

**RTL9075AAD-V2-V3-GR**

**RTL9072AAD-V2-V3-GR**

**RTL9068AAD-V2-V3-GR**

**RTL9075AAD-VA-GR**

**RTL9072AAD-VA-GR**

**RTL9068AAD-VA-GR**

SINGLE-CHIP AUTOMOTIVE ETHERNET SWITCH CONTROLLER WITH 100BASE-T1/1000BASE-T1 TRANSCEIVER

**Automotive Switch Tool JSON Configuration Datasheet**

(CONFIDENTIAL: Development Partners Only)

Rev. 1.10

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|  |  |
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**USING THIS DOCUMENT**

This document is intended for the software engineer’s reference and provides detailed programming information.

Though every effort has been made to ensure that this document is current and accurate, more information may have become available subsequent to the production of this guide.

**REVISION HISTORY**

| Revision | Release Date | Summary |
| --- | --- | --- |
| 1.0 | 2020/03/31 | Formal release |
| 1.1 | 2020/09/30 | 1. Add "2.2 TabStacking" and "2.3 GlobalPtp9075" 2. Modify "2.8 GlobalAcl906x", "2.10 GlobalVlan" and "3.3 PortQos" |
| 1.2 | 2020/10/16 | 1. Modify "2.10 GlobalVlan" |
| 1.3 | 2020/11/06 | 1. Modify "2.4 GlobalMirror906x" 2. Modify "2.1 TabGeneral" 3. Add "2.6 GlobalSleep" |
| 1.4 | 2020/12/02 | 1. Add the special note in "1.2 Comparisons between V3 and VA" 2. Add "2.8.4 EntryAclAggreList" of "2.8 GlobalAcl906x" |
| 1.5 | 2020/12/11 | 1. Modify "2.7 GlobalReg" 2. Modify "2.4 GlobalMirror906x" 3. Add "3.5 PortStormControl" |
| 1.6 | 2020/12/31 | 1. Modify "2.6 GlobalSleep" 2. Add objects of "3.1 PortGeneral" 3. Add objects of "2.4 GlobalMirror906x" 4. Add "3.6 PortIsolation" |
| 1.7 | 2021/01/15 | 1. Add objects of "2.12 GlobalRouting" |
| 1.8 | 2021/02/04 | 1. Add objects of "2.3 GlobalPtp9075" 2. Add objects of "2.4 GlobalMirror906x" 3. Add objects of "2.12 GlobalRouting" |
| 1.9 | 2021/02/26 | 1. Add a field to describe the attribute of the object 2. Remove the unnecessary objects of "2.4 GlobalMirror906x" 3. Revise "2.3 GlobalPtp9075", "2.4 GlobalMirror906x", "2.8.5 EntryAclList", "3.1 PortGeneral" and "3.4 PortTraffic" 4. Add "2.14 GlobalFrer", "2.15 GlobalPsfp" and "2.16 GlobalPhyMaster" |
| 1.10 | 2021/03/19 | 1. Change the attributes of objects in "3.1 PortGeneral" 2. Add the objects of "3.2 PortVlan" |

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1. General Description

Automotive Switch Tool JSON configuration file is used to save all configured settings on Automotive Switch Tool. Users can easily restore all the settings by importing this JSON file every time when the tool is opened. This JSON file can also be modified manually without opening the tool so that external application can generate/modify the content by following the format if any requirement of switch setting is changed.

This document introduces the JSON format that Automotive Switch Tool can recognize and process, supported switch and tool version:

|  |  |
| --- | --- |
| **Automotive Ethernet Switch** | RTL9075AV2/RTL9072AV2/RTL9068AV2  RTL9075AV3/RTL9072AV3/RTL9068AV3 |
| **Automotive Switch Tool** | v2.1.5.17.0 - v2.1.5.25.0 |

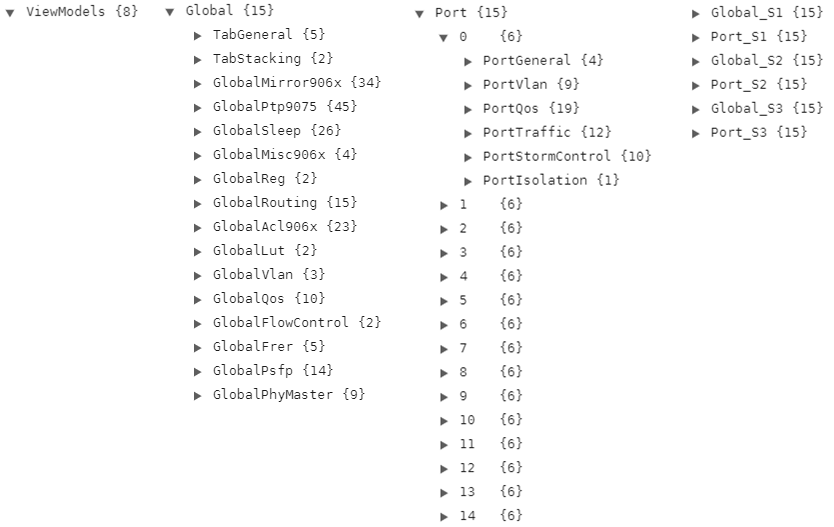
|  |  |
| --- | --- |
| **Automotive Ethernet Switch** | RTL9075VA/RTL9072VA/RTL9068VA |
| **Automotive Switch Tool** | v2.1.6.0.0 - v2.1.6.15.0 |

* 1. Structure

Thru editing JSON file, the functions listed below are configurable:

|  |  |
| --- | --- |
| **Settings** | **Properties in JSON** |
| Chip version, interface | TabGeneral |
| Stacking | TabStacking |
| Global Settings: Mirroring | GlobalMirror906x |
| Global Settings: PTP | GlobalPtp9075 |
| Global Settings: Sleep and Wakeup | GlobalSleep |
| Global Settings: Test Mode | GlobalMisc906x |
| Global Settings: Register value modification | GlobalReg |
| Global Settings: Routing | GlobalRouting |
| Global Settings: ACL | GlobalAcl906x |
| Global Settings: L2 table | GlobalLut |
| Global Settings: VLAN | GlobalVlan |
| Global Settings: QoS | GlobalQos |
| Global Settings: Flow Control | GlobalFlowControl |
| Global Settings: 802.1CB Frame Replication and Elimination for Reliability (Stream Identification) | GlobalFrer |
| Global Settings: 802.1Qci Per-Stream Filtering and Policing | GlobalPsfp |
| Port Settings: Port Properties (Port interface, PHY role, RGMII Tx/Rx delay, xMII LDO Voltage, etc) | PortGeneral |
| Port Settings: VLAN | PortVlan |
| Port Settings: QoS | PortQos |
| Port Settings: 802.1Qbv Enhancements for Scheduled Traffic | PortTraffic |
| Port Settings: Storm Control | PortStormControl |
| Port Settings: Port Isolation | PortIsolation |

The diagram shows global structure of JSON configuration file. Please follow this structure to generate/modify JSON configuration. The format details of each function are showed in following chapters.



