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Have an account? Personalized content Your products and support Log in Don't have an account? Sign up Forgot your password? About Cisco accounts The Cisco & Catalyst 2edge switches, providing improved operational excellence, highly secure business operations, improved sustainability, and an enhanced workspace experience. They are fixed-configuration access switches designed for entry-level enterprise, midmarket, and branch office networks. Figure 1 shows the Cisco Catalyst 2960-S Series Switch model with LAN Lite software. The Cisco Catalyst 2960-S Series Switches with LAN Lite Software have the following capabilities: • 1 GbE Small Form-Factor Pluggable (SFP) uplinks • USB storage interface for file backup, distribution, and simplified operations • Enhanced troubleshooting for problem solving, including link connectivity and cable diagnostics
Single IP address management for up to 16 switches A wide range of software features to provide ease of operations, sustainability and borderless networking experience Limited lifetime hardware warranty, including next-business-day replacement with 90-day service and support The Cisco Catalyst 2960 Series Switches with LAN Lite Software have the following capabilities: • Fast Ethernet (PoE) of up to 15.4W per port • GbE for data connectivity • Enhanced troubleshooting for problem solving, including link connectivity and cable diagnostics • Single IP address management for up to 16 switches • A wide range of software features to provide ease of operation, highly secure business operations, sustainability, and a borderless networking experience • Limited lifetime hardware warranty Figure 1. Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software Figure 2. Cisco Catalyst 2960-S Series Switches with LAN Lite Software Switch Configurations Table 1 shows the configuration information for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software. Table 1. Configurations of Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software Switch Model Description Uplinks Catalyst 2960-S Switches with 1 Gigabit Uplinks and 10/100/1000 2 1 GbE SFP ports Catalyst 2960S-48TS-S 48 Ethernet 10/100/1000 2 1 GbE SFP ports 10 GbE SFP 10/100 PoE ports (370W capacity) 2 dual-purpose ports (10/100/1000 or SFP) Cisco Catalyst 2960-24 Ethernet 10/100 PoE ports (370W capacity) 2 dual-purpose ports (10/100/1000 or SFP) Cisco Catalyst 2960-24 Ethernet 10/100 PoE ports (370W capacity) 2 dual-purpose ports (10/100/1000 or SFP) Cisco Catalyst 2960-24 Ethernet 10/100 PoE ports (370W capacity) 2 dual-purpose ports (370W 48TC-S 48 Ethernet 10/100 2 dual-purpose ports (10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100 2 fixed 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100/1000 or SFP) Cisco Catalyst 2960-24TC-S 24 Ethernet 10/100/1000 or SFP) Cisco Cata 10/100 compact size with no fan 1 dual-purpose port (10/100/1000 or SFP) Cisco Catalyst 2960-S and 2960 Series Switches Enable Cisco Borderless Network The Cisco Cisco Borderless Networks architecture addresses primary IT and business challenges to help create a truly borderless experience is only possible with intelligent network elements designed and architected to meet the needs of a global workspace. Cisco Network Access is a primary component of this architecture, enabling various borderless network services such as mobility, Ease of operations of the following primary areas: • Sustainability • Ease of operations • Sustainability • Ease of operations for increased productivity and operations for increased productivity and operations for increased productivity and operations of the following primary areas: • Sustainability • Ease of operations for increased productivity and operations for increase Borderless security • Borderless experience Sustainability Cisco Catalyst switching solutions enable greener practices through measurable power efficiency, integrated services, and continuous innovations such as Cisco EnergyWise, an enterprisewide solution that monitors and conserves energy with customized policies. Together, Cisco EnergyWise technology and Cisco Catalyst switches reduce greenhouse gas (GhG) emissions and increase energy cost savings and sustainable business behavior. Sustainable business behavior. Sustainability features in the Cisco Catalyst 2960-S and 2960 Series Switches include the following features sets:
Cisco EnergyWise technology
Efficient switch operation
Cisco Catalyst 2960-S and 2960 Series Switches include the following features sets:
Cisco EnergyWise technology
Efficient switch operation
