Access Switch ECS2100-52T/ECS2110-26T

***Phase 1 Firmware Version 1.1.10.171***

**INTRODUCTION:**

ECS2100-52T is a Gigabit Ethernet L3-Lite switch featuring 48 ports 10/100/1000 ports, and 4 Gigabit Ethernet SFP uplink ports.

ECS2110-26T is a Gigabit Ethernet L3-Lite switch featuring 24 ports 10/100/1000 ports, and 2 10Gigabit Ethernet SFP+ uplink ports.

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| **It is recommended that one thoroughly review this release notes prior to the installation or upgrade of this product.** |

**Firmware Specification:**

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| --- | --- | --- | --- |
| **Status** | **Version No.** | **Type** | **Release Date** |
| NTC Test Version | 1.1.10.171 | CC: EC\_VOB main (2017/01/04 11AM) | 2017/01/06 |
| Deposed | 1.1.10.164 | CC: EC\_VOB main (2016/12/29 6PM) | 2016/12/30 |
| NTC Test Version | 1.1.9.164 | CC: EC\_VOB main (2016/12/09 5PM) | 2016/12/09 |
| Deposed | 1.1.8.164 | CC: EC\_VOB main (2016/12/06 4PM) | 2016/12/07 |
| Deposed | 1.1.7.164 | CC: EC\_VOB main (2016/11/23 6PM) | 2016/11/23 |
| Deposed | 1.1.6.164 | CC: EC\_VOB main (2016/11/11 6PM) | 2016/11/11 |
| Deposed | 1.1.5.164 | CC: EC\_VOB main (2016/11/08 3PM) | 2016/11/09 |
| NTC Test Version  (for SW Release) | 1.1.3.164 | CC: EC\_VOB main (2016/10/17 6PM) | 2016/10/18 |
| NTC Test Version | 0.0.3.0 | CC: EC\_VOB main (2016/9/14 12PM) | 2016/9/19 |
| NTC Test Version | 0.0.2.5 | CC: EC\_VOB main (2016/8/11 9PM) | 2016/8/12 |
| NTC Test Version | 0.0.2.3 | CC: EC\_VOB main (2016/7/19 8PM) | 2016/7/20 |
| NTC Test Version | 0.0.1.1 | CC: EC\_VOB main (2016/5/6 5PM) | 2016/5/6 |

**LOADER:**

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| **Status** | **Version No.** | **Type** | **Release Date** |
| Testing Version | 1.0.0.5 |  | 2016/11/09 |
| Testing Version | 1.0.0.4 |  | 2016/10/17 |
| Deposed | 1.0.0.3 | - | 2015/9/19 |
| Testing Version | 1.0.0.2 | - | 2015/8/18 |
| Testing Version | 1.0.0.1 | - | 2015/7/20 |
| Testing Version | 1.0.0.0 | - | 2015/6/23 |
| Testing Version | 0.0.1.0 | - | 2015/3/14 |

**HARDware compatibility:**

ALL

**BootPROM compatibility:**

ALL

**Network Management Software Support:**

|  |  |  |
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| **NMS Platform** | **Version No.** | **Module No.** |
| TBD |  |  |

If you install this image, you may not have control of all of the latest features of this product until the next version(s) of network management software. Please review the software release notes for your specific network management platform for details.

**SUPPORTED FUNCTIONALITY:**

Please see the ECS4100\_ECS2110\_Phase1\_FeatureList\_20161206.xlsx

**Installation and Configuration Notes:**

In general, the ECS2110 **Switch** will be shipped to you pre-configured with this version of firmware. If you would like to upgrade an existing ECS2110 **Switch,** please follow the TFTP download instructions that are included with your firmware image upgrade kit.

