

Refurbished CISCO SL-29-DATA-K9 Datasheet

CISCO > ROUTERS

Cisco 2900 Series Integrated Services Routers

Key Business Benefits of the Cisco 2900 Series Integrated Services Routers

Services Integration	The Cisco 2900 Series ISRs offer increased levels of services integration with voice, video, security, wireless, mobility, and data services, enabling greater efficiencies and cost savings.
Services On Demand	A single Cisco IOS Software Universal image is installed on each ISR G2. The Universal image contains all of the Cisco IOS technology sets which can be activated with a software license. This allows your business to quickly deploy advanced features without downloading a new IOS image. Additionally, larger default memory is included to support the new capabilities. The Cisco Services Ready Engine (SRE) enables a new operational model which allows you to reduce capital expenditures (CapEx) and deploy a variety of application services as needed on a single integrated compute services module.
High Performance with Integrated Services	The Cisco 2900 Series enables deployment in high speed WAN environments with concurrent services enabled up to 75 Mbps. A MultiGigabit Fabric (MGF) enables high-bandwidth module-to-module communication without compromising routing performance.
Network Agility	Designed to address customer business requirements, the Cisco 2900 Series modular architecture offers increased capacity and performance as your network needs grow. Modular interfaces offer increased bandwidth, a diversity of connection options, and network resiliency.
Energy Efficiency	The Cisco 2900 Series architecture provides energy-saving features that include the following: The Cisco 2900 Series offers intelligent power management and allows the customer to control power to the modules based on the time of day. Cisco EnergyWise technology will be supported in the future. Services integration and modularity on a single platform performing multiple functions, optimizes raw materials consumption and energy usage. Platform flexibility and ongoing development of both hardware and software capabilities lead to a longer product lifecycle, lowering all aspects of the total cost of ownership, including materials and energy use. High efficiency power supplies are provided with each platform.
Investment Protection	The Cisco 2900 Series maximizes investment protection: Reuse of a broad array of existing modules supported on the original Integrated Services Routers provides a lower cost of ownership. A rich set of Cisco IOS Software features carried forward from the original Integrated Services Routers and delivered in a single universal image. Flexibility to adapt as your business needs evolve.

Architectural Features and Benefits

Architectural Feature

Architectural Feature	Benefits
Modular Platform	The Cisco 2900 Series ISRs are highly modular platforms with several types of module slots to add connectivity and services for varied branch-office network requirements. The ISRs offer an industry-leading breadth of LAN and WAN connectivity options through modules to accommodate field upgrades for future technologies without requiring a platform replacement.
Processors	The Cisco 2900 Series are powered by high-performance multi-core processors that can support the growing demands of high-speed WAN connections to the branch-office while also running multiple concurrent services.
Embedded IP Security (IPSec) VPN Hardware Acceleration	Embedded hardware encryption acceleration is enhanced to provide higher scalability, which combined with an optional Cisco IOS Security license, enables WAN link security and VPN services (IPSec acceleration). The onboard encryption hardware replaces and outperforms the Advanced Integration Modules (AIMs) of previous generations.
Multigigabit Fabric (MGF)	The Cisco 2900 Series introduces an innovative Multi Gigabit Fabric (MGF) that allows for efficient

	module-to-module communication, enabling tighter services interactions across modules while reducing the overhead on the route processor.
TDM Interconnectivity Fabric	Unified communications services in the branch office are significantly enhanced with the use of a TDM interconnectivity fabric in the system architecture, allowing for scaling of DS-0 channel capacity.
Integrated Gigabit Ethernet Ports	All onboard WAN ports are 10/100/1000 Gigabit Ethernet WAN routed ports. One of the three 10/100/1000 Ethernet WAN ports on the Cisco 2921 and 2951 supports Small Form-Factor Pluggable (SFP)-based connectivity in lieu of a RJ-45 port and enabling fiber connectivity.
Innovative Universal-Serial-Bus (USB)-Based Console Access	A new, innovative USB console port offers management connectivity for devices without a serial port such as modern laptop computers. Traditional console and auxiliary ports are also available.
Optional Integrated Power Supply for Distribution of PoE and Universal DC Power Supply	An optional upgrade to the internal power supply provides inline power (802.3af-compliant PoE and Cisco Inline Power) to integrated switch modules. On the Cisco 2911, 2921, and 2951, an optional DC power supply is available that extends deployment into central offices and industrial environments. On the Cisco 2911, an optional DC-PoE power supply is available.
Optional External Redundant Power Supply (RPS)	The Cisco 2911, 2921, and 2951 allow for power redundancy through the use of an external RPS device, thereby decreasing network downtime and protecting the network from power-supply failures. Redundant power on the Cisco 2900 Series is supported through the Cisco RPS 2300 Redundant Power System. You can use the Cisco RPS 2300 to provide redundant power for Cisco 2900 Series ISRs as well as Cisco Catalyst switches. In order to use the Cisco RPS 2300, an external RPS adapter is required (configurable option) to connect the platform to the external RPS.
PoE Boost	When connected to an external RPS device, the Cisco 2911, 2921, and 2951 can operate in a PoE boost configuration in lieu of redundant power mode - whereby the power capacity of the platform is increased to twice the normal level to power additional PoE ports.
Designed for Flexible Deployments	The Cisco 2911 and 2951 are designed for NEBS environments. The 2911 is 12" deep and has an optional fan filter for deployments in a variety of environments. An assembly that provides front-to-back airflow is also available for 23" racks.