* 1. Comparisons between V3 and VA

**Note:** The two versions of JSON files can't be mixed. If mixed, there will be something wrong with this case.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | VA v2.1.6.15.0 | V3 v2.1.5.25.0 |
| ViewModels | Global | TabGeneral | SavedChip |  |  | o | o |
|  | Global\_S1 |  | SavedIF |  |  | o | o |
|  | Global\_S2 |  | ConfigOutputPath |  |  | o | o |
|  | Global\_S3 |  | JSON\_Version |  |  | o | o |
|  |  |  | EtherDis |  |  | o | x |
|  |  | TabStacking | GroupID |  |  | o | o |
|  |  |  | EntryStackingList | Model |  | o | o |
|  |  |  |  | MAC Address |  | o | o |
|  |  |  |  | isMaster |  | o | o |
|  |  |  |  | Unit ID |  | o | o |
|  |  |  |  | S0 Link To |  | o | o |
|  |  |  |  | S1 Link To |  | o | o |
|  |  | GlobalMirror906x | MirroredRxPorts |  |  | x | o |
|  |  |  | MirroredTxPorts |  |  | x | o |
|  |  |  | BlockedFwPortMask |  |  | x | o |
|  |  |  | SelectedPortBasedMirrorNo |  |  | x | o |
|  |  |  | SelectedPortBasedMirrorPort |  |  | x | o |
|  |  |  | SelectedMirrorNo |  |  | x | o |
|  |  |  | IsMirrorFilterOn |  |  | x | o |
|  |  |  | SelectedPortBasedMirrorPort\_1 |  |  | o | o |
|  |  |  | MirroredRxPorts\_1 |  |  | o | o |
|  |  |  | MirroredTxPorts\_1 |  |  | o | o |
|  |  |  | IsMirrorFilterOn\_1 |  |  | o | o |
|  |  |  | InputSampleRate\_1 |  |  | o | o |
|  |  |  | SelectedRSPAN\_Action\_1 |  |  | o | o |
|  |  |  | InputTPID\_1 |  |  | o | o |
|  |  |  | InputCFI\_1 |  |  | o | o |
|  |  |  | InputTagVID\_1 |  |  | o | o |
|  |  |  | IsRSPAN\_Check\_1 |  |  | o | o |
|  |  |  | InputCheckVID\_1 |  |  | o | o |
|  |  |  | SelectedPortBasedMirrorPort\_2 |  |  | o | o |
|  |  |  | MirroredRxPorts\_2 |  |  | o | o |
|  |  |  | MirroredTxPorts\_2 |  |  | o | o |
|  |  |  | IsMirrorFilterOn\_2 |  |  | o | o |
|  |  |  | InputSampleRate\_2 |  |  | o | o |
|  |  |  | SelectedRSPAN\_Action\_2 |  |  | o | o |
|  |  |  | InputTPID\_2 |  |  | o | o |
|  |  |  | InputCFI\_2 |  |  | o | o |
|  |  |  | InputTagVID\_2 |  |  | o | o |
|  |  |  | IsRSPAN\_Check\_2 |  |  | o | o |
|  |  |  | InputCheckVID\_2 |  |  | o | o |
|  |  |  | IsMirrorTopologyEnable\_1 |  |  | o | x |
|  |  |  | EgressPortsEnable\_1 |  |  | o | x |
|  |  |  | MirroringTopologySet\_1 |  |  | o | x |
|  |  |  | IsMirrorTopologyEnable\_2 |  |  | o | x |
|  |  |  | EgressPortsEnable\_2 |  |  | o | x |
|  |  |  | MirroringTopologySet\_2 |  |  | o | x |
|  |  |  | MirrorTopologyEnable\_1 |  |  | o | x |
|  |  |  | MirroringTopologyTxt\_1 |  |  | o | x |
|  |  |  | MirrorTopologyEnable\_2 |  |  | o | x |
|  |  |  | MirroringTopologyTxt\_2 |  |  | o | x |
|  |  | GlobalPtp9075 | Slave0JoinedPtpPorts |  |  | o | o |
|  |  |  | Slave1JoinedPtpPorts |  |  | o | o |
|  |  |  | Slave2JoinedPtpPorts |  |  | o | o |
|  |  |  | SelectedEnableSync |  |  | o | o |
|  |  |  | SelectedBasicMode |  |  | o | o |
|  |  |  | SelectedSlave0 |  |  | o | o |
|  |  |  | SelectedSlave1 |  |  | o | o |
|  |  |  | SelectedSlave2 |  |  | o | o |
|  |  |  | Slave0Domain |  |  | o | o |
|  |  |  | Slave1Domain |  |  | o | o |
|  |  |  | Slave2Domain |  |  | o | o |
|  |  |  | Slave0Pri |  |  | o | o |
|  |  |  | Slave1Pri |  |  | o | o |
|  |  |  | Slave2Pri |  |  | o | o |
|  |  |  | SyncInterval |  |  | o | o |
|  |  |  | pdelayReq |  |  | o | o |
|  |  |  | SelectedGPIOB1 |  |  | o | o |
|  |  |  | SelectedGPIOB2 |  |  | o | o |
|  |  |  | GPIOB1 |  |  | o | o |
|  |  |  | GPIOB2 |  |  | o | o |
|  |  |  | SendPdelayReq |  |  | o | x |
|  |  |  | AssignPriority |  |  | o | x |
|  |  |  | AsCapableMaskDef |  |  | o | x |
|  |  |  | DelayTh\_Sec |  |  | o | x |
|  |  |  | DelayTh\_NanoSec |  |  | o | x |
|  |  |  | PortNumRemappingEnable |  |  | o | x |
|  |  |  | PortNumRemapping |  |  | o | x |
|  |  |  | OneStepTx0 |  |  | o | x |
|  |  |  | OneStepTx1 |  |  | o | x |
|  |  |  | OneStepTx2 |  |  | o | x |
|  |  |  | SignalEnableDomain0 |  |  | o | x |
|  |  |  | SignalEnableDomain1 |  |  | o | x |
|  |  |  | SignalEnableDomain2 |  |  | o | x |
|  |  |  | VlanSupport0 |  |  | o | x |
|  |  |  | VlanSupport1 |  |  | o | x |
|  |  |  | VlanSupport2 |  |  | o | x |
|  |  |  | VlanSupportVID0 |  |  | o | x |
|  |  |  | VlanSupportVID1 |  |  | o | x |
|  |  |  | VlanSupportVID2 |  |  | o | x |
|  |  |  | PacketDestAddrEnable |  |  | o | x |
|  |  |  | PacketDestAddr |  |  | o | x |
|  |  |  | PacketEtherTypeEnable |  |  | o | x |
|  |  |  | PacketEtherType |  |  | o | x |
|  |  |  | NoSyncRecovery |  |  | o | x |
|  |  |  | OverwriteClockID |  |  | o | x |
|  |  | GlobalSleep | SelectedSleepWakeConfig |  |  | o | x |
|  |  |  | WholeChipSleep |  |  | o | x |
|  |  |  | SelectedOPLocalState |  |  | o | x |
|  |  |  | SelectedOPGlobalState |  |  | o | x |
|  |  |  | SelectedRemoteWake |  |  | o | x |
|  |  |  | SelectedRemotWakePorts |  |  | o | x |
|  |  |  | SleepWakePorts |  |  | o | x |
|  |  |  | OPLocalStatePorts |  |  | o | x |
|  |  |  | RemoteWakePorts |  |  | o | x |
|  |  |  | TC10SC\_Ports |  |  | o | x |
|  |  |  | AcceptLP\_Ports |  |  | o | x |
|  |  |  | ForwardSR\_Ports |  |  | o | x |
|  |  |  | WholeChipS\_Ports |  |  | o | x |
|  |  |  | ForwardLP\_Ports |  |  | o | x |
|  |  |  | DisableRWD\_Ports |  |  | o | x |
|  |  |  | RemoteWakeEnable |  |  | o | x |
|  |  |  | RemoteWakePorts\_0 |  |  | o | x |
|  |  |  | RemoteWakePorts\_1 |  |  | o | x |
|  |  |  | RemoteWakePorts\_2 |  |  | o | x |
|  |  |  | RemoteWakePorts\_3 |  |  | o | x |
|  |  |  | RemoteWakePorts\_4 |  |  | o | x |
|  |  |  | RemoteWakePorts\_5 |  |  | o | x |
|  |  |  | RemoteWakePorts\_6 |  |  | o | x |
|  |  |  | RemoteWakePorts\_7 |  |  | o | x |
|  |  |  | RemoteWakePorts\_8 |  |  | o | x |
|  |  |  | RemoteWakePorts\_9 |  |  | o | x |
|  |  |  | RemoteWakePorts\_10 |  |  | o | x |
|  |  | GlobalMisc906x | PhyId |  |  | o | o |
|  |  |  | TestMode |  |  | o | o |
|  |  |  | Is1000BaseT1 |  |  | o | o |
|  |  |  | Is1000BaseT1Master |  |  | o | o |
|  |  | GlobalReg | AddRegType |  |  | o | o |
|  |  |  | EntryRegList | RegAddr |  | o | o |
|  |  |  |  | DefaultRegVal |  | o | o |
|  |  |  |  | ConfigRegVal |  | o | o |
|  |  |  |  | RegPage |  | o | x |
|  |  |  |  | SgType |  | o | x |
|  |  |  |  | IsPageEnabled |  | o | x |
|  |  |  |  | EnabledPorts |  | o | x |
|  |  |  |  | RegType |  | o | o |
|  |  | GlobalRouting | RoutingInterfaceList | Index |  | o | o |
|  |  |  |  | Ip |  | o | o |
|  |  |  |  | IpType |  | o | o |
|  |  |  |  | Mask |  | o | o |
|  |  |  |  | Port |  | o | o |
|  |  |  |  | Vid |  | o | o |
|  |  |  |  | Mac |  | o | o |
|  |  |  | RoutingHostList | Type |  | o | o |
|  |  |  |  | Source |  | o | o |
|  |  |  |  | Destination |  | o | o |
|  |  |  |  | IpType |  | o | o |
|  |  |  |  | SPort |  | o | o |
|  |  |  |  | DPort |  | o | o |
|  |  |  |  | InterfaceIdx |  | o | o |
|  |  |  |  | NextHop |  | o | o |
|  |  |  |  | TTL |  | o | o |
|  |  |  |  | L2Index |  | o | o |
|  |  |  |  | Firewall |  | o | o |
|  |  |  | RoutingStaticList | Index |  | o | o |
|  |  |  |  | Ip |  | o | o |
|  |  |  |  | IpType |  | o | o |
|  |  |  |  | Mask |  | o | o |
|  |  |  |  | NextHopIp |  | o | o |
|  |  |  | RoutingMultiList | Index |  | o | o |
|  |  |  |  | Sip |  | o | o |
|  |  |  |  | Dip |  | o | o |
|  |  |  |  | IpType |  | o | o |
|  |  |  |  | SPort |  | o | o |
|  |  |  |  | DPort |  | o | o |
|  |  |  |  | InterfaceList |  | o | o |
|  |  |  |  | Firewall |  | o | o |
|  |  |  |  | TTL |  | o | o |
|  |  |  | RoutingEnable |  |  | o | x |
|  |  |  | IsVlanSource |  |  | o | x |
|  |  |  | SelectedACLExtension |  |  | o | x |
|  |  |  | TTL |  |  | o | x |
|  |  |  | RoutingFirewall |  |  | o | x |
|  |  |  | DontCare |  |  | o | x |
|  |  |  | downgrade\_L2 |  |  | o | x |
|  |  |  | RoutingUniList | Index |  | o | x |
|  |  |  |  | Sip |  | o | x |
|  |  |  |  | Dip |  | o | x |
|  |  |  |  | IpType |  | o | x |
|  |  |  |  | SPort |  | o | x |
|  |  |  |  | DPort |  | o | x |
|  |  |  |  | L2Index |  | o | x |
|  |  |  |  | Firewall |  | o | x |
|  |  |  |  | EgressIdx |  | o | x |
|  |  |  |  | TTL |  | o | x |
|  |  |  | RoutingNetworkList | Sip |  | o | x |
|  |  |  |  | Dip |  | o | x |
|  |  |  |  | IpType |  | o | x |
|  |  |  |  | SPort |  | o | x |
|  |  |  |  | DPort |  | o | x |
|  |  |  |  | L2Index |  | o | x |
|  |  |  |  | SPortCare |  | o | x |
|  |  |  |  | DPortCare |  | o | x |
|  |  |  |  | EgressIdx |  | o | x |
|  |  |  | RoutingMultiList\_image |  |  | o | x |
|  |  |  | RoutingUniList\_image |  |  | o | x |
|  |  | GlobalAcl906x | EntryAclUdfList | Index |  | o | o |
|  |  |  |  | Type |  | o | o |
|  |  |  |  | Offset |  | o | o |
|  |  |  | EntryAclRangeList | Type |  | o | o |
|  |  |  |  | Index |  | o | o |
|  |  |  |  | SubType |  | o | o |
|  |  |  |  | UpperValue |  | o | o |
|  |  |  |  | LowerValue |  | o | o |
|  |  |  | EntryAclGroupList | Type |  | o | o |
|  |  |  |  | Index |  | o | o |
|  |  |  |  | SubType |  | o | o |
|  |  |  |  | Value |  | o | o |
|  |  |  | EntryAclAggreList | Index |  | o | x |
|  |  |  |  | AggOper |  | o | x |
|  |  |  | EntryAclList | ComboIndex |  | o | o |
|  |  |  |  | ComboField |  | o | o |
|  |  |  |  | Reverse |  | o | o |
|  |  |  |  | Action |  | o | o |
|  |  |  |  | Action1 |  | o | o |
|  |  |  |  | Action2 |  | o | o |
|  |  |  |  | Drop |  | o | o |
|  |  |  |  | Flow |  | o | o |
|  |  |  |  | Mirror |  | o | o |
|  |  |  |  | Copy |  | o | o |
|  |  |  |  | DPM |  | o | o |
|  |  |  |  | IsPolicerEnabled |  | o | o |
|  |  |  |  | Policer |  | o | o |
|  |  |  |  | AIF |  | o | o |
|  |  |  |  | AIF1 |  | o | o |
|  |  |  |  | AIF2 |  | o | o |
|  |  |  |  | Valid |  | o | o |
|  |  |  | 0 - 15 | SelectedPie |  | o | o |
|  |  |  |  | InputAIF |  | o | o |
|  |  |  |  | Policer |  | o | o |
|  |  |  |  | IsPolicerEnabled |  | o | o |
|  |  |  |  | InputPolicerVal |  | o | o |
|  |  |  |  | SelectedAction |  | o | o |
|  |  |  |  | DisplayedAction |  | o | o |
|  |  |  |  | SelectedFltr |  | o | o |
|  |  |  |  | DisplayedFltr |  | o | o |
|  |  |  |  | InputField |  | o | o |
|  |  |  |  | InputMask |  | o | o |
|  |  |  |  | InputAIF1 |  | o | x |
|  |  |  |  | InputAIF2 |  | o | x |
|  |  |  |  | SelectedAction1 |  | o | x |
|  |  |  |  | SelectedAction2 |  | o | x |
|  |  |  |  | DisplayedAction1 |  | o | x |
|  |  |  |  | DisplayedAction2 |  | o | x |
|  |  |  |  | SelectedDrop |  | o | x |
|  |  |  |  | SelectedFlow |  | o | x |
|  |  |  |  | SelectedMirror |  | o | x |
|  |  |  |  | SelectedCopy |  | o | x |
|  |  |  |  | InputCopyText |  | o | x |
|  |  |  | DefaultAction |  |  | o | x |
|  |  |  | ReserveAction |  |  | o | x |
|  |  | GlobalLut | MulticastHash |  |  | o | o |
|  |  |  | EntryLutList | Index |  | o | o |
|  |  |  |  | MemberPorts |  | o | o |
|  |  |  |  | Type |  | o | o |
|  |  |  |  | Mac |  | o | o |
|  |  |  |  | VId |  | o | o |
|  |  |  |  | Port |  | o | o |
|  |  |  |  | ULFId |  | o | o |
|  |  |  |  | FId |  | o | o |
|  |  |  |  | IsUnicast |  | o | o |
|  |  |  |  | IsMulticast |  | o | o |
|  |  | GlobalVlan | SPID |  |  | o | x |
|  |  |  | TPID |  |  | o | x |
|  |  |  | EntryVlanList | Vid |  | o | o |
|  |  |  |  | MemberPorts |  | o | o |
|  |  |  |  | UntaggedPorts |  | o | o |
|  |  |  |  | Fid |  | o | o |
|  |  |  |  | SharedVlan |  | o | o |
|  |  |  |  | VlanBasedFW |  | o | o |
|  |  |  |  | IsRemovable |  | o | o |
|  |  |  |  | IsFIdEnabled |  | o | o |
|  |  |  |  | VlanInterfaceId |  | o | o |
|  |  |  |  | VlanInterfaceValid |  | o | o |
|  |  | GlobalQos | PrioritySource |  |  | o | o |
|  |  |  | SelectedPrioritySource |  |  | o | o |
|  |  |  | SelectedQueueRemappingPort |  |  | o | o |
|  |  |  | PriDecQueueList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  |  | PriDecInnerInnerList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  |  | PriDecOuterOuterList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  |  | PriDecDscpDscpList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  |  | PriRmkInnerList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  |  | PriRmkOuterList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  |  | PriRmkDscpList | Item |  | o | o |
|  |  |  |  | Column0 |  | o | o |
|  |  |  |  | Column1 |  | o | o |
|  |  |  |  | Column2 |  | o | o |
|  |  |  |  | Column3 |  | o | o |
|  |  |  |  | Column4 |  | o | o |
|  |  |  |  | Column5 |  | o | o |
|  |  |  |  | Column6 |  | o | o |
|  |  |  |  | Column7 |  | o | o |
|  |  | GlobalFlowControl | FlowEnable |  |  | o | x |
|  |  |  | PortStatus |  |  | o | x |
|  |  | GlobalFrer | StreamStartIndex |  |  | o | x |
|  |  |  | StreamEndIndex |  |  | o | x |
|  |  |  | EntryStreamList | EntryIndex |  | o | x |
|  |  |  |  | Valid |  | o | x |
|  |  |  |  | DestAddr |  | o | x |
|  |  |  |  | SrcAddr |  | o | x |
|  |  |  |  | Ethertype |  | o | x |
|  |  |  |  | VlanID |  | o | x |
|  |  |  |  | SrcIP |  | o | x |
|  |  |  |  | DestIP |  | o | x |
|  |  |  |  | DSCP |  | o | x |
|  |  |  |  | NextProtocol |  | o | x |
|  |  |  |  | SrcPort |  | o | x |
|  |  |  |  | DestPort |  | o | x |
|  |  |  |  | PortMask |  | o | x |
|  |  |  |  | StreamHandle |  | o | x |
|  |  |  | CountersStartIndex |  |  | o | x |
|  |  |  | CountersEndIndex |  |  | o | x |
|  |  | GlobalPsfp | StreamFilterStartIndex |  |  | o | x |
|  |  |  | StreamFilterEndIndex |  |  | o | x |
|  |  |  | EntryStreamFilterList | EntryIndex |  | o | x |
|  |  |  |  | Valid |  | o | x |
|  |  |  |  | MatchingStreamHandle |  | o | x |
|  |  |  |  | MatchingPriority |  | o | x |
|  |  |  |  | StreamGateID |  | o | x |
|  |  |  |  | FlowMeterID |  | o | x |
|  |  |  |  | MaxSDUsize |  | o | x |
|  |  |  |  | BlockStreamEnable |  | o | x |
|  |  |  | StreamGateStartIndex |  |  | o | x |
|  |  |  | StreamGateEndIndex |  |  | o | x |
|  |  |  | EntryStreamGateList | EntryIndex |  | o | x |
|  |  |  |  | Valid |  | o | x |
|  |  |  |  | AdminGateState |  | o | x |
|  |  |  |  | AdminIPV |  | o | x |
|  |  |  |  | GateControlListEnable |  | o | x |
|  |  |  |  | GateClose\_RX |  | o | x |
|  |  |  | EntryGclWindow | BaseTime\_MsbSec |  | o | x |
|  |  |  | 0 - 95 | BaseTime\_LsbSec |  | o | x |
|  |  |  |  | BaseTime\_ns |  | o | x |
|  |  |  |  | CycleTimeEtn |  | o | x |
|  |  |  |  | SelectedGclLength |  | o | x |
|  |  |  |  | GateClose\_Octet |  | o | x |
|  |  |  |  | EntryGclList | StreamGateIndex | o | x |
|  |  |  |  |  | ListIndex | o | x |
|  |  |  |  |  | GateState | o | x |
|  |  |  |  |  | IPV | o | x |
|  |  |  |  |  | Duration | o | x |
|  |  |  |  |  | IntervalOctets | o | x |
|  |  |  | FlowMeterStartIndex |  |  | o | x |
|  |  |  | FlowMeterEndIndex |  |  | o | x |
|  |  |  | EntryFlowMeterList | EntryIndex |  | o | x |
|  |  |  |  | Valid |  | o | x |
|  |  |  |  | CommitInfoRate |  | o | x |
|  |  |  |  | CommitBurstSize |  | o | x |
|  |  |  |  | ExcessInfoRate |  | o | x |
|  |  |  |  | ExcessBurstSize |  | o | x |
|  |  |  |  | CouplingFlag |  | o | x |
|  |  |  |  | ColorMode |  | o | x |
|  |  |  |  | DeiSelection |  | o | x |
|  |  |  |  | DropOnYellowFrame |  | o | x |
|  |  |  |  | IPVforYellowFrame |  | o | x |
|  |  |  |  | MarkAllFramesRed |  | o | x |
|  |  |  | CountersStartIndex |  |  | o | x |
|  |  |  | CountersEndIndex |  |  | o | x |
|  |  |  | ErrorStartIndex |  |  | o | x |
|  |  |  | ErrorEndIndex |  |  | o | x |
|  |  | GlobalPhyMaster | InputPhyID |  |  | o | x |
|  |  |  | SelectPower\_Rate |  |  | o | x |
|  |  |  | SelectedPhyIdMode |  |  | o | x |
|  |  |  | PhyAddr |  |  | o | x |
|  |  |  | PhyVal |  |  | o | x |
|  |  |  | SelectedMappingMode |  |  | o | x |
|  |  |  | Mapping\_Page |  |  | o | x |
|  |  |  | Mapping\_Reg |  |  | o | x |
|  |  |  | Mapping\_Ext |  |  | o | x |
|  | Port | 0 - 14 | PortGeneral | SelectedPortIf |  | o | o |
|  | Port\_S1 |  |  | Role |  | o | o |
|  | Port\_S2 |  |  | PhyStatus |  | o | o |
|  | Port\_S3 |  |  | IsWUPEnabled |  | x | o |
|  |  |  |  | PhyPower |  | x | o |
|  |  |  |  | isForce |  | o | o |
|  |  |  |  | isSerdes |  | o | o |
|  |  |  |  | SelectedLinkSpeed |  | o | o |
|  |  |  |  | RxDelay |  | o | o |
|  |  |  |  | TxDelay |  | o | o |
|  |  |  |  | SelectedLdoVoltage |  | o | o |
|  |  |  |  | SelectedRGMIIVoltage |  | o | o |
|  |  |  |  | SelectedSpeed |  | o | o |
|  |  |  |  | RGMIIDriving |  | o | o |
|  |  |  |  | RGMIIDrivingLow |  | o | o |
|  |  |  |  | DrivingEnable |  | o | o |
|  |  |  |  | SelectedE0PortIf |  | x | o |
|  |  |  |  | SelectedSgmiiExternalPortCfg |  | o | o |
|  |  |  |  | SelectedRgmiiTxDelay |  | x | o |
|  |  |  |  | SelectedRgmiiRxDelay |  | x | o |
|  |  |  |  | Rolelabel |  | o | x |
|  |  |  |  | DrivingEnablelabel |  | o | x |
|  |  |  |  | isSerdeslabel |  | o | x |
|  |  |  |  | isForcelabel |  | o | x |
|  |  |  | PortVlan | PortNum |  | o | o |
|  |  |  |  | InputVId |  | o | o |
|  |  |  |  | InputPriority |  | o | o |
|  |  |  |  | SelectedLearningBased |  | o | o |
|  |  |  |  | SelectedMode |  | o | o |
|  |  |  |  | IngressFilter |  | o | o |
|  |  |  |  | EgressFilter |  | o | o |
|  |  |  |  | SelectedFrameType |  | o | o |
|  |  |  |  | DisplayedFrameType |  | o | o |
|  |  |  | PortQos | PriDecPriority |  | o | o |
|  |  |  |  | PriRmkInnerTag |  | o | o |
|  |  |  |  | PriRmkOuterTag |  | o | o |
|  |  |  |  | PriRmkDscp |  | o | o |
|  |  |  |  | PriRmkBoundaryPort |  | o | o |
|  |  |  |  | PriRmkBoundaryPortList | Item | o | o |
|  |  |  |  |  | Column0 | o | o |
|  |  |  |  |  | Column1 | o | o |
|  |  |  |  |  | Column2 | o | o |
|  |  |  |  |  | Column3 | o | o |
|  |  |  |  |  | Column4 | o | o |
|  |  |  |  |  | Column5 | o | o |
|  |  |  |  |  | Column6 | o | o |
|  |  |  |  |  | Column7 | o | o |
|  |  |  |  | SelectedQueueSchedComb |  | o | o |
|  |  |  |  | DisplayedSchedItem0 |  | o | o |
|  |  |  |  | DisplayedSchedItem1 |  | o | o |
|  |  |  |  | QueueSchedItem0 |  | o | o |
|  |  |  |  | QueueSchedItem1 |  | o | o |
|  |  |  |  | SelectedQueueSched |  | o | o |
|  |  |  |  | IsQueueWeightEnabled |  | o | o |
|  |  |  |  | IsRateLimitingEnabled |  | o | o |
|  |  |  |  | IsRateEnableOn |  | o | o |
|  |  |  |  | InputQueueWeight |  | o | o |
|  |  |  |  | InputRateLimiting |  | o | o |
|  |  |  |  | IsCbsBwEnabled |  | o | o |
|  |  |  |  | InputCbsBw |  | o | o |
|  |  |  | PortTraffic | AdminGateState |  | o | x |
|  |  |  |  | OperGateState |  | o | x |
|  |  |  |  | GateEnableState |  | o | x |
|  |  |  |  | QueueMaxSDU |  | o | x |
|  |  |  |  | BaseTime\_MsbSec |  | o | x |
|  |  |  |  | BaseTime\_LsbSec |  | o | x |
|  |  |  |  | BaseTime\_ns |  | o | x |
|  |  |  |  | CycleTimeEtn |  | o | x |
|  |  |  |  | ControlListLength |  | o | x |
|  |  |  |  | EntryTrafficList | Index | o | x |
|  |  |  |  |  | GateState | o | x |
|  |  |  |  |  | Interval | o | x |
|  |  |  |  | CycleTime |  | o | x |
|  |  |  |  | SelectedPortType |  | o | x |
|  |  |  | PortStormControl | BroadcastStormControl |  | o | x |
|  |  |  |  | BcDataRateType |  | o | x |
|  |  |  |  | BroadcastDataRate |  | o | x |
|  |  |  |  | MulticastStormControl |  | o | x |
|  |  |  |  | McDataRateType |  | o | x |
|  |  |  |  | MulticastDataRate |  | o | x |
|  |  |  |  | SelectedMulticastType |  | o | x |
|  |  |  |  | UnicastStormControl |  | o | x |
|  |  |  |  | UcDataRateType |  | o | x |
|  |  |  |  | UnicastDataRate |  | o | x |
|  |  |  | PortIsolation | BlockedFwPortMask |  | o | x |