**Known Bugs and Issues:**

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|  | ECS2100-52T-00014  ECS2110-26T-00114 | TraceRoute: WebUI doesn't support traceroute to hostname. (Missing Web page) |
|  | ECS2100-52T-00018  ECS2110-26T-00145 | DHCPV6 Relay: DUT suould support to configure DHCPV6 Relay setting through WEB. (Missing Web page) |
|  | ECS2100-52T-00019  ECS2110-26T-00155 | ImageMgmt: Got result "Image checksum error" when copy ftp file by FileZilla V0.9.56 beta (Not-Reproducible) |
|  | ECS2100-52T-00020  ECS2110-26T-00157 | Web: Got "No such user" message when TFTP server is not existed (Not-Reproducible) |
|  | ECS2100-52T-00022  ECS2110-26T-00200 | Nessus\_Scan: Nessus Scan found some security issues. (Under investigation) |
|  | ECS2100-52T-00024  ECS2110-26T-00208 | System: CPU is closed to 100% when 6 HTTPS sessions are connected and stayed on Dashboard. (Under investigation) |
|  | ECS2100-52T-00025  ECS2110-26T-00210 | WebMgmt: There are some vulnerability issues.(SSL: 2 Critical, 1 High, ....) (Under investigation) |
|  | ECS2100-52T-00027  ECS2110-26T-00218 | IPv6-MLD-SNP: Well-known packets can not be flooded when input unknown multicast data first. |
|  | ECS2100-52T-00028  ECS2110-26T-00219 | IPv6-MLD-SNP: Well-known packets can not be flooded when change unknown-multicast mode. |
|  | ECS2100-52T-00043 | IP-Cluster: Create inexistence member and save/reboot DUT, the member always exist. |

**Firmware Changes and Enhancements:**

The following Known Issues have been fixed in this release of firmware.

**loader code modifications:**

**Loader V1.0.0.5**

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|  | EPR N/A | 10G Port LEDs (#25,#26) are not lighting on external\_loopback\_test /Diag. |

**Loader V1.0.0.4**

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|  | EPR N/A | a. Get DRAM clock back to 300 MHz (V1.0.0.2 MEM:300MHz stable, V1.0.0.3 MEM:400MHz risky)  b. Add BID=4 (fan-less 52T), doing exactly same HW init as BID=0 (fan-ful 52T)  c. Do not display Realtek Chip# on U-Boot messages |

**Loader V1.0.0.3**

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|  | EPR N/A | [Enhance] Update bootloader’s backdoor password (default) and enable password |
|  | ECS4100-52T-00037 | [Enhance] Support new board - ECS4100-28T: 24\*GbE + 4\*SFP(GbE) |

**Loader V1.0.0.2**

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|  | EPR N/A | (Diag) external\_loopback\_test fails (SFP port linkdown) after internal\_loopback\_test is executed. |

**Loader V1.0.0.1**

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|  | ECS2110-26T-00196 | [Enhance] Support for new sku ECS2110-26T-ME, additional DC power & 6KV surge protection (New BID=2 for 26T-ME) |

**Loader V1.0.0.0 / V0.0.3.4**

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|  | EPR N/A | a. [Enhance] Reduce DRAM operational clock, 400 -> 300 MHz (V0.0.3.4+)  b. [Bug] Reverse Port LED lighting - green for 10/100M link, amber for 1000M link (V1.0.0.0+) |

**runtime code modifications:**

**(ECS2110) Runtime V1.1.10.171, Loader 1.0.0.5**

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|  | EPR | Headline | Role |
|  | ECS2100-52T-00048 | RADIUS-Acct: The console and Web of accounting information that is mismatch | NTC |
|  | ECS2100-52T-00049 | Web: DUT support function in site map is incorrect. | NTC |
|  | ECS2100-52T-00050 | Diffserv: We suggest remove IP DSCP remark. | NTC |
|  | ECS2100-52T-00052 | CLI: Please rename "Excutes" to "Execute" about cable-diagnostics. | NTC |
|  | ECS2100-52T-00053 | storm control maximum and minimum threshold is incorrect | Custom |
|  | ECS2100-52T-00057 | System(Diag) LED stays in amber steady when system is operational normally. | RD |

**(ECS2110) Runtime V1.1.10.164, Loader 1.0.0.5**

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|  | EPR | Headline | Role |
|  | ECS2100-52T-00054 | The fan speed does not have controlled by system, it's always full speed. | TS |

**(ECS2110) Runtime V1.1.9.164, Loader 1.0.0.5**

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|  | EPR | Headline | Role |
|  | ECS2100-52T-00046 | Spanning-tree: We cannot enable the STP mode from WEB. | NTC |

