

Cisco Carrier Routing System (Cisco CRS-1)

Claim to Fame:

- Largest, Fastest Routing System In the World

Hardware and Software Innovations:

- System capacity of up to 92 Terabits per second (Tbps)
- Cisco IOS® XR, a new member of the Cisco IOS software family, designed for Terabit-scale routing systems built on massively scalable fully distributed Multishelf architectures
- Industry's first Optical Carrier (OC)-768c/STM-256c packet interface
- Cisco Silicon Packet Processor (SPP), the world's most sophisticated 40-Gbps fully programmable Application Specific Integrated Circuit (ASIC)
- XML-based Cisco Craft Works Interface (CWI), an efficient, user friendly visual management tool that can manage single-shelf or multi-shelf systems
- The Cisco Intelligent ServiceFlex design for service flexibility and accelerated speed-to-service

What it Does:

- Enables reliable, large-scale network delivery of high bandwidth applications, including video on demand, online gaming, multimedia content distribution, real-time interactive services, and many others

System Features at a Glance

System Longevity

- Up to 72 line card shelves and 8 fabric shelves can be interconnected to provide in-service scalability from 1Tbps to over 92Tbps. This is 100 times more overall capacity than any existing router.
- Ability to add Route Processing capacity as needed
- Transmits and receives data at wire rate over all 1,152 40 gigabits per second (Gbps) line cards simultaneously

Continuous System Operation

- System components, including service cards, route processors, controller cards, power units, and fans, are fully redundant.
- As a self-healing system, it can be maintained, upgraded, enhanced, and scaled to 92 terabits without service interruption. It also recognizes and mitigates DoS attacks with its extensive security capabilities.
- Contains separate control, data, and management planes, allowing the system processes to be fully distributed across the routing system for maximum efficiency and scale.

Services Flexibility

- Only routing system to offer total separation of traffic and network operations on a per-service or per-customer basis; service providers can offer new and profitable converged services to meet customer service-level agreements.
- State of the art programmable 40Gbps packet processing enables flexible services to be turned on with no performance-versus-services feature trade-offs.



System Configurations and Interface Modules

The Cisco CRS-1 can be configured to work in two different modes

- Single-shelf configuration—This configuration consists of a single, 16-slot Line Card Chassis for total switching capacity of 1.2 Tbps.
- Multi-shelf configuration—This configuration consists of 2 to 72 16-slot Line Card Chassis and 1 to 8 Fabric Card Chassis for a total switching capacity of up to 92 Tbps.

Interface Modules for the CRS-1:

- Single Port OC-768c/STM-256c POS
- 4-Port OC-192c/STM-64c POS/DPT
- 16-Port OC-48c/STM-16c POS/DPT
- 4-Port and 8-Port 10 Gigabit Ethernet

Dimensions and Weight

16 Card Line Card Chassis

Size

- (HxWxD) 84 x 23.6 x 39.71 in (213.36 x 59.94 x 100.84 cm)

Weight

- 939 lb (425 kg) as shipped, chassis only with fan trays installed
- 1008 lb (457 kg) chassis only as shipped, including power shelves, w/o pwr modules
- 1657 Lbs (751 Kg) maximum weight, chassis fully configured, using all card slots, power shelves, cable-management and front cover

Fabric Card Chassis

Size

- (HxWxD) 84 x 23.6 x 41 in (213.36 x 59.94 x 104.2 cm)

Weight

- 644 lbs (292 Kg) as shipped, chassis only with fan trays installed
- 712.8 Lbs (323 Kg) chassis only as shipped, including power shelves, w/o power modules
- 1559 Lbs (707 Kg) chassis fully configured, using all card slots, power shelves, cable-management and front cover

Availability & Pricing

The Cisco CRS-1 is currently in field trials now with carriers and service providers worldwide and will be available in July 2004. The starting system list price is \$450,000 USD.

For more detailed information, see <http://newsroom.cisco.com/dlls/index.html>