEB

FEB FEB

FEB

- FEB
- Craft Interface LED FEB

PIC

PIC

- PIC LED
- CLI PIC

```
user@host>

Slot 0 Online
  PIC 0   4x OC-3 SONET, MM
  PIC 1   1x CSTM1, SMIR
  PIC 3   2x OC-3 ATM, MM
Slot 1 Online
  PIC 0   1x OC-12 SONET, MM
  PIC 1   1x OC-12 ATM, MM
  PIC 2   2x OC-3 ATM, MM
  PIC 3   2x OC-3 ATM, MM
```

OK LED FAULT

■ Craft Interface LED

```
user@host>
Class Item           Status  Measurement
...
Fans  Left Fan 1      OK     Spinning at normal speed
      Left Fan 2      OK     Spinning at normal speed
      Left Fan 3      OK     Spinning at normal speed
      Left Fan 4      OK     Spinning at normal speed
...
```

FEB

```
user@host>
Routing Engine status:
   Temperature        35 degrees C / 95 degrees F
   DRAM              768 MB
   Memory utilization   16 percent
   CPU utilization:
     User              0 percent
     Background         0 percent
     Kernel            0 percent
     Interrupt          0 percent
     Idle            100 percent
   Model                RE-2.0
   Serial ID             f1000004f91d2901
   Start time            2003-05-01 15:07:12 PDT
   Uptime               3 days, 9 hours, 4 minutes, 5 seconds
```

- FEB
- PIC

FEB

FEB FEB

- Console FEB
- FEB

```
user@host>

FEB status:
  Temperature           32 degrees C / 89 degrees F
  CPU utilization        3 percent
  Interrupt utilization   0 percent
  Heap utilization       18 percent
  Buffer utilization     44 percent
  Total CPU DRAM         64 MB
  Internet Processor I   Version 1, Foundry IBM, Part number 9
  Start time:             2003-05-01 15:08:59 PDT
  Uptime:                 3 days, 9 hours, 3 minutes, 13 seconds
```

PIC

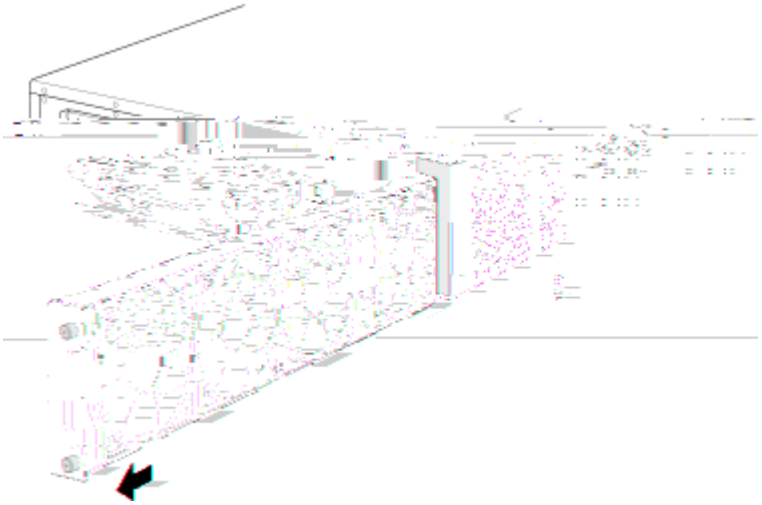
PIC

- PIC LED PIC STATUS LED

  LED
-

```
user@host>

 Slot 0 Online
   PIC 0   4x OC-3 SONET, MM
   PIC 1   1x CSTM1, SMIR
   PIC 3   2x OC-3 ATM, MM
 Slot 1 Online
   PIC 0   1x OC-12 SONET, MM
   PIC 1   1x OC-12 ATM, MM
```