**(ECS2110) Runtime V1.1.8.164, Loader 1.0.0.5**

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| --- | --- | --- | --- |
|  | EPR | Headline | Role |
|  | ECS2100-52T-00045 | (ECR) Downgrade some chip-specific capabilities, 9x -> 8x   1. TCAM rules : 2048 rules for 16 groups (Ingress & Egress) -> 1536 rules for 12 groups (ingress only), where 128 rules per group 2. L2 Multicast Table : 4095 -> 511 groups 3. Link Aggregation : 16 -> 8 trunks 4. Jumbo Frame : 12K -> 10K bytes 5. DiffServ - egress policy map : supported -> not-supported 6. ACL - Egress : supported -> not-supported | RD |

**(ECS2110) Runtime V1.1.7.164, Loader 1.0.0.5**

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|  | EPR | Headline | Role |
|  | ECS2100-52T-00039 | MLDSNP: DUT forwards about 50% multicast data when learn maximum groups. | NTC |
|  | ECS2100-52T-00040 | IP-Cluster: Commander auto reboots after it logs off member switch. | NTC |
|  | ECS2100-52T-00042 | IP-Cluster: There is no help page for IP-Cluster. | NTC |
|  | ECS2100-52T-00044 | IGMP-SNP: After remove vlan, an exception occurs. | NTC |
|  | ECS4100-52T-00053 | ""empty log message in log ram/flash when inject DHCP ACK packet to DHCPSNP trust port | TS |
|  | ECS4100-52T-00069 | switch with stack can't display config complete via SSH | TS |

**(ECS2110) Runtime V1.1.6.164, Loader 1.0.0.5**

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| --- | --- | --- | --- |
|  | EPR | Headline | Role |
|  | ECS2100-52T-00037 | IP-Cluster: We can't manage member via telnet. | NTC |
|  | ECS2100-52T-00038 | IP-Cluster: IP Cluster Web Management Failed | NTC |

**(ECS2110) Runtime V1.1.5.164, Loader 1.0.0.5**

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|  | EPR | Headline | Role |
|  | ECS2100-52T-00036 | [Enhance] Support IP Cluster | RD |
|  | ECS4100-52T-00062 | [Enhance] Hide the option for copying sw license file | RD |
|  | EPR | Headline | Role |
|  | ECS2100-52T-00033 | MLDSNP: Forwarding rate of some UDP well known packets is very poor. | NTC |

**(ECS2110) Runtime V1.1.3.164, Loader 1.0.0.4**

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|  | EPR | Headline | Role |
|  | ECS4100-52T-00043 | 52T System(Diag) LED stays in amber steady when system is operational normally. | RD |

**(ECS4100) Runtime V1.1.1.163, Loader 1.0.0.1**

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|  | EPR | Headline | Role |
|  | ECS2110-26T-00221  ECS2100-52T-00031 | CoS: Change cos-queue mapping, the data receive ratio is not changed. | NTC |
|  | ECS2110-26T-00162 | [QinQ]TPID is not modified when traffic comes from normal port to QinQ uplink port | RD |
|  | ECS4100-52T-00003 | [Enhance] Porting the switch protection with software license from AOS | RD |
|  | ECS4100-52T-00013  ECS4100-52T-00019 | Running-config shows an incredible static route 224.0.0.0 at default system-boot-up.  remove useless command "ip route 224.0.0.0 240.0.0.0 0.0.0.0" on running-config | RD  TS |
|  | ECS4100-52T-00016 | spanning-tree blocking port does not discard ipv4 mdns packet | TS |
|  | ECS4100-52T-00030 | HelpPage: The unsupported feature is still existing on help page. | NTC |

**(ECS4100) Runtime V1.1.0.163, Loader 1.0.0.3**

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|  | EPR | Headline | Role |
|  | ECS2110-26T-00204 | DQoS: The default priority is not modifying when the port had once the authenticated. | NTC |
|  | ECS2110-26T-00215 | 802.1XDQoS: The DUT will permit the supplicant when the attribute is wrong configure. | NTC |
|  | ECS4100-52T-00014 | Running-config shows "ip igmp snooping vlan 1" at default system-boot-up. | RD |
|  | ECS4100-52T-00038 | DHCP Snooping stops forwarding DHCP discover packets if mac-table is full. | TS |