Modularity Features and Benefits

ISR Modules

ISR Modules	Benefits
Cisco Service Module	<p>Each service module slot offers high-data-throughput capability:</p> <ul style="list-style-type: none"> Up to 4 Gbps aggregate toward the route processor. Up to 2 Gbps aggregate to other module slots over MGF. <p>Service Module (SM) slots are highly flexible with support for double-wide service modules (SM-Ds), which are Service Modules that require two SM slots. SM-Ds in the Cisco 2921 and 2951 provide flexibility for higher-density modules.</p> <p>A service module slot replaces the network module and the extension module for voice/fax (EVM) slots and is offered on Cisco 2911, 2921, and 2951 ISRs.</p> <p>An adapter module enables backward compatibility with existing network modules, enhanced Network Modules (NMEs), and EVMs.</p> <p>Service module slots provide twice the power capabilities relative to the network-module slots, allowing for flexibility for higher-scale and better-performance modules.</p> <p>Power to service module slots can be managed by extensions similar to the Cisco EnergyWise framework, so your organization can reduce energy consumption in your network infrastructure. Full EnergyWise support will be available in future software releases.</p>
Cisco Enhanced High-Speed WAN Interface Card (EHWIC)	<p>The EHWIC slot provides enhancements to the prior generation's high-speed WAN interface card (HWIC) slots while provide maximum investment protection by natively supporting HWICs, WAN Interface Cards (WICs), Voice Interface Cards (VICs), and Voice/WAN interface cards (VWICs). Four integrated EHWIC slots on the Cisco 2901, 2911, 2921, and 2951 allow for more flexible configurations.</p> <p>Each HWIC slot offers high-data-throughput capability:</p> <ul style="list-style-type: none"> Up to 1.6 Gbps aggregate toward the route processor. Up to 2 Gbps aggregate to other module slots over the MGF. <p>Flexibility to support double-wide modules is enabled by combining two EHWIC slots. Up to 2 doublewide HWIC (HWIC-D) modules are supported.</p>
Cisco Internal Services Module (ISM)	<p>A single ISM slot provides flexibility to integrate intelligent service modules on an internal slot within the chassis</p> <p>Each ISM slot offers high-data-throughput capability:</p> <ul style="list-style-type: none"> Up to 4 Gbps aggregate toward the route processor. Up to 2 Gbps aggregate to other module slots over the MGF. <p>The ISM replaces the AIM slot; existing AIM modules are not supported in the ISM slot.</p> <p>Power to ISM slots can be managed by extensions similar to the Cisco EnergyWise framework, so your organization can reduce energy consumption in your network infrastructure. Full EnergyWise support will be available in future software releases.</p>
Cisco High-Density Packet Voice	PVDM3 slots natively support PVDM3 modules, providing support for richer density for rich-media

Digital Signal Processor (DSP) Module (PVDM3) Slots on Motherboard	voice and video. Each PVDM3 slot connects back to the system architecture through a 2 Gbps aggregate link through the MGF. Investment protection for PVDM2 modules is supported through an adapter module. Power to the PVDM slots can be managed by extensions similar to the Cisco EnergyWise framework, so your organization can reduce energy consumption in your network infrastructure. Full EnergyWise support will be available in future software releases.
Compact Flash Slots	Two external Compact Flash slots are available on the Cisco 2900 Series Integrated Services Routers. Each slot can support high-speed storage densities upgradeable to 4 GB in density.
USB 2.0 Ports	Two high-speed USB 2.0 ports are supported. The USB ports enable secure token capabilities and storage.

Cisco 2900 ISR G2 Series IOS Software Features and Protocols Support

Feature	Support
Protocols	IPv4, IPv6, Static Routes, Open Shortest Path First (OSPF), Enhanced IGRP (EIGRP), Border Gateway Protocol (BGP), BGP Router Reflector, Intermediate System-to-Intermediate System (IS-IS), Multicast Internet Group Management Protocol (IGMPv3) Protocol Independent Multicast sparse mode (PIM SM), PIM Source Specific Multicast (SSM), Distance Vector Multicast Routing Protocol (DVMRP), IPsec, Generic Routing Encapsulation (GRE), Bi-Directional Forwarding Detection (BFD), IPv4-to-IPv6 Multicast, MPLS, L2TPv3, 802.1ag, 802.3ah, L2 and L3 VPN.
Encapsulation	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR) (FR.15 and FR.16), High-Level Data Link Control (HDLC), Serial (RS-232, RS-449, X.21, V.35, and EIA-530), Point-to-Point Protocol over Ethernet (PPPoE), and ATM.
Traffic Management	QoS, Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), Hierarchical QoS, Policy-Based Routing (PBR), Performance Routing (Pfr), and Network-Based Advanced Routing (NBAR).

Embedded Management Features Available with Cisco IOS Software

WSMA	The Web Services Management Agent (WSMA) defines a mechanism through which you can manage a network device, retrieve configuration data information, and upload and manipulate new configuration data. WSMA uses XML-based data encoding that is transported by the Simple Object Access Protocol (SOAP) for the configuration data and protocol messages.
EEM	Cisco IOS Embedded Event Manager (EEM) is a distributed and customized approach to event detection and recovery offered directly in a Cisco IOS Software device. It offers the ability to monitor events and take informational, corrective, or any desired EEM action when the monitored events occur or when a threshold is reached.
IPSLA	Cisco IOS IP Service-Level Agreements (SLAs) enable you to assure new business-critical IP applications, as well as IP services that use data, voice, and video in an IP network.
SNMP, RMON, Syslog, NetFlow, and TR-069	Cisco 2900 Series Integrated Services Routers also support SNMP, Remote Monitoring (RMON), syslog, NetFlow, and TR-069 in addition to the embedded management features previously mentioned.

The next steps...

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