1. Global Configuration
   1. TabGeneral

**Tool: General**

**Example:**

"TabGeneral": {

"SavedChip": "RTL9075AVA",

"SavedIF": "I2C",

"ConfigOutputPath": "",

"EtherDis": true,

"JSON\_Version": "2.1.6.1.0"

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| SavedChip | String | "Chip Version" | "RTL9043AA"  "RTL9044AA"  "RTL9044AB"  "RTL9047AA"  "RTL9072AV2"  "RTL9068AV2"  "RTL9075AV2"  "RTL9072AV3"  "RTL9068AV3"  "RTL9075AV3"  "RTL9075AVA"  "RTL9072AVA"  "RTL9068AVA"  "RTL9054AVA" | "RTL9043AA"  "RTL9075VA" | R/W |
| SavedIF | String | “Configuration Mode” | “I2C”  “BINARY”  “MDC\_MDIO”  “SPI”  “ETHERNET” | “I2C” | R/W |
| EtherDis | Boolean | "Enabled/Disabled" | true or false | true | RO |

* 1. TabStacking

**Tool: Stacking**

**Example:**

"TabStacking": {

"GroupID": "1",

"EntryStackingList": [

{

"Model": "RTL9075AVA",

"MAC Address": "00:00:00:00:00:00",

"isMaster": "False",

"Unit ID": "1",

"S0 Link To": "OFF",

"S1 Link To": "OFF"

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| GroupID | String | "Group ID" | Register address in 16 bits hex string format  (EX. "0x5566") | "1" | R/W |
| Model | String | "Model" | "RTL9072AV2"  "RTL9068AV2"  "RTL9075AV2"  "RTL9072AV3"  "RTL9068AV3"  "RTL9075AV3"  "RTL9075AVA"  "RTL9072AVA"  "RTL9068AVA"  "RTL9054AVA" | "RTL9075AVA" | R/W |
| MAC Address | String | "MAC Address" | MAC address in string format | "00:00:00:00:00:00" | R/W |
| isMaster | String | "Master" | "True" or "False" | "False" | R/W |
| Unit ID | String | "Unit ID" | "1"-"7" | "1" | R/W |
| S0 Link To | String | "S0 Link To" | "1"-"7", "OFF" and "N/A" | "OFF" | R/W |
| S1 Link To | String | "S1 Link To" | "1"-"7", "OFF" and "N/A" | "OFF" | R/W |

* 1. GlobalPtp9075

**Tool: Switch -> Global Settings -> PTP**

**Example:**

"GlobalPtp9075": {

"Slave0JoinedPtpPorts": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"Slave1JoinedPtpPorts": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"Slave2JoinedPtpPorts": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"SelectedEnableSync": "Disable",