**(ECS2110) Runtime V0.0.3.0, Loader 1.0.0.3**

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|  | EPR | Headline | Role |
|  | ECS2110-26T-00156 | Web: Got "Data is invalid" when another copy ftp is run. | NTC |
|  | ECS2110-26T-00175 | Transceiver: Got debugging message "SFP 2 unknown sfp type:0x2" and got "checksum error" information | NTC |
|  | ECS2110-26T-00206 | Syslog: restartControl by cold start (SNMP) will send warm start trap. | NTC |
|  | ECS2110-26T-00220 | SNMP: We can't get the value of switchMgt on ECS2110-26T-ME. | NTC |
|  | ECS2110-26T-00223 | enabled proxy-switching still reply the IGMP querier when MVR source port receive the join report | TS |
|  | ECS2100-52T-00001  ECS2100-52T-00002  ECS2100-52T-00003  ECS2100-52T-00004  ECS2100-52T-00005  ECS2100-52T-00006  ECS2100-52T-00007  ECS2100-52T-00008  ECS2100-52T-00009  ECS2100-52T-00010  ECS2100-52T-00011  ECS2100-52T-00012  ECS2100-52T-00013 | [ECR] Remove IP Subnet-based VLAN  [ECR] Remove GARP/GVRP  [ECR] Remove DHCPv6 Snooping  [ECR] Remove IPv6 Source Guard  [ECR] Remove Network Access - Link Detection  [ECR] Remove DHCP Server  [ECR] Remove MVR and MVR6  [ECR] Remove selective QinQ  [ECR] Remove Remove L2 Protocol Tunneling  [ECR] Remove 802.3ah EFM  [ECR] Remove 802.1ag CFM  [ECR] Remove PPPoE Intermediate Agent  [ECR] Remove L2 Packet Filtering | RD |
|  | ECS4100-52T-00012  ECS4100-52T-00018 | Running-config shows LLDP PoE-specific settings on each port at factory defaults.  useless commands "no lldp dot3-tlv poe" "no lldp dot3-tlv poe" in running-config | RD  TS |
|  | ECS4100-52T-00017 | loopback detection does not detect traffic loop because of ipv4 mdns packet | TS |

**(ECS2110) Runtime V0.0.2.5, Loader 1.0.0.1**

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|  | EPR | Headline | Role |
|  | ECS2110-26T-00094 | SNMP/MIB and Web miss the "Linux Kernel Version" item. | RD |
|  | ECS2110-26T-00125 | MVR:Groups belong to MVR profile can not be registered on normal port. | NTC |
|  | ECS2110-26T-00131 | MVR: Inactive receiver port would forward data to source port and receiver port. | NTC |
|  | ECS2110-26T-00156 | Web: Got "Data is invalid" when another copy ftp is run. | NTC |
|  | ECS2110-26T-00196 | [Enhance] Support for new sku ECS2110-26T-ME, additional DC power | Custom |
|  | ECS2110-26T-00197 | switch can't dynamic learn mrouter port when enable MVR | TS |
|  | ECS2110-26T-00198 | [Enhance] Add Web help pages (prepared by TW using v0.0.2.0) to CC | RD |
|  | ECS2110-26T-00199 | MVR: Group can not be deleted when registered port received leave report in transparent mode. | NTC |
|  | ECS2110-26T-00201 | TACACS+: The DUT will reboot automatically when user logins the DUT by TACACS account, but the TACACS key is mismatch. | NTC |
|  | ECS2110-26T-00202 | StaticRoute: Source MAC in routing packets is not DUT's MAC address. | NTC |
|  | ECS2110-26T-00203 | EFM-OAM: When we start/stop remote loopback, it can't start again. | NTC |
|  | ECS2110-26T-00205 | There is no WEB help page. | NTC |
|  | ECS2110-26T-00207 | System: DUT cannot forward the IGMP general Querier to host on v0.0.2.3. | NTC |
|  | ECS2110-26T-00209 | WebAuth: When quiet period is set to 30 seconds, it shows "You are allowed to re-login after 0 minutes." | NTC |
|  | ECS2110-26T-00213 | [enhance] support mDNS | RD |