Cisco Catalyst 2960-S and 2960 Series Switches include the following features sets:
Cisco EnergyWise technology
Efficient switch operation
Cisco Catalyst 2960-S and 2960 Series Switches include the following features sets:
Cisco EnergyWise technology
Cisco Energy Intelligent power management Cisco EnergyWise Technology Cisco EnergyWise is an innovative architecture, added to fixed configuration switches, promoting companywide sustainability by reducing energy consumption across an entire corporate infrastructure and affecting more than 50 percent of global greenhouse gas emissions created by worldwide building infrastructure, a much greater effect than the 2 percent generated by the IT industry. Cisco EnergyWise enables companies to measure the power consumption of network-attached devices and manage power consumption with specific policies, reducing power consumption to realize increased cost savings, potentially affecting any powered device. EnergyWise encompasses a highly intelligent network discovers Cisco EnergyWise-manageable devices, monitors their power consumption, and takes action based on business rules to reduce power consumption. EnergyWise uses a unique domain-naming system to query and summarize information from large sets of devices, making it simpler than traditional network management capabilities. Cisco EnergyWise's management interfaces allow facilities and network management applications to communicate with endpoints and each other using the network as a unifying fabric. The management interface uses standard Simple Network Management Protocol (SNMP) or TCP to integrate Cisco and third-party management systems. Efficient Switch Operation Cisco Catalyst 2960-S and 2960 Series Switches, designed and engineered by Cisco, provide optimum power saving, low power operations for industry best-in-class power management, and power consumption capabilities. The Catalyst 2960-S ports are capable of reduced power modes so that ports not in use can move into a lower power utilization state. Intelligent Power operations for industry best-in-class power management, and power modes so that ports not in use can move into a lower power utilization state. the latest PoE devices including Cisco IP phones and Cisco Aironet WLAN access points providing up to 15.4W of power per port, as well as any IEEE 802.3af-compliant end device. switches to negotiate a more granular power setting when connecting to a Cisco powered device such as IP phones or access points than what is provided by IEEE classification. • PoE MIB provides proactive visibility into power usage and allows customers to set different power-level thresholds. comes with automatic discovery to detect a Cisco prestandard or IEEE 802.3af endpoint and provide the necessary power without any user configuration. Per-port PoE power sensing measures the actual power being drawn, enabling more intelligent control of powered devices. Table 2 lists the PoE capacity of the Cisco Catalyst 2960 Series Switches Switch PoE Power Capacity Switch Model Maximum Number of PoE Ports* Available PoE Power Cisco Catalyst 2960-48PST-S 24 ports up to 15.4W 370W Cisco Catalyst 2960-24PC-S 24 ports up to 15.4W 3 across all ports. Ease of Operations The Cisco Catalyst Smart Operations Cisco Catalyst Smart Operations Cisco Catalyst Smart Operations is a comprehensive set of capabilities that simplify LAN deployment, configuration, and troubleshooting. Cisco Catalyst Smart Operations is a set of features that includes Smart Install, Auto Smart ports, Smart Configuration, and Smart Troubleshooting to enhance operational excellence: • Cisco Smart Install is a transparent plug-and-play technology to configuration and the assistance of other switches to facilitate installation providing transparent network plug and play. • Cisco Auto Smartports provide automatic configuration as devices connect to the switch port, allowing auto detection and plug and play selects half- or full-duplex transmission mode to optimize bandwidth. • Dynamic Trunking Protocol (DTP) facilitates dynamic trunk configuration across all switch ports. • Port Aggregation Protocol (PAgP) automates the creation of Cisco Fast EtherChannel groups or Gigabit EtherChannel groups to link to another switch, router, or server. • Link Aggregation Control Protocol (LACP) allows the creation of Ethernet channeling with devices that conform to IEEE 802.3ad. This feature is similar to Cisco EtherChannel technology and PAgP. through) is installed.
Unidirectional Link Detection Protocol (UDLD) and Aggressive UDLD allow unidirectional links caused by incorrect fiber-optic interfaces.
