

# Thuyết minh thông số kỹ thuật Switch L2 Cisco WS-C2960X-48TS-L

|                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Performance & Bandwidth thông số Switch - managed - 48 10/100/1000 Gigabit Ethernet ports, 4 1G SFP uplink ports |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Mã                                                                                                               | WS-C2960X-48TS-L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Device Type                                                                                                      | Switch - 48 ports - managed - stackable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Enclosure Type                                                                                                   | Desktop, rack-mountable 1U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Subtype                                                                                                          | Gigabit Ethernet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ports                                                                                                            | 48 x 10/100/1000 + 4 x Gigabit SFP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Performance                                                                                                      | Switching capacity: 216 Gbps   Forwarding performance (64-byte packet size): 107.1 Mpps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Capacity                                                                                                         | Virtual interfaces (VLANs): 1023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Jumbo Frame Support                                                                                              | 9216 bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Max Units In A Stack                                                                                             | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Remote Management Protocol                                                                                       | SNMP 1, RMON 1, RMON 2, Telnet, SNMP 3, SNMP 2c, HTTP, TFTP, SSH, CLI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Authentication Method                                                                                            | Kerberos, Secure Shell (SSH), RADIUS, TACACS+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Features                                                                                                         | Layer 2 switching, DHCP support, auto-negotiation, ARP support, trunking, VLAN support, auto-uplink (auto MDI/MDI-X), IPv6 support, Rapid Spanning Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support, Dynamic Trunking Protocol (DTP) support, Port Aggregation Protocol (PAgP) support, Trivial File Transfer Protocol (TFTP) support, Access Control List (ACL) support, RADIUS support, Jumbo Frames support, MLD snooping, Dynamic ARP Inspection (DAI), Cisco EnergyWise technology, Unicast Reverse Path Forwarding (URPF), Uni-Directional Link Detection (UDLD), Rapid Per-VLAN Spanning Tree Plus (PVRST+), IPv4 support, Shaped Round Robin (SRR), Link Aggregation Control Protocol (LACP), Remote Switch Port Analyzer (RSPAN), NetFlow, Hot Standby Router Protocol (HSRP) support, Energy Efficient Ethernet |
| Compliant Standards                                                                                              | IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.1D, IEEE 802.1Q, IEEE 802.3ab, IEEE 802.1p, IEEE 802.3x, IEEE 802.3ad (LACP), IEEE 802.1w, IEEE 802.1x, IEEE 802.3ae, IEEE 802.1ae, IEEE 802.3az, IEEE 802.1AX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Processor                                                                                                        | : 600 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| RAM                                                                                                              | 512 MB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Flash Memory                                                                                                     | 128 MB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Status Indicators                                                                                                | Port transmission speed, port duplex mode, system, status, link/activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Expansion / Connectivity                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Interfaces                                                                                                       | 48 x 1000Base-T 10Base-T/100Base-TX/1000Base-T - RJ-45 - RJ-45   1 x console console - RJ-45 - RJ-45   1 x mini-USB console - mini-USB Type B - Type B management   1 x USB Type A   1 x 1000Base-TX 10Base-T/100Base-TX - RJ-45 - RJ-45 management   4 x SFP (mini-GBIC) - SFP uplink                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Expansion Slots                                                                                                  | 1 (total) / 1 (free) x Stacking Module slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Manufacturer Warranty                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Service & Support                                                                                                | Limited warranty - advance parts replacement - lifetime - response time: next business day   Technical support - consulting - 90 days                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Miscellaneous                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| MTBF                                                                                                             | 442,690 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Compliant Standards                                                                                              | CISPR 22 Class A, CISPR 24, EN 61000-3-2, EN 61000-3-3, EN55024, AS/NZS 60950-1, ICES-003 Class A, RoHS, FCC CFR47 Part 15, UL 60950-1 Second Edition, CSA C22.2 No. 60950-1 Second Edition, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, VCCI Class A, KN22, KN24, CNS 13438(95) Class A, EN 55022 Class A, EN 300 386                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Power                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Power Device                                                                                                     | Internal power supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Power Redundancy                                                                                                 | Optional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Voltage Required                                                                                                 | AC 120/230 V (50/60 Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Features                                                                                                         | Redundant Power System (RPS) connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Software / System Requirements                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Software Included                                                                                                | Cisco IOS LAN Base                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Environmental Parameters                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Min Operating Temperature                                                                                        | 23 °F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                           |                           |
|---------------------------|---------------------------|
| Max Operating Temperature | 113 °F                    |
| Humidity Range Operating  | 10 - 95% (non-condensing) |
| Min Storage Temperature   | -13 °F                    |
| Max Storage Temperature   | 158 °F                    |
| Humidity Range Storage    | 10 - 95% (non-condensing) |
| Dimensions & Weight       |                           |
| Width                     | 17.5 in                   |
| Depth                     | 11 in                     |
| Height                    | 1.8 in                    |
| Weight                    | 9.26 lbs                  |