**(ECS2110) Runtime V0.0.2.3, Loader 1.0.0.0**

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|  | EPR | Headline | Role |
|  | ECS2110-26T-00183 | [enhance] remove phy internal loopback test. | RD |
|  | ECS2110-26T-00186 | [enhance] display total flash size in CLI 'dir' command for EC products. | RD |
|  | ECS2110-26T-00187 | [enhance] MVR redesign in ES3528MV2 Ph5 branch -> EC main | RD |
|  | ECS2110-26T-00193 | [Enhance] Disable those unused 25M output clocks in RTL839x (52T only) | RD |
|  | ECS2110-26T-00195 | [Enhance] Enable BCAM from L2 lookup table | RD |

**(ECS2110) Runtime V0.0.1.1, Loader 0.0.1.0**

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|  | EPR | Headline | Role |
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**Known RESTRICITIONS AND Limitations:**

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| 1 | L2 table (16K entries) share for L2 unicast, L2 multicast, IPv4 multicast, IPv6 multicast, Routing. |
| 2 | For all Basic Switching Unit-Test items of the half duplex, the counter of fragments would increase the same number/speed as the counter, collisions on IXIA.  It is confirmed by Realtek Josh. It is chip normal behaviour which follows the standard.  RTK use the “Collision based backpressure” of flow control (backpressure) on half mode. It will send the jam pattern packet to do the flow control. |
| 3 | Due to chip limitation, do not support Port-based QoS. |
| 4 | Chip limitation: Not supported for global ACK, which was known as “VLAN ACL” before. |
| 5 | Chip limitation: MAC ACL does not allow for configuring any IP/IPv6 pattern. |
| 6 | Chip limitation: Supports for mapping CoS/DSCP to PHB (or Internal Priority) and then to Queue. But CoS/DSCP-to-PHB mapping also changes a packet's trap-to-cpu queue.  Therefore, SW design decides to remove CoS/DSCP-to-PHB mapping, causing straight CoS/DSCP-to-Queue mapping on user configuration. [ECS2000-28PP-00344]  Note: The implementation gets to be partially compliant with RFC 2597/2598.  Implemented the CLI command: “Console(config-if)#[no] qos map {cos-queue | dscp-queue}”, for ethernet inferface only. |
| 7 | Chip limitation: Ingress/Egress DiffServ poorly supports for SRTCM/TRTCM remarking.  1) Meter burst size is global setting, instead of per-police. => So hard to meet various SRTCM/TRTCM cases.  2) Ingress rule does not support for color action and CoS/DSCP remarking. => Has to additionally use egress rule.  3) Egress ACL action is global for DLF/broadcast/multicast traffic, however, per-port for unicast. => DLF/broadcast/multicast will not be matched with port list.  Therefore, SW design decides to only implements flow rate-limiting. [ECS2110-26T-00034]  Implemented the CLI command: “Console(config-pmap-c)#[no] police rate *<16-10000000 Kbps>*”.  Besides, DiffServ ingress policy-map can remark CoS only. When a police is configured to remark DSCP, it shall be rejected while binding to port. |
| 8 | Chip limitation: Following counters are not supported. These counters are not visible. [ECS2000-28PP-00051,00466]  IF-MIB:  Discard Input (ifInDiscards)  Unknown Protocols Input (ifInUnknownProtos)  Error Output (ifOutErrors) - RTL838x does not support this counter, however, RTL839x does.  QLen Output (ifOutQLen)  EtherLike-MIB:  Alignment Errors (dot3StatsAlignmentErrors)  SQE Test Errors (dot3StatsSQETestErrors)  Internal Mac Receive Errors (dot3StatsInternalMacReceiveErrors)  Carrier Sense Errors (dot3StatsCarrierSenseErrors) |