Unidirectional Link Detection Protocol (UDLD) and Aggressive UDLD allow unidirectional links caused by incorrect fiber-optic interfaces. deployment. • Switching Database Manager (SDM) templates for access, routing, and VLAN deployment allow the administrator to easily maximize memory allocation by the administrator to easily maximize memory allocation with Private VLAN Edge to minimize broadcasts and maximize available bandwidth. • Internet Group Management Protocol (IGMP) Snooping for IPv4 and IPv6 MLD v1 and v2 Snooping for IPv4 and leaves of multicast streams and limit bandwidth-intensive video traffic to only the requestors. • Per-port broadcast, multicast storm control prevents faulty end stations from degrading overall systems performance. • Voice VLAN simplifies telephony installations by keeping voice traffic on a separate VLAN for easier administration and troubleshooting. • Cisco VLAN Trunking Protocol (VTP) supports dynamic trunk configuration across all switches. allows administrators to monitor ports in a Layer 2 switch network from any other switch in the same network. • For enhanced traffic management, monitoring (RMON) software agent supports four RMON groups (history, statistics, alarms, and events). • Trivial File Transfer Protocol (TFTP) reduces the cost of administering software upgrades by downloading from a centralized location. • Network Timing Protocol (NTP) provides an accurate and consistent timestamp to all intranet switches. • Cisco Emergency Responder (CER) enhances emergency calling from Cisco Unified CallManager sends emergency calls to the appropriate Public Safety Answering Point (PSAP) for the caller's location. Advanced, Intelligent Network Management Tools The Cisco Catalyst 2960-S and 2960 Series Switches offer both a superior CLI for detailed configuration and Cisco Network Assistant software, a PC-based tool for quick configuration based on preset templates. In addition, CiscoWorks LAN Management Solution (LMS) supports the Cisco Catalyst 2960-S and 2960 Series Switches for network management. Cisco Network Management Cisco Network management. Assistant offers centralized network management and configuration capabilities. Cisco Smartports technology to simplify both initial deployment and ongoing maintenance. This application also features an intuitive GUI where users can easily apply common services across Cisco Switches, routers, and access points, such as: Configuration management Troubleshooting advice Inventory reports Event notification Password synchronization Resource Value of Configuration Resource of Configuration Resource Official Software upgrades Resource Value of Configuration Resource Value of Configuration Resource Official Software Upgrades Resource Value of Configuration Resource V LAN Management Solution (LMS) is a comprehensive network lifecycle management of your Cisco network infrastructure. CiscoWorks LMS uniquely uses Cisco hardware and software platform knowledge and operational experience into a powerful set of workflow driven configuration, monitoring, troubleshooting, reporting, and administrative tools. Including: • Support for new technologies and services from initial deployment to day-to-day administration and management, such as EnergyWise, Identity, Cisco Auto Smartports, Cisco Smart Install, and much more
Configuration management tools built from Cisco experience and Cisco Validated Design recommendations
Automation in managing hardware inventories, security vulnerabilities (PSIRTS) and platform end-of-life and support cycles For detailed information about CiscoWorks LMS, go to: . Borderless Security The Cisco Catalyst 2960-S and 2960 LAN Lite Series Switches provide basic TrustSec, a primary element of Borderless Security Architecture, that helps enterprise customers secure their networks, data and resources with policy-based access control, identity-aware and role-aware networking, pervasive integrity, and confidentiality. The borderless security is enabled by the following features Cisco TrustSec
The Cisco TrustSec
T provides authentication, access control, and security policy administration to secure network connectivity and resources. On the Cisco Catalyst 2960-S and 2960 Series with LAN Lite, the TrustSec solution prevents unauthorized access and helps ensure that users get only their designated privileges. It provides the ability to dynamically administer granular levels of network access. Other Security Features include but are not limited to:
 MAC Auth Bypass (MAB) for voice allows third-party IP phones without an 802.1X supplicant to get authenticated using their MAC address.
 MAC Auth Bypass (MAB) for voice allows third-party IP phones without an 802.1X supplicant to get authenticated using their MAC address.