"SelectedBasicMode": "P2P",

"SelectedSlave0": "Port4",

"SelectedSlave1": "Port4",

"SelectedSlave2": "Port4",

"Slave0Domain": 0,

"Slave1Domain": 1,

"Slave2Domain": 2,

"Slave0Pri": 248,

"Slave1Pri": 248,

"Slave2Pri": 248,

"SyncInterval": "1s",

"pdelayReq": "1s",

"SelectedGPIOB1": "Local",

"SelectedGPIOB2": "Local",

"GPIOB1": false,

"GPIOB2": false,

"SendPdelayReq": true,

"AssignPriority": false,

"AsCapableMaskDef": "0x7FFF",

"DelayTh\_Sec": 0,

"DelayTh\_NanoSec": 524296000,

"PortNumRemappingEnable": false,

"PortNumRemapping": [

0, 1, 2, 3, 4,

5, 6, 7, 8, 9,

10, 11, 12, 13, 14

],

"OneStepTx0": false,

"OneStepTx1": false,

"OneStepTx2": false,

"SignalEnableDomain0": false,

"SignalEnableDomain1": false,

"SignalEnableDomain2": false,

"VlanSupport0": false,

"VlanSupport1": false,

"VlanSupport2": false,

"VlanSupportVID0": 0,

"VlanSupportVID1": 0,

"VlanSupportVID2": 0,

"PacketDestAddrEnable": false,

"PacketDestAddr": "01:80:C2:00:00:0E",

"PacketEtherTypeEnable": false,

"PacketEtherType": "0x88F7",

"NoSyncRecovery": false,

"OverwriteClockID": false

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Slave0JoinedPtpPorts | Array(Boolean) | In "Basic" section:  "Joined Port" of "Slave 0" | Array of 15 Booleans | Array of 15 false | R/W |
| Slave1JoinedPtpPorts | Array(Boolean) | In "Basic" section:  "Joined Port" of "Slave 1" | Array of 15 Booleans | Array of 15 false | R/W |
| Slave2JoinedPtpPorts | Array(Boolean) | In "Basic" section:  "Joined Port" of "Slave 2" | Array of 15 Booleans | Array of 15 false | R/W |
| SelectedEnableSync | String | In "Basic" section:  "Time Sync" | "Enable" or "Disable" | "Disable" | R/W |
| SelectedBasicMode | String | In "Basic" section:  "Mode" | "P2P TC+BC" or "Grandmaster" | "P2P TC+BC" | R/W |
| SelectedSlave0 | String | In "Basic" section:  "Slave Port" of "Slave 0" | "Port0", "Port1", ..., "Port14" | "Port4" | R/W |
| SelectedSlave1 | String | In "Basic" section:  "Slave Port" of "Slave 1" | "Port0", "Port1", ..., "Port14" | "Port4" | R/W |
| SelectedSlave2 | String | In "Basic" section:  "Slave Port" of "Slave 2" | "Port0", "Port1", ..., "Port14" | "Port4" | R/W |
| Slave0Domain | Number | Internal use only for debugging | | | RO |
| Slave1Domain | Number | Internal use only for debugging | | | RO |
| Slave2Domain | Number | Internal use only for debugging | | | RO |
| Slave0Pri | Number | Internal use only for debugging | | | RO |
| Slave1Pri | Number | Internal use only for debugging | | | RO |
| Slave2Pri | Number | Internal use only for debugging | | | RO |
| SyncInterval | String | In "Interval" section:  "Sync Interval" | 2^(-5) - 2^3 s | "1/8s" | R/W |
| pdelayReq | String | In "Interval" section:  "Pdelay Request" | 2^(-5) - 2^3 s | "1s" | R/W |
| SelectedGPIOB1 | String | In "PPS" section:  "Clock Selection" of "GPIOB1" | "Local", "Master"  "Slave 0", "Slave 1" and "Slave 2" | "Local" | R/W |
| SelectedGPIOB2 | String | In "PPS" section:  "Clock Selection" of "GPIOB2" | "Local", "Master",  "Slave 0", "Slave 1" and "Slave 2" | "Local" | R/W |
| GPIOB1 | Boolean | In "PPS" section:  "Enable" of "GPIOB1" | true or false | false | R/W |
| GPIOB2 | Boolean | In "PPS" section:  "Enable" of "GPIOB2" | true or false | false | R/W |
| SendPdelayReq | Boolean | Internal use only for debugging | | | RO |
| AssignPriority | Boolean | Internal use only for debugging | | | RO |
| AsCapableMaskDef | Number | Internal use only for debugging | | | RO |
| DelayTh\_Sec | Number | Internal use only for debugging | | | RO |
| DelayTh\_NanoSec | Number | Internal use only for debugging | | | RO |
| PortNumRemappingEnable | Boolean | Internal use only for debugging | | | RO |
| PortNumRemapping | Array(Boolean) | Internal use only for debugging | | | RO |
| OneStepTx0 | Boolean | Internal use only for debugging | | | RO |
| OneStepTx1 | Boolean | Internal use only for debugging | | | RO |
| OneStepTx2 | Boolean | Internal use only for debugging | | | RO |
| SignalEnableDomain0 | Boolean | Internal use only for debugging | | | RO |
| SignalEnableDomain1 | Boolean | Internal use only for debugging | | | RO |
| SignalEnableDomain2 | Boolean | Internal use only for debugging | | | RO |
| VlanSupport0 | Boolean | Internal use only for debugging | | | RO |
| VlanSupport1 | Boolean | Internal use only for debugging | | | RO |
| VlanSupport2 | Boolean | Internal use only for debugging | | | RO |
| VlanSupportVID0 | Number | Internal use only for debugging | | | RO |
| VlanSupportVID1 | Number | Internal use only for debugging | | | RO |
| VlanSupportVID2 | Number | Internal use only for debugging | | | RO |
| PacketDestAddrEnable | Boolean | Internal use only for debugging | | | RO |
| PacketDestAddr | String | Internal use only for debugging | | | RO |
| PacketEtherTypeEnable | Boolean | Internal use only for debugging | | | RO |
| PacketEtherType | String | Internal use only for debugging | | | RO |
| NoSyncRecovery | Boolean | Internal use only for debugging | | | RO |
| OverwriteClockID | Boolean | Internal use only for debugging | | | RO |

* 1. GlobalMirror906x

**Tool: Switch -> Global Settings -> Mirror**

**Example:**

"GlobalMirror906x": {

"MirroredRxPorts": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"MirroredTxPorts": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"BlockedFwPortMask": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"SelectedPortBasedMirrorNo": 1,

"SelectedPortBasedMirrorPort": 0,

"SelectedMirrorNo": 1,

"IsMirrorFilterOn": false,

"SelectedPortBasedMirrorPort\_1": 0,

"MirroredRxPorts\_1": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"MirroredTxPorts\_1": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"IsMirrorFilterOn\_1": "Disabled",

"InputSampleRate\_1": "1",

"SelectedRSPAN\_Action\_1": "Retain",

"InputTPID\_1": "0x8810",

"InputPCP\_1": "0",

"InputCFI\_1": "0",

"InputTagVID\_1": "0",

"IsRSPAN\_Check\_1": false,

"InputCheckVID\_1": "0",

"SelectedPortBasedMirrorPort\_2": 0,

"MirroredRxPorts\_2": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"MirroredTxPorts\_2": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

],

"IsMirrorFilterOn\_2": "Disabled",

"InputSampleRate\_2": "1",

"SelectedRSPAN\_Action\_2": "Retain",

"InputTPID\_2": "0x8810",

"InputPCP\_2": "0",

"InputCFI\_2": "0",

"InputTagVID\_2": "0",

"IsRSPAN\_Check\_2": false,

"InputCheckVID\_2": "0",

"IsMirrorTopologyEnable\_1": false,

"EgressPortsEnable\_1": true,

"MirroringTopologySet\_1": "Local Mirroring",

"IsMirrorTopologyEnable\_2": false,

"EgressPortsEnable\_2": true,

"MirroringTopologySet\_2": "Local Mirroring",

"MirrorTopologyEnable\_1": false,

"MirrorTopologyEnable\_2": false

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| MirroredRxPorts | Array(Boolean) | “Mirrored Rx Ports Mask” | Array of 15 Booleans | Array of 15 false | R/W |
| MirroredTxPorts | Array(Boolean) | “Mirrored Tx Ports Mask” | Array of 15 Booleans | Array of 15 false | R/W |
| BlockedFwPortMask | Array(Boolean) | “Blocked Forwarding Ports” | Array of 15 Booleans | Array of 15 false | R/W |
| SelectedPortBasedMirrorNo | Number | "Function 1" and "Function 2" | 1 or 2 | 1 | R/W |
| SelectedPortBasedMirrorPort | Number | “Mirroring Port” | 0-14 | 0 | R/W |
| SelectedMirrorNo | Number | In "Mirror Filter On/Off" section:  "Function 1" or "Function 2" | 1 or 2 | 1 | R/W |
| IsMirrorFilterOn | Boolean | In "Mirror Filter On/Off" section:  "Enabled" or "Disabled" | true or false | false | R/W |
| SelectedPortBasedMirrorPort\_1  SelectedPortBasedMirrorPort\_2 | Number | “Mirroring Port” | 0-14 | 0 | R/W |
| MirroredRxPorts\_1  MirroredRxPorts\_2 | Array(Boolean) | "Ingress Ports" | Array of 15 Booleans | Array of 15 false | R/W |
| MirroredTxPorts\_1  MirroredTxPorts\_2 | Array(Boolean) | "Egress Ports" | Array of 15 Booleans | Array of 15 false | R/W |
| IsMirrorFilterOn\_1  IsMirrorFilterOn\_2 | Boolean | In "Mirror Filter On/Off" section:  "Enabled" or "Disabled" | true or false | false | R/W |
| InputSampleRate\_1  InputSampleRate\_2 | Number | "Sample Rate" | Integer | 1 | R/W |
| SelectedRSPAN\_Action\_1  SelectedRSPAN\_Action\_2 | String | "RSPAN Tag" | "Retain" or "Add" | "Retain" | R/W |
| InputTPID\_1  InputTPID\_2 | String | "TPID Field" | Hex string format | "0x8810" | R/W |
| InputPCP\_1  InputPCP\_2 | Number | "PCP Field" | Integer | 0 | R/W |
| InputCFI\_1  InputCFI\_2 | Number | "CFI Field" | Integer | 0 | R/W |
| InputTagVID\_1  InputTagVID\_2 | Number | "VID Field" | Integer | 0 | R/W |
| IsRSPAN\_Check\_1  IsRSPAN\_Check\_2 | Boolean | In "Check RSPAN Tag" section:  "Enabled" or "Disabled" | true or false | false | R/W |
| InputCheckVID\_1  InputCheckVID\_2 | Number | "VLAN Identifier (VID)" | Integer | 0 | R/W |
| IsMirrorTopologyEnable\_1  IsMirrorTopologyEnable\_2 | Boolean | Internal use only for debugging | | | RO |
| EgressPortsEnable\_1  EgressPortsEnable\_2 | Boolean | Internal use only for debugging | | | RO |
| MirroringTopologySet\_1  MirroringTopologySet\_2 | String | "Mirroring Topology" | "Disable", "Local Mirroring"  "Remote Mirroring" | "Local Mirroring" | R/W |
| MirrorTopologyEnable\_1  MirrorTopologyEnable\_2 | Boolean | Internal use only for debugging | | | RO |
| MirroringTopologyTxt\_1  MirroringTopologyTxt\_2 | String | Internal use only for debugging | | | RO |

* 1. GlobalMisc906x

**Tool: Switch -> Global Settings -> Misc (Runtime mode only)**

**Example:**

"GlobalMisc906x": {

"PhyId": 0,

"TestMode": 1,

"Is1000BaseT1": false,

"Is1000BaseT1Master": false

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| PhyId | Number | “Port Id” | 0,1,2,3,4,5,6,7,9,10 | 0 | R/W |
| TestMode | Number | “Test Mode” | 1,2,3,4,5,6 | 1 | R/W |
| Is1000BaseT1 | Boolean | “100/1000Base-T1” | true or false | false | R/W |
| Is1000BaseT1Master | Boolean | “Master/Slave” | true or false | false | R/W |

* 1. GlobalSleep

**Tool: Switch -> Global Settings -> Sleep**

**Example:**

"GlobalSleep": {

"SelectedSleepWakeConfig": "TC10 Sleep Capability",

"WholeChipSleep": false,

"SelectedOPLocalState": "Sleep",

"SelectedOPGlobalState": "Sleep",

"SelectedRemoteWake": "Disable",

"SelectedRemotWakePorts": "0",

"SleepWakePorts": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"OPLocalStatePorts": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"TC10SC\_Ports": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"AcceptLP\_Ports": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"ForwardSR\_Ports": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"WholeChipS\_Ports": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"ForwardLP\_Ports": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"DisableRWD\_Ports": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakeEnable": [

0, 0, 0, 0, 0,

0, 0, 0, 0, 0,

0

],

"RemoteWakePorts\_0": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_1": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_2": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_3": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_4": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_5": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_6": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_7": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_8": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_9": [

false, false, false, false, false,

false, false, false, false, false,

false

],

"RemoteWakePorts\_10": [

false, false, false, false, false,

false, false, false, false, false,

false

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| SelectedSleepWakeConfig | String | "Configure Setting" | "TC10 Sleep Capability", etc. | "TC10 Sleep Capability" | R/W |
| WholeChipSleep | Boolean | "Whole Chip Sleep" | true or false | false | R/W |
| SelectedOPLocalState | String | "Set Local State" | "Sleep", etc. | "Sleep" | R/W |
| SelectedOPGlobalState | String | "Set Global State" | "Sleep", etc. | "Sleep" | R/W |
| SelectedRemoteWake | Boolean | "Remote Wake Up" | "Disable" or "Enable" | "Disable" | R/W |
| SelectedRemotWakePorts | Number | "Ports" | 0-10 | 0 | R/W |
| SleepWakePorts | Array (Boolean) | "Configure Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| OPLocalStatePorts | Array (Boolean) | "Local Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts | Array (Boolean) | "Remote Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| TC10SC\_Ports | Array (Boolean) | "TC10 SC Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| AcceptLP\_Ports | Array (Boolean) | "Accept LP Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| ForwardSR\_Ports | Array (Boolean) | "Forward SR Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| WholeChipS\_Ports | Array (Boolean) | "Whole Chip S Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| ForwardLP\_Ports | Array (Boolean) | "Forward LP Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| DisableRWD\_Ports | Array (Boolean) | "Disable RWD Ports" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakeEnable | Array (Boolean) | "Remote Wake Enable" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_0 | Array (Boolean) | "Remote Wake Ports 0" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_1 | Array (Boolean) | "Remote Wake Ports 1" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_2 | Array (Boolean) | "Remote Wake Ports 2" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_3 | Array (Boolean) | "Remote Wake Ports 3" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_4 | Array (Boolean) | "Remote Wake Ports 4" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_5 | Array (Boolean) | "Remote Wake Ports 5" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_6 | Array (Boolean) | "Remote Wake Ports 6" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_7 | Array (Boolean) | "Remote Wake Ports 7" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_8 | Array (Boolean) | "Remote Wake Ports 8" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_9 | Array (Boolean) | "Remote Wake Ports 9" | Array of 11 Booleans | Array of 11 false | R/W |
| RemoteWakePorts\_10 | Array (Boolean) | "Remote Wake Ports 10" | Array of 11 Booleans | Array of 11 false | R/W |

* 1. GlobalReg

**Tool: Switch -> Global Settings -> Register (Binary mode only)**

**Example:**

"GlobalReg": {

"AddRegType": "MAC",

"EntryRegList": [

{

"RegAddr": "0x18000C",

"DefaultRegVal": "0x00000000",

"ConfigRegVal": "0x841",

"RegPage": null,

"SgType": "N\_A",

"IsPageEnabled": false,

"EnabledPorts": null,

"Addr\_Len": 6,

"DefRegVal\_Len": 8,

"CfgRegVal\_Len": 10,

"RegType": "MAC"

},

{

"RegAddr": "0x000000",

"DefaultRegVal": "0x00000000",

"ConfigRegVal": "0x00000000",

"RegPage": null,

"SgType": "N\_A",

"IsPageEnabled": false,

"EnabledPorts": null,

"Addr\_Len": 8,

"DefRegVal\_Len": 8,

"CfgRegVal\_Len": 10,

"RegType": "MAC"

