ROUTER INTRODUCTION

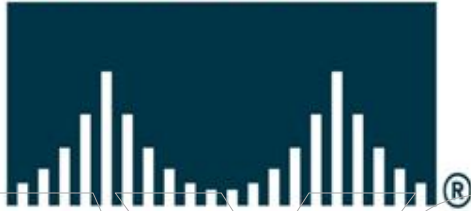# ROUTER

- To connect different networks.

- Route the signal of particular network.

ROUTER MANUFACTURING COMPANIES

Cisco Systems

Cyclades

NORTEL NETWORKS™

JUNIPER NETWORKS

D-Link®
Building Networks for People

LINKSYS®
A Division of Cisco Systems, Inc.
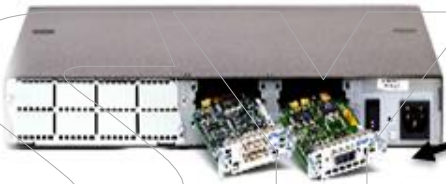
3COM

MULTICOM systems

TYPES OF ROUTER

MODULAR ROUTER

MODULAR ROUTER

WIC-WAN Interface Card

WIC – WAN Interface Card

1T

2T

NON-MODULAR ROUTER (FIXED ROUTER)

ROUTER PORTS

Serial Ports

FastEthernet Ports

Console Port

Auxiliary Port

Power Switch

Power Cord Connection