 MAC Auth Bypass (MAB) for voice allows third-party IP phones without an 802.1X supplicant to get authenticated using their MAC address. address of the device to which it is connected. It also can be used to limit the total number of devices plugged into a switch port, thereby protecting the risks posed by rogue wireless access points or hubs. users by sending an alert to a management station so that network administrators know when and where users enter the network. Secure Shell (SSH) Protocol (SNMP) v3 provide network security by encrypting administrator traffic during Telnet and SNMP sessions. SSH v2 and the cryptographic version of SNMP v3 require a special cryptographic software image because of U.S. export restrictions. Borderless network enables enterprise mobility and business-grade video services. Industry's first unified network (wired and wireless) location services enable tracking of mobile assets and the users of those assets for both wired and wireless devices. The true borderless experience is enabled by the following feature sets in the Cisco Catalyst 2960-S and 2960 Series Switches provide Layer 2 Networking • QoS Layer 2 Networking The Cisco 2960-S and 2960 Series Switches provide Layer 2 Networking to enable availability. Features include but are not limited to: • IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP) provide rapid spanning-tree convergence independent of spanning-tree timers and also offers the benefit of Layer 2 load balancing and distributed processing. VLAN spanning-tree basis, without requiring the implementation of spanning-tree instances. • Switch-port autorecovery (Errdisable) automatically attempts to reactivate a link that is disabled because of a network error. and 2960 Series Switches offers intelligent services that keep everything flowing smoothly. Industry-leading mechanisms for marking, classification, and scheduling deliver supported in the Cisco 2960-S and 2960 Series Switches: 802.1p class of service (CoS) classification provides differentiated services when best-effort traffic delivery is insufficient. • Four egress queues per port help enable differentiated management of differentiated management of differentiated management of differentiated services when best-effort traffic delivery is insufficient. servicing the ingress queues and egress queues and egress queues. • Weighted Tail Drop (WTD) provides congestion avoidance at the ingress and egress queues before a disruption occurs. Tables 3, 4, 5, 6 and 7 provide hardware features, power specifications, management and standards, and safety and compliance information for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software. Table 3. Hardware Features for Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software Performance and Scalability Numbers for All Switch Models Forwarding bandwidth 16 Gbps (2960), 50 Gbps (2960-S) Flash memory 32 MB (2960), 64 MB (2960-S) Memory DRAM 64 MB (2960), 128 MB (2960-S) Max VLANs 64 VLAN IDs 4000 Maximum transmission unit (MTU) Up to 9198 bytes Jumbo frames 9016 bytes (2960-24TC-S 6.5 mpps 2960-24TC-S 6.5 mpps 2 mpps 2960-48TC-S 10.1 mpps 2960-48PST-S 13.3 mpps Resource Default QoS Dual Unicast MAC addresses 8000 8000 IPv4 IGMP groups 256 256 IPv4 MAC gos access control entries (ACEs) 128 384 0 IPv4 MAC security ACEs 384 128 256 Connectors and Cabling and Indicators • 10BASE-T ports: RJ-45 connectors, 2-pair Category 3, 4, or 5 unshielded twisted-pair (UTP) cabling • 1000BASE-TX ports: RJ-45 connectors, 4-pair Category 5 UTP cabling • 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Category 5 UTP cabling • 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Category 5 UTP cabling • 1000BASE-T set and the s multimode fiber) • 100Base-FX: LC fiber connectors (single- and multimode fiber) • Customers can provide power to a switch only by using the internal power supply is an auto-ranging unit. • The internal power supply supports input voltages between 100 and 240 VAC. • Use the