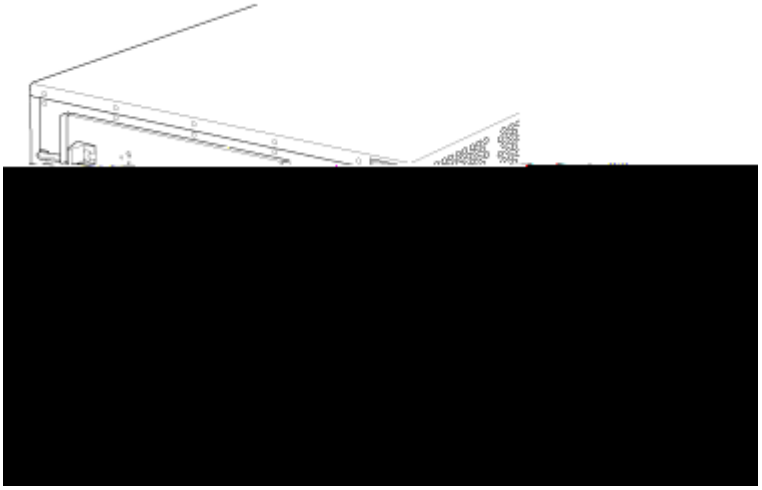
	FEB PIC



3-1

3-2

1. ESD Point
2.
3.



3-2

PFE

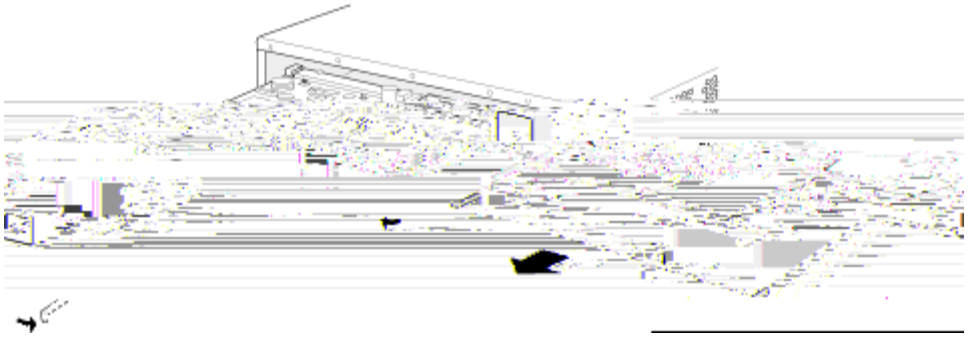
- FEB
- PIC
- SFP

FEB

FEB FEB 7 3.2 FEB

FEB

- FEB
- FEB

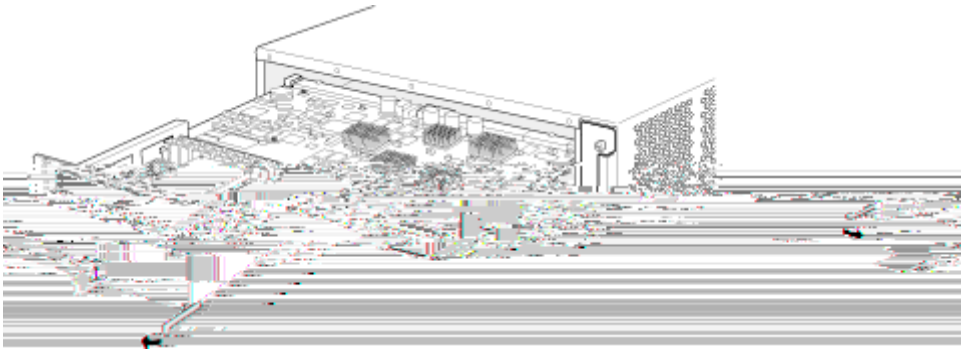


3-3 FEB

FPC

FEB 3-4 FEB

1. OFF(0)
2. ESD Point
3. FEB FEB
4. FEB FEB
5. FEB
6.
7. CLI show chassis feb FEB



3-4 FEB

PIC

PIC PIC PIC PIC

- PIC

■ PIC

PIC

PIC 3-5 PIC

1. PIC

2. ESD Point

3. PIC

■ PIC offline 5 FAIL LED

■

```
user@host>
```

4. PIC

5. PIC PIC

6. PIC

7. PIC

3-5 PIC

PIC

PIC 3-6 PIC

1. ESD Point

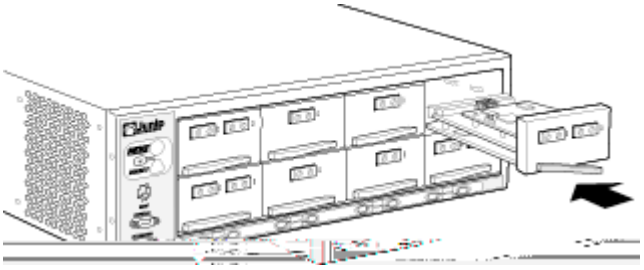
2. PIC PIC

3. PIC PIC PIC

4. PIC

- PIC offline 5 LED
-

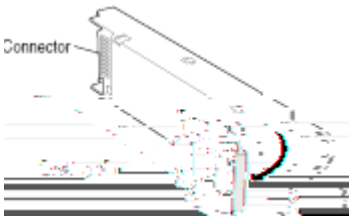
```
user@host>
```



3-6 PIC

SFP

SFP Small form factor pluggable PIC 3-7 SFP



3-7 SFP

SFP SFP

SFP

- SFP
- SFP

SFP

SFP

1. SFP
2. ESD Point

3. SFP SFP

4. SFP

5.