| 9 | Chip limitation: Cable diagnostics can detect cable length up to 100 meters with an inaccuracy around 15 meters. |
| 10 | Chip limitation: Jumbo frame is supported by system, instead of per port. |
| 11 | Chip limitation: Voice VLAN can not support for remarking DSCP priority (because rule action can not remark CoS and DSCP at the same time). [ECS2000-28PP-00041] |
| 12 | Chip and HW board limitations: When an SFP transceiver is inserted, CPU will take some more time to have it initialized. This will lead to slow system response. |
| 13 | Chip limitation: Not supported for false carrier events ‘rpMauFalseCarriers’ in MAU-MIB. The counter value will always stay in 0. |
| 14 | Chip limitation: The collision mac-address is not affordable. |
| 15 | Chip limitation: Not supported for changing the priority of multicast traffic in IGMPSNP/MVR/MVR6. [ECS2000-28PP-00341, ECS2110-26T-00064,76,129] |
| 16 | Chip limitation: One single reason for trap-to-cpu of protocol packets, like BPDU/LACP/LLDP/dot1X (because all of these packets go through queue #5). |
| 17 | Chip limitation: IPv4 standard ACL and IPv4 extended ACL are implemented using a same rule slice. Their entries share the total 128 rules in the slice. |
| 18 | Chip limitation: IPv6 standard ACL and IPv6 extended ACL are implemented using a same rule slice. Their entries share the total 64 rules in the slice. |
| 19 | Chip limitation: Not supported for GVRP bypass VLAN check in RTL839x, but supported in RTL838x.  (Supported for BPDU/LACP/LLDP bypass VLAN check in 8x [ECS2000-28PP-000147]. 9x as well.).  Therefore, when a receive port does not join PVID VLAN and its VLAN ingress filter is enabled, GVRP does not work (GVRP packet is dropped by chip). |
| 20 | Chip limitation: MAC-based VLAN can not work with IP Source Guard. [ECS2000-28PP-00321] |
| 21 | Chip limitation: Internal loopback test does not work on 10G SFP+ ports (port# 25,26) in ECS2110-26T device because of no PHY chip there. |
| 22 | Chip limitation: When a port is linkup at 10 Mbps speed, cable diagnostics is not supported. [ECS2110-26T-00055] |
| 23 | Chip limitation: L2 hashing algorithm (algo\_1) will get to observable collisions when both Source MAC address and VLAN ID are incremental successively.  However, when only SA is random (no matter if VID is fixed, incremental, or random), L2 hashing will have very good performance. |
| 24 | Chip limitation: L2 table can contain up to (16K + 64) entries because BCAM (extension table with additional 64 entries) is enabled. [ECS2110-26T-00211, ECS2100-52T-00032] |
| 25 | Chip limitation: When a packet is mirrored to mirroring port due to one port’s rx and the other port’s tx, only one packet (i.e. the copy of that rx) will be copied to mirroring port. [ECS4100-52T-00046] |
| 26 | Chip limitation: There is only 1 copy, which is from the port with smallest port id, for mirroring non-unicast in egress dirextion(tx). [ECS2100-10P-ACN-00022] |