supplied AC power cord to connect the AC power connector to an AC power contector to an AC power connector to an AC power contector to an AC power co activity, speed, and full duplex • System status: System, link status, link duplex, PoE, and link speed Dimensions (H x W x D) Model Inches Centimeters 2960S-24TS-S 1.75 x 17.7 x 11.8 4.5 x 45 x 30 2960S-24TS-S 1.75 x 17.7 x 11.8 4.5 x 45 x 30 2960-8TC-S 1.73 x 10.6 x 6.4 4.4 x 27 x 16.3 2960-24-S 1.73 x 17.7 x 9.52 4.4 x 45 x 24.2 2960-24TC-S 1.73 x 17.7 x 9.52 4.4 x 45 x 24.2 2960-24PC-S 1.73 x 17.7 x 13 4.4 x 45 x 24.2 2960-24PC-S 1.73 x 17.7 x 9.52 4.4 x 45 x 33.02 2960-48TC-S 1.73 x 17.7 x 9.52 4.4 x 45 x 24.2 2960-48TC-S 1.73 x 17.7 x 9.52 4.4 x 45 x 24.2 2960-48TC-S 1.73 x 17.7 x 9.52 4.4 x 45 x 24.2 2960-48TC-S 1.73 x 17.7 x 13 4.4 x 45 x 24.2 2960-48TC-S 1.73 x 17.7 x 9.52 4.4 x 45 2960-8TC-S 3 1.4 2960-24-S 8 3.6 2960-24TC-S 8 3.6 2960-24PC-S 12 5.4 2960-24PC-S 12 5.4 2960-48TT-S 8 3.6 2960-48TT-S 8 term exception at sea level* 23º to 31ºF -5º to +55ºC Short-term exception up to 5,000 feet (1500 m)* 23º to 122ºF -5º to +45ºC Storage temperature Same as above Feet Meters Operating altitude Up to 10,000 Up to 3000 Storage altitude Up to 13,000 Up to 3000 Storage altitude Up to 30,000 Up to 3000 Storage altitude Up to 30,000 U 4000 Operating relative humidity 10% to 95% noncondensing Storage relative humidity 10% to 95% noncondensing Acoustic noise Measured per ISO 9296. Bystander positions operating mode at 25°C ambient. Sound Pressure Sound Power Model LpA (Typical*) LpAD (Maximum*) LwA (Typical*) LwAD (Maximum*) 2960S-48TS-S 44 dB 47 dB 5.4 B 5.7 B 2960S-24TS-S 2960-24TS-S 40 dB - - 2960-24TC-S 40 dB - - 2960-24TC-S 48 dB - - 2960-24TC-S 48 dB - - 2960-24TC-S 40 dB - - 2960-24TC-S 48 dB - variations Mean time between failures (MTBF) 2960S-48TS-S 357,740 hours 2960-24TS-S 335,014 hours 2960-24TC-S 403,745 hour following in a 1-year period. 96 consecutive hours, or 360 hours total, or 15 occurences. Note: Compact switch 2960-S and 2960 Series Switches with LAN Lite Software Description C2960-S and C2960 Specifications Models C2960S-48TS-S C2950S-48TS-S C2950S-4 24TS-S C2960-8TC-S C2960-24TC-S C2960-24TC-S C2960-24TC-S C2960-24PC-S 100 Percent Throughput Measured Power Consumption 53W 36W 11W 21W 24W 5 Percent Throughput (with 50 Percent Throughput Measured Power Consumption 53W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 21W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 24W 5 Percent Throughput Measured Power Consumption 50W 36W 11W 24W 5 Percent Throughput Measured Power Consumption 5 Percent Throughput (with Maximum Possible PoE Loads) Measured Power Consumption - - - - Switch Power: 433W PoE Pow Power Consumption 78W 70W 54W 50W 5 Percent Throughput (with 50 Percent Power: 339W 100 Percent Throughput (with Maximum Possible PoE Loads) Measured Power: 62W - - Switch Power: 162W PoE Power: 119W - - Switch Power: 02W - - Switch Power: 02 Power: 262W PoE Power: 187W Table 5. Voltage and Power Rating for Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software Voltages and Power Rating Model Voltage (Autoranging) Current Frequency 2960S-48TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960-8TC-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960-8TC-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-48TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-48TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960-8TC-S 100 to 240 VAC 1 to 0.5 A 50 to 60 Hz 2960S-24TS-S 100 to 240 VAC 1 to 0.5 A 50 to 24 240 VAC 0.5 to 0.3 A 50 to 60 Hz 2960-24+C-S 100 to 240 VAC 1.3 to 0.8 Hz 2960-48PST-S 100 to 240 VAC 5.0 to 2.0 A 50 to 60 Hz Model Power Rating 2960-24TC-S 0.13 kVA 2960-24TC-S 0.05 kVA 2960-24TC-S 0.05 kVA 2960-24TC-S 0.075 kVA 2960-24TC-S 0.07 port for PoE is 15.4W
Total power dedicated to PoE is 370W Table 6. Management and Standards Support for Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software Description Specification Management