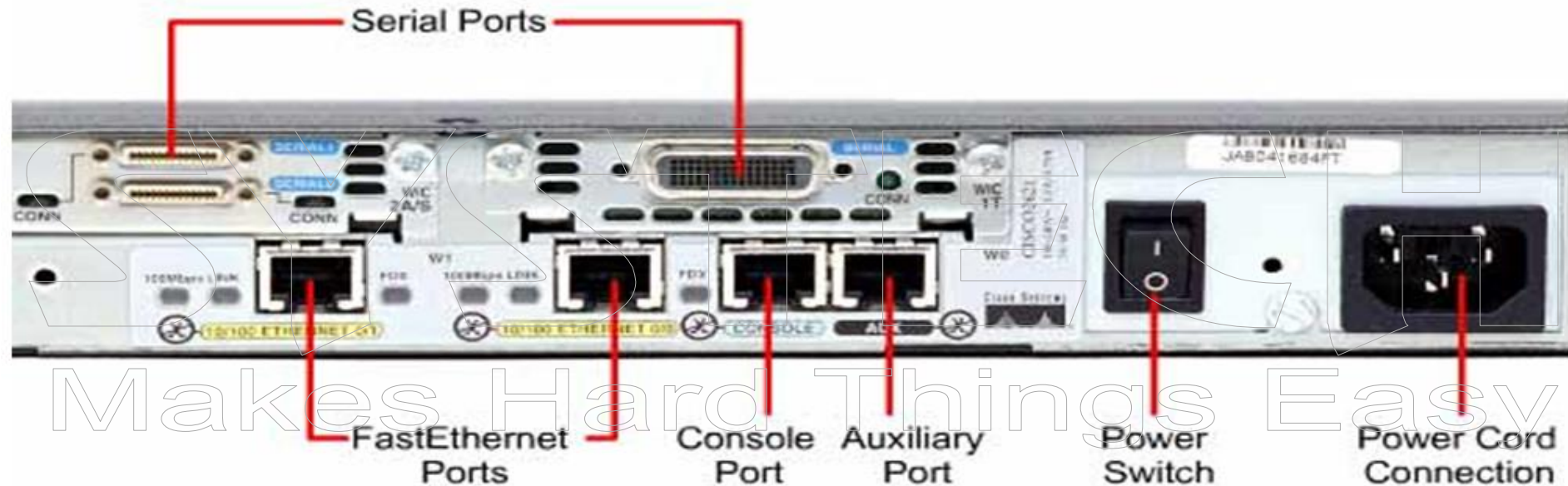
TRANSCEIVER

SERIAL PORT

V.35 CABLE

V.35 SMART SERIAL CABLE

CONSOLE PORT CABLE

**Console Cable
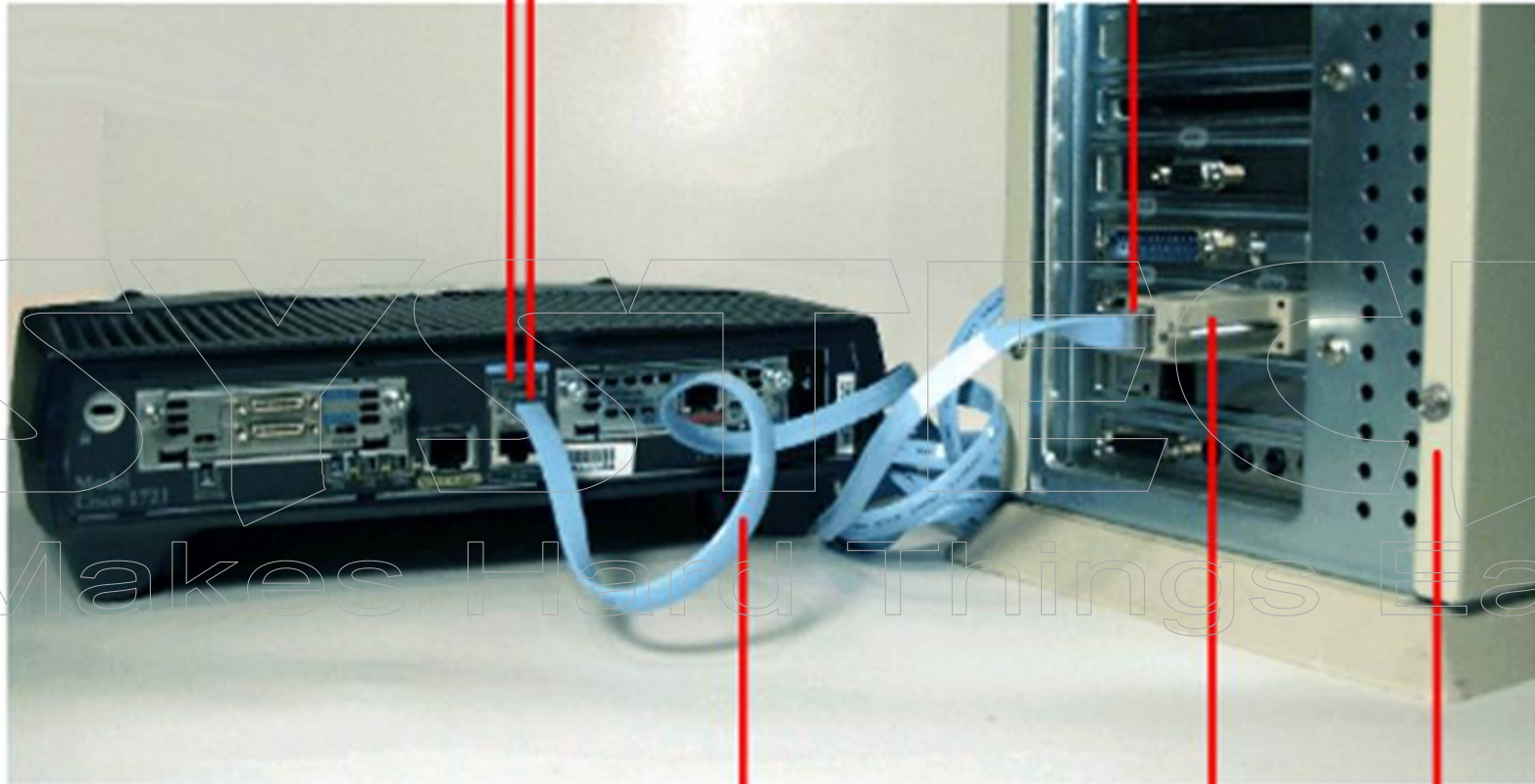(Rollover Cable)**

DB9 Converter

USB – COM PORT CONVERTER

CONSOLE CONNECTIVITY

Console Port

RJ-45 Connector
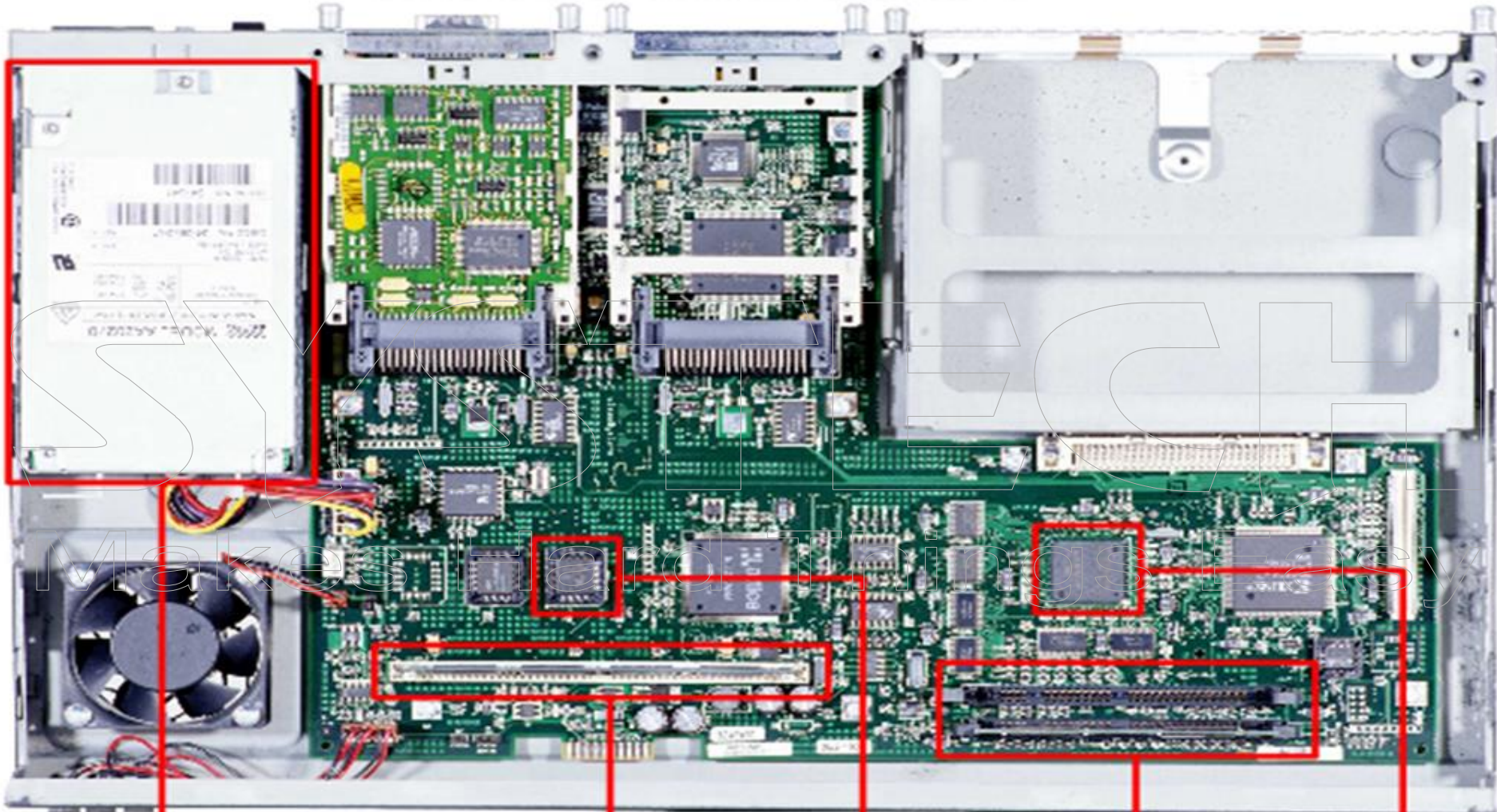
Rollover Cable

RJ-45 to DB-9 Adapter

Computer

INTERNAL COMPONENTS

Power Supply

Flash SIMM

Boot ROM

RAM DIMMs

CPU

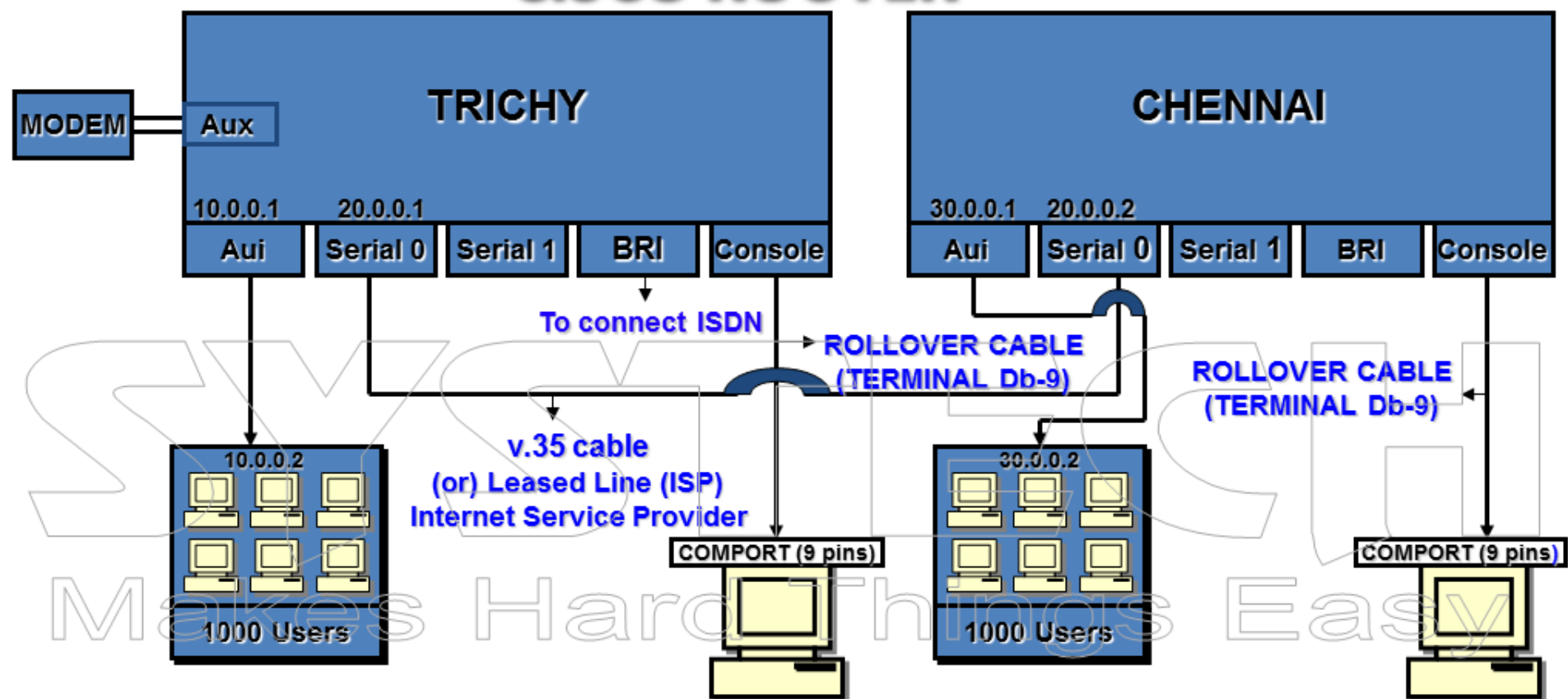AUI   SERIAL 0   SERIAL 1   BRI   CONSOLE   AUX

CD2520113G019070

Cisco 2503

Straight Through cable

Rollover Cable

Straight Through cable