**Compliance support:**

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| **Compliance Level** | **Compliant** |
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Known Anomalies: None.

**IEEE Standards Support:**

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| **Standard** | **Title** |
| IEEE 802.1D | Transparent Bridging Specifications (ISO/IEC 10038) |
| IEEE 802.1p | Traffic Class Expediting and Dynamic Multicast Filtering |
| IEEE 802.1Q | Virtual Bridged Local Area Networks |
| IEEE 802.1w | Rapid Spanning Tree |
| IEEE 802.2 | Local Area Networks, Logical Link Control (LLC) |
| IEEE 802.3 | CSMA/CD 9 (ISO/IEC 8802-3) |
| IEEE 802.3I | 10Base-T (ISO/IEC 8802-3, clause 14) |
| IEEE 802.3u | 100Base-TX (ISO/IEC 8802-3, clause 25) |
| IEEE 802.3x | Flow Control |
| IEEE 802.3z | 1000Base-SX, 1000Base-LX |
| IEEE 802.3ab | 1000Base-TX |
| IEEE 802.3ac | VLAN Tag |
| IEEE 802.3ad | Link Aggregation |
| IEEE 802.1X | Port-based Network Access Control |

**IETF Standards MIB Support:**

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| **RFC No.** | Title | **Groups Supported** |
| 1907 | SNMPv2-MIB (MIB II) | - system group ( 1-9)  - snmp group (1-6, 8-22, 24-32) |
| 2011 | IP-MIB (MIB-II) | - ip group (1-20, 22-23) - icmp group (1-26) |
| 2012 | TCP-MIB (MIB-II) | - tcp group (1-15)(tcpConnTable only support read.) |
| 2013 | UDP-MIB (MIB-II) | - udp group (1-5) |
| IEEE  802.1X MIB | IEEE8021-PAE-MIB | - dot1xPaeSystem (1-2)  - dot1xPaeAuthenticator (1-3)(not support per-port timer setting) |
| 1493 | Bridge MIB | - dot1dBase group (1-4) - dot1dStp group (1-15) - dot1dTp group (1-4) - dot1dStatic group (1) |
| 2863 | Interfaces Evolution MIB (IF-MIB) | - interface group (1-2) (ifadminStatus not support set to 3(testing))  - ifXTable group (1) - ifStackTable group (1)(support  read-only) |
| 2819 | RMON MIB | - statistics group (1) - history group (1-2) - alarm group (1) - event group (1-2) |
| 2618 | RADIUS MIB | - radiusAuthClientMIB (1) |
| 2665 | Etherlike MIB | - dot3StatsTable group (1-19) |
| 2737 | Entity MIB | * entityPhysical group (1-16)   (support read-only) |
| 2674 | P-bridge | - dot1dExtBase group (1-4) - dot1dPriority group (1,3)  - dot1dGarp group (1) |
| 2674 | Q-bridge | - dot1qBase group (1-5) - dot1qTp group (1-2) - dot1qStatic group(1) - dot1qVlan (1-5) (9-10) |
| V-Bridge MIB | V-Bridge MIB | - dot1vProtocol group |
| 3636 | MAU MIB | * dot3IfMauBasicGroup * dot3IfMauAutoNegGroup |

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| 1612 | DNS Reslover MIB | * dnsServConfig * dnsServCounter * dnsServCounterAuthAns * dnsServCounterAuthNoNames * dnsServCounterAuthNoDataResps * dnsServCounterNonAuthDatas * dnsServCounterNonAuthNoDatas * dnsServCounterReferrals * dnsServCounterErrors * dnsServCounterRelNames * dnsServCounterReqRefusals * dnsServCounterReqUnparses * dnsServCounterOtherErrors * dnsServOptCounter * dnsResMIBObjects * dnsResConfig * dnsResCounter * dnsResCache * dnsResCacheStatus * dnsResCacheMaxTTL * dnsResCacheGoodCaches * dnsResCacheBadCaches * dnsResOptCounter |
| 3411 | SNMP FrameWork | * snmpFrameworkMIBObjects |
| 3412 | SNMP MPD MIB | * snmpMPDMIBObjects |
| 3413 | SNMP Target MIB | * snmpTargetObjects |
| 3413 | SNMP Notify MIB | * SnmpNotifyObjects * snmpNotifyTable * usmMIBObjects |
| 3415 | SNMP View-Based ACM MIB | * vacmMIBObjects * Private MIB * switchMgt * portMgt * trunkMgt * lacpMgt * staMgt * tftpMgt * restartMgt * mirrorMgt * igmpSnoopMgt * ipMgt * bcastStormMgt * vlanMgt * priorityMgt * trapDestMgt * qosMgt * securityMgt * sysLogMgt * lineMgt |

**ECS2110 Private Enterprise MIB Support:**

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| --- | --- |
| **Title** | Version |
| ECS2110-Series.mib | 201612270000Z |

**SNMP Trap Support:**

|  |  |
| --- | --- |
| **RFC No.** | **Title** |
| RFC 1215 | ColdStart (v1) warmStart (v1) linkDown (v1) linkUp (v1) authenticationFailure (v1) |
| RFC 1907 | coldStart (v2c) warmStart (v2c) authenticationFailure (v2c) |
| RFC 2863 | linkDown (v2c) linkUp (v2c) |
| RFC 1493 | newRoot (v1) topologyChange (v1) |
| RFC 1757 | risingAlarm (v1)  fallingAlarm (v1) |
| RFC 2819 | risingAlarm (v2c) fallingAlarm (v2c) |

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