CISCO-CABLE-DIAG-MIB
CISCO-CLUSTER-MI
CISCO-CONFIG-COPY-MIB CONFIG-MAN-MIB • CISCO-ENTITY-VENDORTYPE-OID-MIB • CISCO-ERR-DISABLE-MIB • CISCO-IMAGE-MIB • CISCO-IMA PAGP-MIB • CISCO-PING-MIB • CISCO-PORT-SECURITY-MIB • CISCO-PORT-STORM-CONTROL-MIB • CISCO-PRODUCTS-MIB • CISCO-PR MIB • CISCO-TC-MIB • CICSO-TCP-MIB • CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB • CISCO-VLAN-IFTABLE-MEMBERSHIP-MIB • CISCO-VTP-MIB • INET-ADDRESS-MIB • OLD-CISCO-CHASSIS-MIB • OLD-CISCO-FLASH-MIB • OLD-CISCO-INTERFACES-MIB • OLD-CISCO-FLASH-MIB • O OLD-CISCO-IP-MIB • OLD-CISCO-SYS-MIB • OLD-CISCO-TCP-MIB • SNMP-FRAMEWORK-MIB • SNMP-FRAMEWOR 802.1p CoS Prioritization • IEEE 802.1Q VLAN • IEEE 802.1x • IEEE 802.1x • IEEE 802.1x • IEEE 802.1x • IEEE 802.3ah (100BASE-T, 100BASE-T, 100B 100BASE-TX specification • IEEE 802.3ab 1000BASE-T specification • IEEE 802.3z 1000BASE-X specification • 100BASE-SX (SFP) • 1000BASE-SX (SFP) • 1 ICMP • RFC 793 - TCP • RFC 1305 - NTP • RFC 1493 - Brotocol (ARP) • RFC 1542 - BOOTP extensions • RFC 1643 - Ethernet Interface MIB • RFC 1757 - RMON • RFC 1901 - SNMP v2C • RFC 1902-1907 - SNMP v2 • FRC 2068 - HTTP • RFC 2131 - DHCP • RFC 2133 - IF MIB • RFC 2273-2275 - SNMP v3 • RFC 2474 - Differentiated Services (DiffServ) Precedence • RFC 2597 - Assured Forwarding • RFC 2598 -Expedited Forwarding • RFC 2571 - SNMP Management • RFC 3046 - DHCP Relay Agent Information Option • RFC 3376 - IGMP v3 • RFC 3580 - 802.1X RADIUS *Version with MED will be available starting in release IOS12.2.(55) Table 7. Safety and Compliance Description Specification Safety certifications • UL 60950-1, Second Edition • CAN/CSA 22.2 No. 60950-1, Second Edition • TUV/GS to EN 60950-1, Second Edition • CB to IEC 60950-1 Second Edition • CB CNS13438 Class A
MIC
GOST
China EMC Certifications Environmental Reduction of Hazardous Substances (ROHS) 5 Telco Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches come with a limited lifetime Warranty Cisco Limited Lifetime Hardware Warranty Cisco Catalyst 2960-S and 2960 Series Switches come with a limited lifetime Warranty Cisco Catalyst 2960-S and 2960 Series Switches Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches come with a limited lifetime Warranty Cisco Catalyst 2960-S and 2960 Series Switches Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches Common Language Equipment Identifier (CLEI) code Warranty Cisco Catalyst 2960-S and 2960 Series Switches Catalyst 2960-S and 2960 Series Switc warranty (Table 8). The warranty for the Catalyst 2960-S has the same terms as our standard limited lifetime warranty plus the addition of next business day delivery of replacement hardware where available and 90 days of 8x5 Cisco Technical Assistance (TAC) support. Your formal warranty statement, including the warranty applicable to Cisco software, appears in the Cisco information packet that accompanies your Cisco product. We encourage you to review carefully the warranty statement shipped with your specific product before use. Cisco reserves the right to refund the purchase price as its exclusive warranty remedy. For further information on warranty terms, visit . Table 8. Limited Lifetime Warranty Terms Cisco Enhanced Limited Lifetime Hardware Warranty Cisco Enhanced Limited Lifetime Hardware Warranty Device covered Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst 2960-S Series Switches Sold on or after May 1, 2009 Applies to Cisco Catalyst as the original end user continues to own or use the product, provided that: fan and power supply warranty is limited to five (5) years. End-of-life policy In the event of discontinuance of product manufacture, Cisco warranty support is limited to five (5) years from the announcement of discontinuance. In the event of discontinuance of product manufacture, Cisco warranty support is limited to five (5) years from the announcement of discontinuance. Hardware replacement part within ten (10) working days after receipt of the RMA request. Actual delivery times may vary depending on customer location. Cisco or its service center will use commercially reasonable efforts to ship a Catalyst 2960-S replacement for next business day delivery, where available. Otherwise, a replacement will be shipped within ten (10) working days after receipt of the RMA request. Actual delivery times may vary depending on customer location. Effective date Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco reseller, not more than ninety [90] days after original shipment by Cisco). Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco). Cisco). TAC support Not included. Cisco will provide, during customer's local business hours, 8 hours per day, 5 days per week basic configuration, diagnosis, and troubleshooting of device-level problems for up to 90 days from the date of shipment of the originally purchased Catalyst 2960-S product. This support does not include solution or networklevel support beyond the specific device under consideration. Cisco.com Access Warranty allows guest access only to Cisco.com Warranty allows guest access on the cisco.com with maintenance updates and bug fixes designed to maintain the compliance of the software with published specifications, release notes, and industry standards compliance as long as the original end user continues to own or use the product or for up to one year from the end-of-sale date for this product, whichever occurs earlier. Customers with licenses for our premium software images, Enterprise Services or IP Services, require a service support contract such as Cisco SMARTnet® Services for the Catalyst 2960 Switches Minimize operating costs and reduce power consumption for the Cisco Catalyst 2960 switch using intelligent, personalized services from Cisco and our partners. Through a discovery process that begins with understanding your business objectives, we help you integrate the Cisco Catalyst switch into your architecture and incorporate network services onto it. Sharing knowledge and leading practices, we support your success every step of the way as you deploy, absorb, manage, and scale new technology. Choose from a flexible suite of support services designed to meet your business needs and help you maintain high-quality network performance while controlling operational costs. Table 9 lists the technical services available for the Cisco Catalyst 2960-S and 2960 Series Switches. Table 9. Technical Services Available for Cisco SMARTnet® Service Available for Cisco Catalyst 2960-S and 2960 Series Switches. tools • Next-business-day, 8x5x4, 24x7x4, or business-day advance hardware replacement as available • Access to SMB TAC during business hours (access levels vary by region) • Access to Cisco.com SMB knowledge base • Online technical resources through the Smart Foundation Portal • Operating system software bug fixes and patches Cisco Smart Care Service • Network-level coverage for the needs of small and medium-sized businesses • Proactive health checks and periodic assessments of Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco hardware and software through Smart Care Portal • Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco hardware and software through Smart Care Portal • Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco hardware and software through Smart Care Portal • Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco hardware and software through Smart Care Portal • Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco network foundation, voice, and security techno business-day advance hardware replacement as available, 24x7x4, option available1 Cisco SP Base Service • Around-the-clock, global access to the Cisco.com • Next business day, 8x5x4, 24x7x4, and 24x7x2 advance hardware replacement. Return to factory option available1 • Ongoing operating system software updates 2 Cisco Focused Technical Support Service • Cisco High-Touch Service • Cisco High-Touch Cisco High-Touch Service • Cisco Footnotes: 1. Advance hardware replacement is available in various service-level combinations. For example, 8x5xNBD indicates that shipment will be initiated during the standard 8-hour business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day, 5 days a week (the generally accepted business day) a week (the general day) a we same day shipping is provided. Restrictions apply; please review the appropriate service descriptions for details. 