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| AddRegType | String | "Reg Type" | "MAC", "SGMII", "FWCFG", "RTPG\_PHY\_1" and "RTPG\_PHY\_2" | "MAC" | R/W |
| EntryRegList | Array (JSON Object) | Register Table | JSON object (Containing RegAddr, DefaultRegVal, ConfigRegVal, RegType) | Empty array | R/W |
| RegAddr | String | “Register Address” | Register address in 24 bits hex string format  (EX. “0x180000”) | “0x000000” | R/W |
| DefaultRegVal | String | “Default Register Value” | Register value in 32 bits hex string format  (EX. “0x00000841” or “0x841”) | “0x00000000” | R/W |
| ConfigRegVal | String | “Config Register Value” | Register value in 32 bits hex string format  (EX. “0x00000843” or “0x843”) | “0x00000000” | R/W |
| RegPage | Number | "Page" | Integer | null | R/W |
| SgType | String | "SG Type" | "N\_A", "D\_PHY" and "PCS" | "N\_A" | R/W |
| IsPageEnabled | Boolean | Internal use only for debugging | | | RO |
| EnabledPorts | String | "Port enabled" | Port string array, for example, 6, 7, 8-11 | null | R/W |
| Addr\_Len | Number | Internal use only for debugging | | | RO |
| DefRegVal\_Len | Number | Internal use only for debugging | | | RO |
| CfgRegVal\_Len | Number | Internal use only for debugging | | | RO |
| RegType | String | “Register Type” | "MAC", "SGMII", "FWCFG",  "RTPG\_PHY\_1" and "RTPG\_PHY\_2" | “MAC” | R/W |

* 1. GlobalAcl906x

**Tool: Switch -> Global Settings -> ACL**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| EntryAclUdfList | Array (JSON Object) | ACL Pie Table | JSON object (Index, Type, Offset) | empty array | R/W |
| EntryAclRangeList | Array (JSON Object) | ACL Pie Table | JSON object (Type, Index, SubType, UpperValue, LowerValue) | empty array | R/W |
| EntryAclGroupList | Array (JSON Object) | ACL Pie Table | JSON object (Type, Index, SubType, Value) | empty array | R/W |
| EntryAclList | Array (JSON Object) | ACL Pie Table | JSON object (Containing ComboIndex, ComboField, Action, IsPolicerEnabled, AIF, Valid) | empty array | R/W |
| Template Generator  “0” – “7” | JSON Object | “Template” | JSON object (Containing SelectedPie, InputAIF, Policer, IsPolicerEnabled, InputPolicerVal, SelectedAction, DisplayedAction, SelectedFltr) | JSON Object with default attribute values | R/W |

* + 1. EntryAclUdfList

**Example:**

"GlobalAcl906x": {

"EntryAclUdfList": [

{

"Index": 0,

"Type": "IPv4",

"Offset": 0,

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Index | Number | User Defined Field -> Index | 0-31 | 0 | R/W |
| Type | String | User Defined Field -> Type | "IPv4", "IPv6", "L3", "TCP", "UDP", "L4", "Payload" or "Max" | "IPv4" | R/W |
| Offset | Number | User Defined Field -> Offset | 0-1023 | 0 | R/W |

* + 1. EntryAclRangeList

**Example:**

"GlobalAcl906x": {

"EntryAclRangeList": [

{

"Type": "IPv4",

"Index": 0,

"SubType": "SIP",

"UpperValue": "0.0.0.0",

"LowerValue": "0.0.0.0",

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Type | String | Range Check -> Type | "IPv4", "IPv6", "L4 Port", "VLAN ID", "Packet Length" | "IPv4" | R/W |
| Index | Number | Range Check -> Index | 0-31 | 0 | R/W |
| SubType | String | Range Check -> SubType | "SIP", "DIP", "SIP or DIP" or "Invalid" | "SIP" | R/W |
| UpperValue | String | Range Check -> UpperValue | Value depending on Key "Type" | No default value | R/W |
| LowerValue | String | Range Check -> LowerValue | Value depending on Key "Type" | No default value | R/W |

* + 1. EntryAclGroupList

**Example:**

"GlobalAcl906x": {

"EntryAclGroupList": [

{

"Type": "IPv4",

"Index": 0,

"SubType": "SIP",

"Value": "0.0.0.0",

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Type | String | Group Member Check -> Type | "IPv4", "IPv6", "L4 Port", "VLAN ID" | "IPv4" | R/W |
| Index | Number | Group Member Check -> Index | 0-31 | 0 | R/W |
| SubType | String | Group Member Check -> SubType | "SIP" or "DIP" | "SIP" | R/W |
| Value | String | Group Member Check -> Value | Value depending on Key "Type" | No default value | R/W |

* + 1. EntryAclAggreList

**Example:**

"GlobalAcl906x": {

"EntryAclGroupList": [

{

"Index": 0,

"AggOper": 0

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Index | Number | Group Member Check -> Index | 0-511 | 0 | R/W |
| AggOper | Number | Group Member Check -> AggOper | 0-2 | 0 | R/W |

* + 1. EntryAclList

**Example:**

"GlobalAcl906x": {

"EntryAclList": [

{

"ComboIndex": "74",

"ComboField": [

"1122/ffff", "3344/ffff", "0000/0000", "0000/0000", "0000/0000",

"0000/0000", "0000/0000", "0000/0000", "0000/0000", "0000/0000",

"0000/0000", "0000/0000"

],

"Reverse": "Off",

"Action": "Forward",

"Action1": "Action",

"Action2": "Action",

"Drop": "Bypass",

"Flow": "Flow 0",

"Mirror": "None",

"Copy": "None",

"DPM": "0",

"IsPolicerEnabled": true,

"Policer": "01:1000",

"AIF": "00000000",

"AIF1": "00000000",

"AIF2": "00000000",

"Valid": "1"

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| ComboIndex | String | “PIE Entry” | “0” – “511” | No default value | R/W |
| ComboField | Array (String) | “0” - “11” | Combination of field value and mask in String format. (EX. “8899/ffff”) | “0000/0000” | R/W |
| Action, Action1, Action2 | String | “Action0”, “Action1”, “Action2” | "Action", "Forward", "OVID Remark", "IVID Remark", "PRI Remark", "DSCP Remark" and "Priority" | No default value | R/W |
| Reverse | String | "Hit Result Reverse" | “On”, “Off” | “Off” | R/W |
| Drop | String | “Drop Action” | “Bypass”, “Drop”,  “Withdraw Drop” | “Bypass” | R/W |
| Flow | String | “Flow Action” | “Flow 0”, “Flow 1” | “Flow 0” | R/W |
| Mirror | String | “Mirror Action” | “None”, “Mirror 0”, “Mirror 1” | “None” | R/W |
| Copy | String | “Copy Action” | “Copy2CPU”, “None” | “None” | R/W |
| DPM | String | "DPM" | Destination port mask | "0" | R/W |
| IsPolicerEnabled | Boolean | Internal use only for debugging | | | RO |
| Policer | String | “Policer” | Combination of policer parameters:  “01”(policer enabled) or “00”(disabled) + “:” + Policer value in String format.  EX. “01:1000”, “00:0000” | “00:0000” | R/W |
| AIF, AIF1, AIF2 | String | “AIF”, “AIF1”, “AIF2” | Action field value in 32 bits hex string format.  EX. “6DA00000” | “00000000” | R/W |
| Valid | String | “Valid” | “0” or “1” | “1” | R/W |

* + 1. Template Generator

Most attributes in Template Generator JSON content are used to save tool UI settings (except“SelectedFltr”). Those parts have nothing to do with binary creation. For the purpose of binary configuration, those attributes can be kept as it is (default value).

“SelectedFltr” is the only attribute required to set in this section. “SelectedFltr” will define the filters’ type in each template in binary. For the information of filter type, please refer to the “Accepted Value” of “SelectedFltr” in the given table of this section.

**Example:**

"0": {

"SelectedPie": "PIE Entry",

"InputAIF": "00000000",

"Policer": false,

"IsPolicerEnabled": false,

"InputPolicerVal": "00000",

"SelectedAction": "TOOL\_ACL\_ACTION\_NONE",

"DisplayedAction": "Action",

"SelectedFltr": [

102, 102, 102, 102, 102,

102, 102, 102, 102, 102,

102, 102

],

"DisplayedFltr": [

"--", "--", "--", "--", "--",

"--", "--", "--", "--", "--",

"--", "--"

],

"InputField": [

"0000", "0000", "0000", "0000", "0000",

"0000", "0000", "0000", "0000", "0000",

"0000", "0000"

],

"InputMask": [

"0000", "0000", "0000", "0000", "0000",

"0000", "0000", "0000", "0000", "0000",

"0000", "0000"

],

"InputAIF1": "00000000",

"InputAIF2": "00000000",

"SelectedAction1": "TOOL\_ACL\_ACTION\_NONE",

"SelectedAction2": "TOOL\_ACL\_ACTION\_NONE",

"DisplayedAction1": "Action",

"DisplayedAction2": "Action",

"SelectedDrop": "Bypass",

"SelectedFlow": "Flow 0",

"SelectedMirror": "None",

"SelectedCopy": "None",

"InputCopyText": "0",

},

"1": {

…

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| SelectedFltr | Number | “Filter | 0: "Customized"  1: "DMAC[15:0]"  2: "DMAC[31:16]"  3: "DMAC[47:32]  4: "SMAC[15:0]"  5: "SMAC[31:16]"  6: "SMAC[47:32]"  7: "Ether Type"  8: "OTAG"  9: "ITAG"  12: "SIP[15:0]"  13: "SIP[31:16]"  14: "DIP[15:0]"  15: "DIP[31:16]"  19: "L4 SPORT”  20: "L4 DPORT"  21: "L4 HDR"  100: "SPMASK[12:0]"  102: "--" | 102 | R/W |

* 1. GlobalLut

**Tool: Switch -> Global Settings -> L2**

**Example:**

"GlobalLut": {

"MulticastHash": true,

"EntryLutList": [

{

"Index": 0,

"MemberPorts": "",

"Type": "Unicast",

"Mac": "10:22:33:44:55:66",

"VId": 2,

"Port": 4,

"ULFId": 1,

"FId": 5,

"IsUnicast": true,

"IsMulticast": false

},

{

"Index": 0,

"MemberPorts": "1,2,3",

"Type": "Multicast",

"Mac": "11:22:33:44:55:66",

"VId": 2,

"Port": 0,

"ULFId": 0,

"FId": 5,

"IsUnicast": false,

"IsMulticast": true

}

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| MulticastHash | Boolean | “Multicast hash with VID/FID” | true or false | True (Hash with FID) | R/W |
| EntryLutList | Array (JSON Object) | L2 Table | JSON object (Containing Index, MemberPorts, Type, Mac, VId, Port, ULFId, FId, IsUnicast, IsMulticast) | Empty array | R/W |
| Index | Number | “Index” | 0-4095 | 0 | R/W |
| MemberPorts | String | “Member Ports” | Configured member ports in string format  (Ex. “1,3,5” or “1-5” or “1,3,5-7”) | empty string | R/W |
| Type | String | “Type” | “Unicast” or “Multicast” | “Unicast” | R/W |
| Mac | String | “MAC Address” | MAC address in string format | “00:00:00:00:00:00” | R/W |
| VId | Number | “VLAN ID” | 1-4095 | 0 | R/W |
| Port | Number | “Port” | 0-11 | 0 | R/W |
| ULFId | Number | “ULFID” | 0 or 1 | 0 | R/W |
| FId | Number | “Filter ID” | 0 - 15 | 0 | R/W |
| IsUnicast | Boolean | Internal use only for debugging | | | RO |
| IsMulticast | Boolean | Internal use only for debugging | | | RO |

* 1. GlobalVlan

**Tool: Switch -> Global Settings -> Vlan**

**Example:**

"GlobalVlan": {

"SPID": "88A8",

"TPID": "8100",

"EntryVlanList": [

{

"VId": 2,

"MemberPorts": "1-3",

"UntaggedPorts": "4,5",

"FId": 0,

"SharedVlan": "No",

"VlanBasedFW": "Yes",

"IsRemovable": true,

"IsFIdEnabled": false,

"VlanInterfaceId": 2,

"VlanInterfaceValid": "Valid"

},

{

"VId": 3,

"MemberPorts": "6,7",

"UntaggedPorts": "10",

"FId": 0,

"SharedVlan": "No",

"VlanBasedFW": "Yes",

"IsRemovable": true,

"IsFIdEnabled": false,

"VlanInterfaceId": 3,

"VlanInterfaceValid": "Invalid"

}

]

},

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| SPID | String | "SPID" | 16 bits hex string format | "88A8" | R/W |
| TPID | String | "TPID" | 16 bits hex string format | "8100" | R/W |
| EntryVlanList | Array (JSON Object) | VLAN Table | JSON object (Containing VId, MemberPorts, UntaggedPorts, Fid, SharedVlan, VlanBasedFW, IsRemovable, IsFIdEnabled) | Empty array | R/W |
| VId | Number | “Valid VLAN ID” | 1-4095 | 0 | R/W |
| MemberPorts | String | “Member Ports” | Configured member ports in string format  (Ex. “1,3,5” or “1-5” or “1,3,5-7”) | empty string | R/W |
| UntaggedPorts | String | “Untagged Ports” | Configured untagged ports in string format  (Ex. “1,3,5” or “1-5” or “1,3,5-7”) | empty string | R/W |
| FId | Number | “FID” | 0-15 | 0 | R/W |
| SharedVlan | String | “Shared Vlan” | “Yes” or “No” | “No” | R/W |
| VlanBasedFW | String | “Vlan Based FW” | “Yes” or “No” | “No” | R/W |
| IsRemovable | Boolean | Internal use only for debugging | | | RO |
| IsFIdEnabled | Boolean | Internal use only for debugging | | | RO |
| VlanInterfaceId | Number | "Interface ID" | 0-63 | 0 | R/W |
| VlanInterfaceValid | String | "Interface Valid" | "Invalid" or "Valid" | "Invalid" | R/W |