CISCO ROUTER

AUI : Attachment unit interface.

AUX: Auxiliary port.

BRI : Basic rate interface.

Communication Port : Ethernet, serial, BRI

Configuration Port : Ethernet, Aux, Console

Router Types:

❖ Modulator (we can make changes, e.g. : serial ports can be added)

❖ Non Modulator (we cannot make changes)

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Routing Protocols:

To learn user and routing information.

- ✓ Static Routing.
- ✓ Dynamic Routing.
- ✓ Default Routing.

Routed Protocols:

To learn user information.

- ✓ IP : Internet Protocol.
- ✓ IPX : Internet Protocol Exchange.
- ✓ APPLE TALK.

Dynamic Routing Protocols:

- ✓ RIP : Routing information Protocol.
- ✓ IGRP : Interior Gateway routing protocol.
- ✓ EIGRP : Enhanced Interior gateway routing protocol.
- ✓ OSPF : Open shortest path first.
- ✓ RIPV2 : Routing information protocol/version 2

Router boot sequence:

- ✓ Bootstrap Loading
- ✓ POST : Power On Self Test
- ✓ IOS: Internet work Operating System
- ✓ Configuration File

Router Modes:

Console mode	: Router >
Privilege Mode	: Router #
Global Configuration mode	: Router (config)#
Specification mode	: Router (config-if)#

Set password for console and privilege mode, if not then hackers will access global configuration and hack our network.