6. SFP PIC SFP

SFP

PIC

1. ESD Point

2. SFP

3. PIC SFP SFP ś SFP

   ■ PIC 10 SFP ś SFP

   ■ PIC SFP ś FPC ś SFP

   FPC SFP

4. SFP PIC

5. SFP SFP

6.

7. PIC LED

ś

■ _____

■ _____

7 3.2

3-8

1.

2.

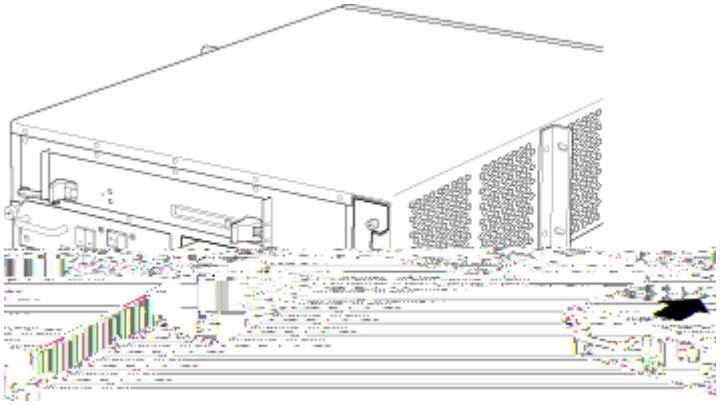
■ — -48V

7.

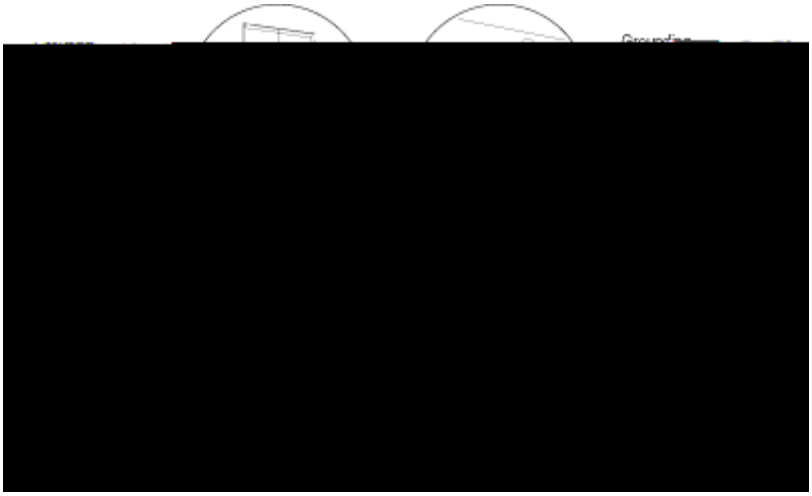
8.

9. |

LED OUTPUT OK LED



3-9



3-10

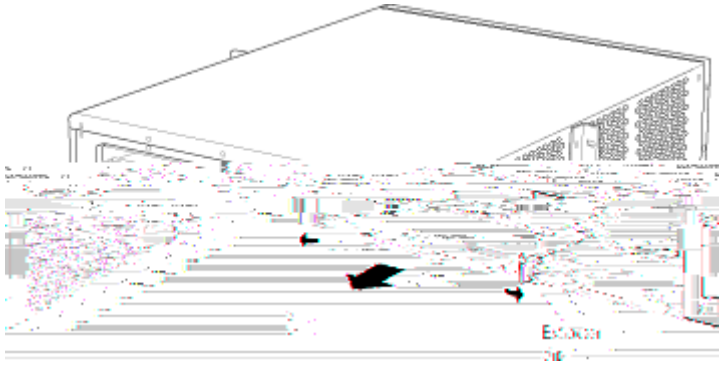
■ PC Card

■

PC Card

PC CARD Type I PCMACIA
PC Card JUNOS PC Card JUNOS
JUNOS PC Card

2. PC Card



3-13

RE

3-14

1. ESD Point
2.

3-15

- Ethernet
- Console Auxiliary

Ethernet

RJ45 ETHERNET Ethernet

1. ETHERNET
   3-16 Ethernet
2. ETHERNET RE0
   RE0 RE1 RE1
3.

3-16 Ethernet

Console Auxiliary

CIP CONSOLE Modem
CIP AUXILIARY RS-232

DB-9/DB-9

console auxiliary

1. CONSOLE AUXILIARY

- console auxiliary
-
-
-