* 1. GlobalQos

**Tool: Switch -> Global Settings -> QoS  
Example:**

"GlobalQos": {

"PrioritySource": "QOS\_DEFAULT\_PRIORITY",

"SelectedPrioritySource": "Default",

"SelectedQueueRemappingPort": "0",

"PriDecQueueList": [{…}],

"PriDecInnerInnerList": [{…}],

"PriDecOuterOuterList": [{…}],

"PriDecDscpDscpList": [{…},{…},{…},{…},{…},{…},{…},{…}],

"PriRmkInnerList": [{…}],

"PriRmkOuterList": [{…}],

"PriRmkDscpList": [{…}]

}

* + 1. Priority Decision

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| PrioritySource | String | Internal use only for debugging | | | RO |
| SelectedPriority-  Source | String | “Priority Source” | “Port-based”,"InnerTag-based",  "OuterTag-based","Hybrid-based"  "DSCP-based","Default" | “Default” | R/W |
| SelectedQueue-  RemappingPort | String | “Port” | “0”,”1” ,”2” ,”3” ,”4” ,”5” ,  ”6” ,”7” ,”8” ,”9” ,”10” ,”11” | “0” | R/W |
| PriDecQueueList | Array (JSON Object) | “Priority Decision” -> “Internal Priority to Queue ID” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |
| PriDecInnerInner-  List | Array (JSON Object) | “Priority Decision” (“Inner Tagged Based”) -> “Source Priority to Internal Priority” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |
| PriDecOuterOuter-  List | Array (JSON Object) | “Priority Decision” (“Outer Tagged Based”) -> “Source Priority to Internal Priority” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |
| PriDecDscpDscpList | Array (JSON Object) | “Priority Decision” (“DSCP-Based”) -> “Source Priority to Internal Priority” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |

* + 1. Priority Remarking

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| PriRmkInnerList | Array (JSON Object) | “Priority Remarking” -> “Egress Inner Tag Priority” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |
| PriRmkOuterList | Array (JSON Object) | “Priority Remarking” -> “Egress Outer Tag Priority” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |
| PriRmkDscpList | Array (JSON Object) | “Priority Remarking” -> “Egress Inner DSCP Priority” | JSON objects (Containing Item, Column0,Column1,Column2,Column3, Column4,Column5,Column6,Column7) | JSON Object with default attribute values | R/W |

* + 1. Priority Decision/Remarking List JSON Object

The example/attribute-table listed below are applied to the JSON objects of:

PriDecQueueList / PriDecInnerInnerList / PriDecOuterOuterList / PriDecDscpDscpList

PriRmkInnerList / PriRmkOuterList / PriRmkDscpList

**Example:**

"PriDecQueueList": [

{

"Item": "Queue ID (Traffic Class)",

"Column0": 0,

"Column1": 1,

"Column2": 2,

"Column3": 3,

"Column4": 4,

"Column5": 5,

"Column6": 6,

"Column7": 7

}

]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Item | String | Priority Decision:  “Internal Tag Priority”  “Outer Tag Priority”  “DSCP Index”  Internal Priority To Queue ID Remapping:  “Internal Priority”  Priority Remarking:  “Internal Priority” | Priority Decision:  “Internal Priority”,  “Internal Priority of DSCP 0-7”,  “Internal Priority of DSCP 8-15”,  “Internal Priority of DSCP 16-23”,  “Internal Priority of DSCP 24-31”,  “Internal Priority of DSCP 32-39”,  “Internal Priority of DSCP 40-47”,  “Internal Priority of DSCP 48-55”,  “Internal Priority of DSCP 56-63”,  Internal Priority To Queue ID Remapping:  “Queue ID (Traffic Class)”  Priority Remarking:  “Egress Inner Tag Priority”  “Egress Outer Tag Priority”  “Egress DSCP Priority” | Please refer to default DefaultConfig906x.json file | R/W |
| Column0 | Number | “0” or  “+0”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column1 | Number | “1” or  “+1”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column2 | Number | “2” or  “+2”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column3 | Number | “3” or  “+3”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column4 | Number | “3” or  “+3”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column5 | Number | “4” or  “+4”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column6 | Number | “5” or  “+5”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |
| Column7 | Number | “6” or  “+6”(Priority Decision DSCP-based) | 0-7 or 0-63 (Egress DSCP Priority) | Please refer to default DefaultConfig906x.json file | R/W |

* 1. GlobalRouting

**Tool: Switch -> Global Settings -> Routing (Binary Mode Only)**

**Example:**

"GlobalRouting": {

"RoutingInterfaceList": [

{

"Index": 0,

"Ip": "0.0.0.0",

"IpType": "IPv4",

"Mask": "32",

"Port": 0,

"VId": 0,

"Mac": "11:22:00:00:00:00"

}

],

"RoutingHostList": [

{

"Type": "Interface",

"Source": "0.0.0.0",

"Destination": "0.0.0.0",

"IpType": "IPv4",

"SPort": "0",

"DPort": "0",

"InterfaceIdx": "0",

"NextHop": "",

"TTL": "False",

"L2Index": "0",

"Firewall": "False"

}

],

"RoutingStaticList": [

{

"Index": 0,

"Ip": "0.0.0.0",

"IpType": "IPv4",

"Mask": "32",

"NextHopIp": "0.0.0.0"

}

],

"RoutingMultiList": [

{

"Index": 0,

"Sip": "0.0.0.0",

"Dip": "0.0.0.0",

"IpType": "IPv4",

"SPort": "0",

"DPort": "0",

"InterfaceList": "00:00:00:00:00:00:00:07",

"Firewall": "True",

"TTL": "True"

}

],

"RoutingEnable": "True",

"IsVlanSource": "True",

"SelectedACLExtension": "Off"

"TTL": false,

"RoutingFirewall": false,

"DontCare": false,

"downgrade\_L2": false,

"RoutingUniList": [

{

"Index": 0,

"Sip": "0.0.0.0",

"Dip": "0.0.0.0",

"IpType": "IPv4",

"SPort": "0",

"DPort": "0",

"L2Index": "0",

"Firewall": "True",

"EgressIdx": "0",

"TTL": "False"

}

],

"RoutingNetworkList": [

{

"Sip": "0.0.0.0",

"Dip": "0.0.0.0",

"IpType": "IPv4",

"SPort": "0",

"DPort": "0",

"L2Index": "0",

"SPortCare": "False",

"DPortCare": "False",

"EgressIdx": "0",

}

],

"RoutingMultiList\_image": [],

"RoutingUniList\_image": []

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| RoutingInterfaceList | Array (JSON Object) | “InterfaceList” | JSON object (Containing Index, Ip, IpType, Mask, Port, Vid, Mac) | Empty array | R/W |
| RoutingHostList | Array (JSON Object) | “HostList” | JSON object (Containing Type, Destination, IpType, InterfaceIdx, NextHop) | Empty array | R/W |
| RoutingStaticList | Array (JSON Object) | “StaticList” | JSON object (Containing Index, Ip, IpType, Mask, NextHopIp) | Empty array | R/W |
| RoutingMultiList | Array (JSON Object) | “MultiList” | JSON object (Containing Index, Sip, Dip, IpType, Sport, Dport, InterfaceList, Firewall, TTL) | Empty array | R/W |
| RoutingUniList | Array (JSON Object) | “Static Host List” | JSON object (Containing Index, Sip, Dip, IpType, Sport, Dport, L2Index, Firewall, EgressIdx, TTL) | Empty array | R/W |
| RoutingEnable | Boolean | “Routing Enable” | True or false | False | R/W |
| IsVlanSource | Boolean | “IsVlanSource” | True or false | False | R/W |
| SelectedACLExtension | String | "Selected ACL Extension" | "Off" or "On" | "Off" | R/W |
| TTL | Boolean | “TTL” | True or false | false | R/W |
| RoutingFirewall | Boolean | “Firewall” | True or false | False | R/W |
| DontCare | Boolean | Internal use only for debugging | | | RO |
| downgrade\_L2 | Boolean | "L2 Downgrade" | True or false | false | R/W |
| RoutingNetworkList | Array (JSON Object) | “Routing Network List” | JSON object (Containing Sip, Dip, IpType, SPort, DPort, L2Index, SPortCare, DPortCare, EgressIdx) | Empty array | R/W |
| RoutingMultiList\_image | Array (JSON Object) | Internal use only for debugging | | | RO |
| RoutingUniList\_image | Array (JSON Object) | Internal use only for debugging | | | RO |

* + 1. RoutingInterfaceList (Interface Config)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Index | Number | “Index” | 0-63 | 0 | R/W |
| Ip | String | “IP” | IP address in String format | “0.0.0.0” | R/W |
| IpType | string | “IP Type” | “IPv4”, “IPv6” | “IPv4” | R/W |
| Mask | String | “Mask” | Mask(32 bits) in String format | “32” | R/W |
| Port | Number | “Port” | 0-11 | 0 | R/W |
| Vid | Number | “VID” | 0-4095 | 0 | R/W |
| Mac | String | “MAC” | MAC address in String format | “00:00:00:00:00:00” | R/W |

* + 1. RoutingStaticList (Static Route)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Index | Number | Internal use only for debugging | | | RO |
| Ip | String | “IP” | IP address in String format | “0.0.0.0” | R/W |
| IpType | string | “IP Type” | “IPv4”, “IPv6” | “IPv4” | R/W |
| Mask | String | “Mask” | Mask(32 bits) in String format | “32” | R/W |
| NextHopIp | String | “Next Hop” | IP address in String format | “0.0.0.0” | R/W |

* + 1. RoutingMultiList (Multicast)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Index | Number | Internal use only for debugging | | | RO |
| Sip | String | “SIP” | IP address in String format | “0.0.0.0” | R/W |
| Dip | string | “DIP” | IP address in String format | “0.0.0.0” | R/W |
| IpType | String | “IP Type” | “IPv4”, “IPv6” | “IPv4” | R/W |
| Sport | Number | “Sport” | 0-65535 | 0 | R/W |
| Dport | Number | “Dport” | 0-65535 | 0 | R/W |
| InterfaceList | String | “Interface List” | Mask in String format  EX. “01:01:01:01:01:01:01:01” | No Default Value | R/W |
| Firewall | Boolean | “Firewall” | True or false | false | R/W |
| TTL | Boolean | “Interface List” | True or false | false | R/W |

* + 1. RoutingUniList (Global Routing Table)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Index | Number | Internal use only for debugging | | | RO |
| Sip | String | “SIP” | IP address in String format | “0.0.0.0” | R/W |
| Dip | string | “DIP” | IP address in String format | “0.0.0.0” | R/W |
| IpType | String | “IP Type” | “IPv4”, “IPv6” | “IPv4” | R/W |
| Sport | Number | “Sport” | 0-65535 | 0 | R/W |
| Dport | Number | “Dport” | 0-65535 | 0 | R/W |
| InterfaceList | String | “Interface List” | Mask in String format  EX. “01:01:01:01:01:01:01:01” | No Default Value | R/W |
| Firewall | Boolean | “Firewall” | True or false | false | R/W |
| EgressIdx | Number | “EgressIdx” | 0-63 | 0 | R/W |
| TTL | Boolean | “TTL” | True or false | false | R/W |

* + 1. RoutingHostList (Static Host)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Type | String | “Type” | “Interface”, “Static”, “Multi” | No Default Value | R/W |
| Source | String | “Source” | “IPv4”, “IPv6” | No Default Value | R/W |
| Destination | String | “Destination” | Combination of IP and subnet mask in String format  EX. “192.168.1.1/32” | No Default Value | R/W |
| InterfaceIdx | String | “Index” | If “Type” is “Interface”, this value must be set to certain “index” of RoutingInterfaceList entry.  If “Type” is “Multi”, this value must be set to certain “InterfaceList” of RoutingMultiList entry.  If “Type” is “Static” or “Static Host”, this value must be set to empty String “”. | No Default Value | R/W |
| NextHop | String | “Next Hop” | IP address in String format | No Default Value | R/W |
| Sport | Number | “Sport” | 0-65535 | No Default Value | R/W |
| Dport | Number | “Dport” | 0-65535 | No Default Value | R/W |
| L2Index | Number | “L2Index” | 0-65535 | No Default Value | R/W |
| ConfigInfo | Number | “ConfigInfo” | 0-65535 | No Default Value | R/W |

* + 1. RoutingNetworkList (Network List)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| Sip | String | “SIP” | IP address in String format | “0.0.0.0” | R/W |
| Dip | string | “DIP” | IP address in String format | “0.0.0.0” | R/W |
| IpType | String | “IP Type” | “IPv4”, “IPv6” | “IPv4” | R/W |
| SPort | Number | “Sport” | 0-65535 | No Default Value | R/W |
| DPort | Number | “Dport” | 0-65535 | No Default Value | R/W |
| L2Index | Number | “L2Index” | 0-65535 | No Default Value | R/W |
| SPortCare | Number | “Dport” | 0-65535 | No Default Value | R/W |
| DPortCare | Number | “Dport” | 0-65535 | No Default Value | R/W |
| EgressIdx | Number | “EgressIdx” | 0-63 | 0 | R/W |