2. Cisco operating system updates within the licensed feature set. Ordering Information Table 10 has ordering information for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software. Table 10. Ordering Information for Cisco Catalyst 2960S-48TS-S • 48 Ethernet 10/100/1000 • 2 One Gigabit Ethernet SFP uplink ports • LAN Lite software Cisco Catalyst 2960S-24TS-S • 24 Ethernet 10/100/1000 • 2 One Gigabit Ethernet SFP uplink ports • LAN Lite software WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100 ports and 1 dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100/1000 Ethernet port active) • LAN Lite software • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100/1000 Ethernet port active) • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100/1000 Ethernet port active) • Compact size with no fan; mounting magnet included WS-C2960-8TC-S • 8 Ethernet 10/100/1000 Ethernet port active) • Compact size with no fan; mounting magnet included WS-C2960-8TC-S C2960-24-S • 24 Ethernet 10/100 ports • 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplinks (each dual-purpose uplinks) • 24 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplink port has 1 10/100/1000 Ethernet port and 1 SFP-based Gigabit Ethernet port, 1 port active) • LAN Lite software • 24 PoE ports WS-2960-24LC-S • 24 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplinks) active)] • LAN Lite software • 8 PoE ports WS-C2960-48TT-S • 48 Ethernet 10/100 ports and 2 10/100/1000 TX uplinks • LAN Lite software WS-C2960-48TC-S • 48 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplinks (each dual-purpose uplinks) • LAN Lite software WS-2960-48PST-S • 48 Ethernet 10/100 ports and 2 10/100/1000 uplinks and 2 SFP uplinks • LAN Lite software • 48 PoE ports Spare RCKMNT-1RU= • 1 RU recessed rack-mount kit for the Cisco Catalyst 2960 and 2960-S Series Power Cords CAB-16AWG-AC AC Power Cord, 16AWG CAB-ACE AC Power Cord, 250VAC, 15A, NEMA L6-20 to C13, US CAB-ACI AC Power Cord, (Italy), C13, CEI 23-16, 2.5m CAB-ACU AC Power Cord, (UK), C13, CEI 23-16, 2.5m CAB-ACU AC Power Cord, 16AWG-AC AC Power Cord, 16AWG-AC AC Power Cord, 250VAC, 15A, NEMA L6-20 to C13, US CAB-ACI AC POWER CORD, 250VAC, 250VAC, 250VAC, 250VAC, 250VAC, 250VAC, 250VAC, 250VAC, 250VAC, BS 1363, 2.5m CAB-ACA AC Power Cord (China/Australia), C13, AS 3112, 2.5m CAB-ACS AC Power Cord (Switzerland), C13, IEC 60884-1, 2.5m CAB-ACC CORD, PWR, CHINA, 10A, IEC 320, C13(APN=CS-PWR-CH) CAB-ASY, POWER CORD, JAPAN 3P, PSE, 12A @125VAC CAB-L620P-C13-IPN Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord Europe, Right Angle CAB-ACI-RA Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord Europe, Right Angle CAB-ACI-RA Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A Power Cord. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A POWER CORD. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A POWER CORD. 250VAC. 15A, NEMA L6-20 to C13, IAPAN CAB-IND-10A POWER CORD. 250VAC. 25 Cord China, Right Angle CAB-ACA-RA Power Cord, Japan, Right Angle CAB-ACS-RA Power Cord, Japan, Right Angle CAB-ACR-RA Power Cord, Japan, Right Angle CAB-AC SFP transceiver module for MMF and SMF, 1300-nm wavelength GLC-SX-MM= 1000BASE-SX SFP transceiver module for Category 5 copper wire GLC-GE-100FX= 100BASE-FX SFP module for Gigabit Ethernet ports, 1310-nm wavelength, 2 km over MMF GLC-FE-100FX= 100BASE-FX SFP module for 100-Mb ports, 1310-nm wavelength, 2 km over MMF CAB-SM-LCSC-1M 1m fiber single-mode LC-to-SC connectors For latest information on transceivers, please go to: . 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