* 1. GlobalFlowControl

**Tool: Switch -> Global Settings -> Flow Ctrl**

**Example:**

"GlobalFlowControl": {

"FlowEnable": false,

"PortStatus": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| FlowEnable | Boolean | "Flow Control Configuration Setting" | true or false | false | R/W |
| PortStatus | Array (Boolean) | "Port 0" - "Port 14" | Array of 15 Booleans | Array of 15 false | R/W |

* 1. GlobalFrer

**Tool: Switch -> Global Settings -> FRER**

**Example:**

"GlobalFrer": {

"StreamStartIndex": 1,

"StreamEndIndex": 15,

"EntryStreamList": [

{

"EntryIndex": 1,

"Valid": false,

"DestAddr": "0x0",

"SrcAddr": "0x0",

"Ethertype": "0x0",

"VlanID": "0",

"SrcIP": "0x0",

"DestIP": "0x0",

"DSCP": "0x0",

"NextProtocol": "0x0",

"SrcPort": "0",

"DestPort": "0",

"PortMask": "0x0",

"StreamHandle": "0x0"

}

]

"CountersStartIndex": 1,

"CountersEndIndex": 15

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| StreamStartIndex | Number | "Stream Identification" -> "Start" | 1-96 | 1 | R/W |
| CountersEndIndex | Number | "Stream Identification" -> "End" | 1-96 | 15 | R/W |
| EntryStreamList | Array (JSON Object) | "EntryStreamList" | JSON object (Containing "EntryIndex", "Valid", "DestAddr", "SrcAddr", "Ethertype", "VlanID", "SrcIP", "DestIP", "DSCP", "NextProtocol", "SrcPort", "DestPort", "PortMask" and "StreamHandle") | Empty array | R/W |
| EntryIndex | Number | "Entry" | 1-96 | No default value | R/W |
| Valid | Boolean | "Valid" | true or false | false | R/W |
| DestAddr | String | "Destination Address" | Hex integer string | No default value | R/W |
| SrcAddr | String | "Source Address" | Hex integer string | No default value | R/W |
| Ethertype | String | "Ethertype" | Hex integer string | No default value | R/W |
| VlanID | String | "VLAN ID" | Integer string | No default value | R/W |
| SrcIP | String | "Source IP" | Hex integer string | No default value | R/W |
| DestIP | String | "Destination IP" | Hex integer string | No default value | R/W |
| DSCP | String | "DSCP" | Hex integer string | No default value | R/W |
| NextProtocol | String | " Next Protocol" | Hex integer string | No default value | R/W |
| SrcPort | String | "Source Port" | Integer string | No default value | R/W |
| DestPort | String | "Destination Port" | Integer string | No default value | R/W |
| PortMask | String | "Port Mask" | Hex integer string | No default value | R/W |
| StreamHandle | String | " Stream Handle" | Hex integer string | No default value | R/W |
| CountersStartIndex | Number | "Counters" -> "Start" | 1-96 | 1 | R/W |
| CountersStartIndex | Number | "Counters" -> "End" | 1-96 | 15 | R/W |

* 1. GlobalPsfp

**Tool: Switch -> Global Settings -> PSFP**

**Example:**

"GlobalFrer": {

"StreamFilterStartIndex": 0,

"StreamFilterEndIndex": 15,

"EntryStreamFilterList": [

{

"EntryIndex": 0,

"Valid": false,

"MatchingStreamHandle": "0x0",

"MatchingPriority": "0",

"StreamGateID": "0",

"FlowMeterID": "0",

"MaxSDUsize": "0",

"BlockStreamEnable": "Disabled"

}

],

"StreamGateStartIndex": 0,

"StreamGateEndIndex": 15,

"EntryStreamGateList": [

{

"EntryIndex": 0,

"Valid": false,

"AdminGateState": "Closed",

"AdminIPV": "Bypass",

"GateControlListEnable": "Disabled",

"GateClose\_RX": "Disabled"

}

],

"EntryGclWindow": {

"0"-"95": {

"BaseTime\_MsbSec": "0x0",

"BaseTime\_LsbSec": "0x0",

"BaseTime\_ns": "0x0",

"CycleTimeEtn": "0x0",

"SelectedGclLength": 2,

"GateClose\_Octet": "Disabled",

"EntryStreamGateList": [

{

"StreamGateIndex": 0,

"ListIndex": 0,

"GateState": "Open",

"IPV": "Bypass",

"Duration": "0",

"IntervalOctets": "0"

}

]

}

},

"FlowMeterStartIndex": 0,

"FlowMeterEndIndex": 15,

"EntryFlowMeterList": [

{

"EntryIndex": 0,

"Valid": false,

"CommitInfoRate": "",

"CommitBurstSize": "",

"ExcessInfoRate": "",

"ExcessBurstSize": "",

"CouplingFlag": "False",

"ColorMode": "ColorBlind",

"DeiSelection": "InnerTag",

"DropOnYellowFrame": "False",

"IPVforYellowFrame": "Disabled",

"MarkAllFramesRed": "Disabled"

}

],

"CountersStartIndex": 0,

"CountersEndIndex": 15,

"ErrorStartIndex": 0,

"ErrorEndIndex": 15

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| StreamFilterStartIndex | Number | "Stream Filter" -> "Start" | 0-95 | 0 | R/W |
| StreamFilterEndIndex | Number | "Stream Filter" -> "End" | 0-95 | 15 | R/W |
| EntryStreamFilterList | Array (JSON Object) | "Stream Filter" | JSON object (Containing "EntryIndex", "Valid", "MatchingStreamHandle", "MatchingPriority", "StreamGateID", "FlowMeterID", "MaxSDUsize" and "BlockStreamEnable") | Empty array | R/W |
| EntryIndex | Number | "Entry" | 0-95 | No default value | R/W |
| Valid | Boolean | "Valid" | true or false | false | R/W |
| MatchingStreamHandle | String | "Matching Stream Handle" | Hex integer string | No default value | R/W |
| MatchingPriority | String | "Matching Priority" | Integer string | No default value | R/W |
| StreamGateID | String | "Stream Gate ID" | Integer string | No default value | R/W |
| FlowMeterID | String | "Flow Meter ID" | Integer string | No default value | R/W |
| MaxSDUsize | String | "Max SDU size in Byte" | Integer string | No default value | R/W |
| BlockStreamEnable | String | "Block Stream due to Oversize" | "Disabled" or "Enabled" | "Disabled" | R/W |
| StreamGateStartIndex | Number | "Stream Gate" -> "Start" | 0-95 | 0 | R/W |
| StreamGateEndIndex | Number | "Stream Gate" -> "End" | 0-95 | 15 | R/W |
| EntryStreamGateList | Array (JSON Object) | "Stream Gate" | JSON object (Containing "EntryIndex", "Valid", "AdminGateState", "AdminIPV", "GateControlListEnable" and "GateClose\_RX") | Empty array | R/W |
| EntryIndex | Number | "Entry" | 0-95 | 0 | R/W |
| Valid | Boolean | "Valid" | true or false | false | R/W |
| AdminGateState | String | "Admin Gate State" | "Closed" or "Open" | "Closed" | R/W |
| AdminIPV | String | "Admin IPV" | "1"-"7" and "Bypass" | "Bypass" | R/W |
| GateControlListEnable | String | "Gate Control List" | "Disabled" or "Enabled" | "Disabled" | R/W |
| GateClose\_RX | String | "Gate Close due to Invalid RX" | "Disabled" or "Enabled" | "Disabled" | R/W |
| EntryGclWindow | Array (JSON Object) | "0"-"95"  "Stream Gate" -> "Gate Control List Set" | JSON object (Containing "BaseTime\_MsbSec", "BaseTime\_LsbSec", "BaseTime\_ns", "CycleTimeEtn", "SelectedGclLength", "GateClose\_Octet" and "EntryGclList") | Empty array | R/W |
| BaseTime\_MsbSec | String | "Stream Gate" -> "Gate Control List Set" -> "Base Time" | Hex integer string | No default value | R/W |
| BaseTime\_LsbSec | String | "Stream Gate" -> "Gate Control List Set" -> "Base Time" | Hex integer string | No default value | R/W |
| BaseTime\_ns | String | "Stream Gate" -> "Gate Control List Set" -> "Base Time" | Hex integer string | No default value | R/W |
| CycleTimeEtn | String | "Stream Gate" -> "Gate Control List Set" -> "Cycle Time Extension" | Hex integer string | No default value | R/W |
| SelectedGclLength | Number | "Stream Gate" -> "Gate Control List Set" -> "Control List Length" | "2"-"8" | No default value | R/W |
| GateClose\_Octet | String | "Stream Gate" -> "Gate Control List Set" -> "Gate Close due to Exceed Octet" | "Disabled" or "Enabled" | "Disabled" | R/W |
| EntryGclList | Array (JSON Object) | "Stream Gate" -> "Gate Control List Set" -> "Gate Control List" | JSON object (Containing "StreamGateIndex", "ListIndex", "GateState", "IPV", "Duration" and "IntervalOctets") | Empty array | R/W |
| StreamGateIndex | Number | Internal use only for debugging | | | RO |
| ListIndex | Number | "Index" | 0-1 | 0 | R/W |
| GateState | String | "Gate State" | "Closed" or "Open" | "Open" | R/W |
| IPV | String | "IPV" | "1"-"7" and "Bypass" | "Bypass" | R/W |
| Duration | String | "Duration" | Integer string | "0" | R/W |
| IntervalOctets | String | "Interval Octets" | Integer string | "0" | R/W |
| FlowMeterStartIndex | Number | "Flow Meter" -> "Start" | 0-95 | 0 | R/W |
| FlowMeterEndIndex | Number | "Flow Meter" -> "End" | 0-95 | 15 | R/W |
| EntryFlowMeterList | Array (JSON Object) | "Flow Meter" | JSON object (Containing "EntryIndex", "Valid", "CommitInfoRate", "CommitBurstSize", "ExcessInfoRate", "ExcessBurstSize", "CouplingFlag", "ColorMode", "DeiSelection", "DropOnYellowFrame", "IPVforYellowFrame" and"MarkAllFramesRed") | Empty array | R/W |
| "EntryIndex" | Number | "EntryIndex" | 0-95 | 0 | R/W |
| "Valid" | Boolean | "Valid" | true or false | false | R/W |
| "CommitInfoRate" | String | "CommitInfoRate" | Integer string | "0" | R/W |
| "CommitBurstSize" | String | "CommitBurstSize" | Integer string | "0" | R/W |
| "ExcessInfoRate" | String | "ExcessInfoRate" | Integer string | "0" | R/W |
| "ExcessBurstSize" | String | "ExcessBurstSize" | Integer string | "0" | R/W |
| "CouplingFlag" | String | "CouplingFlag" | "True" or "False" | "False" | R/W |
| "ColorMode" | String | "ColorMode" | "ColorBlind" or "ColorAware" | "ColorBlind" | R/W |
| "DeiSelection" | String | "DeiSelection" | "InnerTag" or "OuterTag" | "InnerTag" | R/W |
| "DropOnYellowFrame" | String | "DropOnYellowFrame" | "True" or "False" | "False" | R/W |
| "IPVforYellowFrame" | String | "IPVforYellowFrame" | "Disabled" or "Enabled" | "Disabled" | R/W |
| "MarkAllFramesRed" | String | "MarkAllFramesRed" | "Disabled" or "Enabled" | "Disabled" | R/W |
| CountersStartIndex | Number | "Counters" -> "Start" | 0-95 | 0 | R/W |
| CountersEndIndex | Number | "Counters" -> "End" | 0-95 | 15 | R/W |
| ErrorStartIndex | Number | "Counters" -> "Start" | 0-95 | 0 | R/W |
| ErrorEndIndex | Number | "Counters" -> "End" | 0-95 | 15 | R/W |

* 1. GlobalPhyMaster

**Tool: Switch -> Global Settings -> Phy Master**

**Example:**

"GlobalFrer": {

"InputPhyID": [

1, 2, 3, 4

]

"SelectPower\_Rate": 5,

"SelectedPhyIdMode": "PHY 0",

"PhyAddr": "",

"PhyVal": "",

"SelectedMappingMode": "PHY 0",

"Mapping\_Page": "",

"Mapping\_Reg": "",

"Mapping\_Ext": ""

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| InputPhyID | Array (Number) | "Phy 0 ID", "Phy 1 ID",  "Phy 2 ID" and "Phy 3 ID" | Integer number | 1, 2, 3, 4 | R/W |
| SelectPower\_Rate | Number | "Frequency" | Integer number | 5 | R/W |
| SelectedPhyIdMode | String | "Which Phy to initailize" | "PHY 0", " PHY 1",  "PHY 2" and " PHY 3" | "PHY 0" | R/W |
| PhyAddr | Number | "Register Address" | Hex integer number | No default value | R/W |
| PhyVal | Number | "Register Value" | Hex integer number | No default value | R/W |
| SelectedMappingMode | String | "Which Phy" | "PHY 0", " PHY 1",  "PHY 2" and " PHY 3 | "PHY 0" | R/W |
| Mapping\_Page | Number | "Page" | Hex integer number | No default value | R/W |
| Mapping\_Reg | Number | "Reg" | Integer number | No default value | R/W |
| Mapping\_Ext | Number | "External PHY Reg" | Integer number | No default value | R/W |

1. Port
   1. PortGeneral

**Tool: Switch -> P0-P14 -> Properties**

**Example:**

"PortGeneral": {

"Role": true,

"SelectedPortIf": "RGMII",

"PhyStatus": true,

"isForce": false,

"isSerdes": false,

"SelectedLinkSpeed": "1000M",

"RxDelay": 0,

"TxDelay": 0,

"SelectedLdoVoltage": "1.8v",

"SelectedRGMIIVoltage": "3.3v",

"SelectedSpeed": "10mbps",

"RGMIIDriving": "0",

"RGMIIDrivingLow": "0",

"DrivingEnable": "True"

"SelectedSgmiiExternalPortCfg": "CML/N-Way enable PHY side, speed 1000Mbps",

"Rolelabel": "Master",

"DrivingEnablelabel": "Auto"

"isSerdeslabel": "MAC",

"isForcelabel": "OFF"

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| SelectedPortIf | String | “Interface” | “100BASE T1 PHY”,  “1000BASE T1 PHY”,  ”RGMII”,  ”SGMII”,  ”RGMII PHY”,  ”RGMII MAC”,  ”MII PHY” ,  ”MII MAC” ,  ”RGMII 100M”,  ”HISGMII”,  ”USXGMII”,  ”FAST ETHERNET”,  ”PCIE1G”  ”PCIE5G”  \* Supported interfaces are varied from port to port, please check RTL907X\_6XA-V1 Series Datasheet | Please refer to default DefaultConfig906x.json file | R/W |
| Role | Boolean | “Role” | True(Master) or false(Slave)  \*Only affects when interface is “100BASE T1 PHY” or “1000BASE T1 PHY” | true | R/W |
| PhyStatus | Boolean | Internal use only for debugging | | | RO |
| isForce | Boolean | "Force Mode" | true or false | false | R/W |
| isSerdes | Boolean | "Serdes Mode" | true or false | false | R/W |
| SelectedLinkSpeed | string | "Link Speed" | RGMII: 1000M/100M/10M  RMII/MII PHY/MAC: 100M/10M | RGMII: 1000M  RMII/MII PHY/MAC: 100M | R/W |
| RxDelay | Number | “RGMII RX Delay” | 0-7  \*Only affects when interface is “RGMII” | 0 | R/W |
| TxDelay | Number | “RGMII TX Delay” | 0-1  \*Only affects when interface is “RGMII” | 0 | R/W |
| SelectedLdoVoltage | string | “xMII LDO” | “1.25v”,”1.8v”,”Disable”  \* Only P4,P5,P9(9072A) or P0,P1,P5(9068A) have this attribute | “1.8v” | R/W |
| SelectedRGMIIVoltage | string | “xMII Voltage” | “3.3v”,“2.5v”,”1.8v”  \* Only P4,P5,P8,P9,P11(9072A/9075A) or P0,P1,P5,P6,P8(9068A) have this attribute | “1.8v” | R/W |
| SelectedSpeed | string | "Speed" | SGMII: "10mbps", "100mbps" and "1000mbps" | "10mbps" | R/W |
| RGMIIDriving | Number | “Rising Strength” | 0-7 | 0 | R/W |
| RGMIIDrivingLow | Number | “Falling Strength” | 0-7 | 0 | R/W |
| DrivingEnable | Boolean | “xMII Driving” | True or false | false | R/W |
| SelectedSgmiiExternalPortCfg | string | Internal use only for debugging | | | RO |
| Rolelabel | string | Internal use only for debugging | | | RO |
| DrivingEnablelabel | string | Internal use only for debugging | | | RO |
| isSerdeslabel | string | Internal use only for debugging | | | RO |
| isForcelabel | string | Internal use only for debugging | | | RO |

* 1. PortVlan

**Tool: Switch -> P0-P14 -> Vlan**

**Example:**

"PortVlan": {

"PortNum": 2,

"InputVId": 1,

"InputPriority": 0,

"SelectedLearningBased": "Inner Tag",

"SelectedMode": "802.1Q-based",

"IngressFilter": true,

"EgressFilter": true,

"SelectedFrameType": "ACCEPT\_FRAME\_TYPE\_ALL",

"DisplayedFrameType": "Untagged, priority-tagged and tagged"

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| PortNum | Number | Internal use only for debugging | | | RO |
| InputVId | Number | “VID” | 0-4095 | 1 | R/W |
| InputPriority | Number | “Priority” | 0-7 | 0 | R/W |
| SelectedLearningBased | String | “VLAN learning based on” | “Inner Tag”,  ”Outer Tag” | Inner Tag | R/W |
| SelectedMode | String | “VLAN Mode” | “802.1Q-Based”,”Port-Based” | 802.1Q-Based | R/W |
| IngressFilter | Boolean | “Ingress Filter” | True(Enabled) or false(Disabled) | True | R/W |
| EgressFilter | Boolean | “Egress Filter” | True(Enabled) or false(Disabled) | True | R/W |
| IngressFilterLabel | String | Internal use only for debugging | | | RO |
| EgressFilterLabel | String | Internal use only for debugging | | | RO |
| DisplayedFrameType | String | Internal use only for debugging | | | RO |
| SelectedFrameType | String | “Accepted Frame Type” | “Untagged,priority-tagged and tagged”,  “Tagged only”,  “Untagged and Priority Tagged only”,  ”None” | “Untagged,priority-tagged and tagged” | R/W |

* 1. PortQos

**Tool: Switch -> P0-P14 -> QoS**

**Example:**

"PortQos": {

"PriDecPriority": 2,

"PriRmkInnerTag": "Disabled",

"PriRmkOuterTag": "Disabled",

"PriRmkDscp": "Disabled",

"PriRmkBoundaryPort": "Disabled",

"PriRmkBoundaryPortList": [

{

"Item": "Remark to PCP",

"Column0": 0,

"Column1": 0,

"Column2": 0,

"Column3": 0,

"Column4": 0,

"Column5": 0,

"Column6": 0,

"Column7": 0

}

],

"SelectedQueueSchedComb": "Strict Priority + WRR",

"DisplayedSchedItem0": "Strict Priority",

"DisplayedSchedItem1": "WRR",

"QueueSchedItem0": [

"SP\_0", "SP\_1", "SP\_2", "SP\_3", "SP\_4",

"SP\_5", "SP\_6", "SP\_7"

],

"QueueSchedItem1": [

"WRR\_0", "WRR\_1", "WRR\_2", "WRR\_3", "WRR\_4",

"WRR\_5", "WRR\_6", "WRR\_7" ],

"SelectedQueueSched": [

"Strict Priority", "Strict Priority", "Strict Priority", "Strict Priority", "Strict Priority",

"Strict Priority", "Strict Priority", "Strict Priority" ],

"IsQueueWeightEnabled": [

false, true, true, true, true,

true, true, true

],

"IsRateLimitingEnabled": [

true, true, true, true, true,

true, true, true

],

"IsRateEnableOn": [

false, false, false, false, false,

false, false, false

],

"InputQueueWeight": [

0, 2, 4, 8, 1,

2, 4, 8

],

"InputRateLimiting": [

1048568, 1048568, 1048568, 1048568, 1048568,

1048568, 1048568, 1048568

],

"IsCbsBwEnabled": [

false, false, false, false, false,

false, false, false

],

"InputCbsBw": [

0, 0, 0, 0, 0,

0, 0, 0

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| PriDecPriority | Number | “Priority Decision” ->  “Port-Based Priority” | 0-7 | 2 | R/W |
| PriRmkInnerTag | String | “Priority Remarking” -> “Inner Tag Priority Remarking” | “Disable”, ”Enable” | Disable | R/W |
| PriRmkOuterTag | String | “Priority Remarking” -> “Outer Tag Priority Remarking” | “Disable”, ”Enable” | Disable | R/W |
| PriRmkDscp | String | “Priority Remarking” -> “DSCP Remarking” | “Disable”, ”Enable” | Disable | R/W |
| SelectedQueueSchedComb | String | “Queue Settings” ->  “Queue Schedulers” | “Strict Priority + WRR”, “Strict Priority + WFQ” | “Strict Priority + WRR” | R/W |
| DisplayedSchedItem0 | String | Internal use only for debugging | | | RO |
| DisplayedSchedItem1 | String | Internal use only for debugging | | | RO |
| QueueSchedItem0 | String | Internal use only for debugging | | | RO |
| QueueSchedItem1 | String | Internal use only for debugging | | | RO |
| SelectedQueueSched | Array (String) | “Queue Settings” ->  “Scheduler” | “Strict Priority”, “WRR”, ”WFQ” | “Strict Priority” | R/W |
| IsQueueWeightEnabled | Array (Boolean) | Internal use only for debugging | | | RO |
| IsRateLimitingEnabled | Array (Boolean) | Internal use only for debugging | | | RO |
| IsRateEnableOn | Array (Boolean) | Internal use only for debugging | | | RO |
| InputQueueWeight | Array (Number) | “Weight” | 0-63 | Please refer to default DefaultConfig906x.json file | R/W |
| InputRateLimiting | Array (Number) | “Rate” | 0-1048568 | 1048568 | R/W |
| IsCbsBwEnabled | Array (Boolean) | "Queue Settings" ->  "Queue Schedulers" -> "Strict Priority + CBS" | true or false | True | R/W |
| InputCbsBw | Array (Number) | "CBS Bandwidth" | 0-5000000000 | 0 | R/W |

* 1. PortTraffic

**Tool: Switch -> P0-P14 -> Traffic Scheduler**

**Example:**

"PortTraffic": {

"AdminGateState": "0xFF",

"OperGateState": "",

"GateEnableState": "Disabled",

"QueueMaxSDU": [

"0x3FFF", "0x3FFF", "0x3FFF", "0x3FFF", "0x3FFF",

"0x3FFF", "0x3FFF", "0x3FFF"

],

"BaseTime\_MsbSec": "0x0",

"BaseTime\_LsbSec": "0x0",

"BaseTime\_ns": "0x0",

"CycleTimeEtn": "0x0",

"ControlListLength": 2,

"EntryTrafficList": [

{

"Index": 0,

"GateState": "",

"Interval": ""

},

{

"Index": 1,

"GateState": "",

"Interval": ""

}

],

"CycleTime": "-",

"SelectedPortType": "100M"

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| AdminGateState | String (String) | "Admin Gate State" | hex string format | "0xFF" | R/W |
| OperGateState | String (String) | "Oper Gate State" | "Disable" and "Enable" | "Disable" | R/W |
| GateEnableState | Boolean | "GateEnableState" | "Disable" and "Enable" | "Disable" | R/W |
| QueueMaxSDU | Array (String) | Queue Max SDU | 16 bits hex string format | "0x3FFF" | R/W |
| BaseTime\_MsbSec | String (String) | "Base Time" | hex string format | "0x0" | R/W |
| BaseTime\_LsbSec | String (String) | "Base Time" | hex string format | "0x0" | R/W |
| BaseTime\_ns | String (String) | "Base Time" | hex string format | "0x0" | R/W |
| CycleTimeEtn | String (String) | "Cycle Time Extension" | hex string format | "0x0" | R/W |
| ControlListLength | Number | "Control List Length" | integer | 2 | R/W |
| EntryTrafficList | Array (JSON Object) | “Gate Control List” | JSON object (Containing Index, GateState, Interval) | Empty array | R/W |
| Index | Number | "Gate Control List" -> "index" | integer | 0 | R/W |
| GateState | String (String) | "Gate Control List" -> "gate state" | "Disable" and "Enable" | "Disable" | R/W |
| Interval | String (String) | "Gate Control List" -> "interval" | hex string format | "0" | R/W |
| CycleTime | String (String) | "Cycle Time" | hex string format | "-" | R/W |
| SelectedPortType" | String (String) | "Port Type" | String | "100M" | R/W |

* 1. PortStormControl

**Tool: Switch -> P0-P14 -> Storm Control**

**Example:**

"PortStormControl": {

"BroadcastStormControl": "Disabled",

"BcDataRateType": "bps",

"BroadcastDataRate": "1",

"MulticastStormControl": "Disabled",

"McDataRateType": "bps",

"MulticastDataRate": "1",

"SelectedMulticastType": "Unknown Multicast Only",

"UnicastStormControl": "Disabled",

"UcDataRateType": "bps",

"UnicastDataRate": "1"

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| BroadcastStormControl | String | "Broadcast" -> "StormControl" | "Enabled" or "Disabled" | "Disabled" | R/W |
| BcDataRateType | String | "Broadcast" -> "Data Rate" | "bps" or "pps" | "bps" | R/W |
| BroadcastDataRate | Number | "Broadcast" -> "Data Rate" | Integer | 0 | R/W |
| MulticastStormControl | String | "Multicast" -> "StormControl" | "Enabled" or "Disabled" | "Disabled" | R/W |
| McDataRateType | String | "Multicast" -> "Data Rate" | "bps" or "pps" | "bps" | R/W |
| MulticastDataRate | Number | "Multicast" -> "Data Rate" | Integer | 0 | R/W |
| SelectedMulticastType | String | "Multicast" -> "Multicast Type" | "Unknown Multicast Only" or "All Multicast" | "Unknown Multicast Only" | R/W |
| UnicastStormControl | String | "Unicast" -> "StormControl" | "Enabled" or "Disabled" | "Disabled" | R/W |
| UcDataRateType | String | "Unicast" -> "Data Rate" | "bps" or "pps" | "bps" | R/W |
| UcDataRateType | Number | "Unicast" -> "Data Rate" | Integer | 0 | R/W |

* 1. PortIsolation

**Tool: Switch -> P0-P14 -> Port Isolation**

**Example:**

"PortIsolation": {

"BlockedFwPortMask": [

false, false, false, false, false,

false, false, false, false, false,

false, false, false, false, false

]

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Type** | **Items On Tool** | **Accepted Value** | **Default** | **R/W** |
| BlockedFwPortMask | Array (Boolean) | "Blocked Forwarding Ports" | Array of 15 Booleans | Array of 15 false | R/W |