

show port

This chapter describes the output of the **show port** command.

Important The outputs of **show port** commands vary based on platform ASR 5000 or ASR 5500, VPC (virtualized), card type and the StarOS release.

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show port datalink counters (ASR 5000)

Table 1: show port datalink counters Command Output Descriptions (ASR 5000)

Field	Description
Counters for port	The port for which the counters are displayed. The very next line displays the type of line card to which that port belongs.
Line Card	Line card type displayed as a text string
RX Counters	
RX Bytes	The number of received bytes.
RX BAD frames	The number of received frames with errors.
RX Runt frames	The number of received frames of less that expected size.
RX Oversize frames	The number of received oversize frames.

Field	Description
RX Good frames	The number of received frames with no errors.
RX Unicast frames	The number of Unicast frames received.
RX Multicast frames	The number of Multicast frames received.
RX Broadcast frames	The number of Broadcast frames received.
RX Size	The number of times that data was received according to number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1518 - Greater than 1518
RX OverSize frames	The number of oversized frames received.
RX Bytes OK	The number of bytes that were received without error.
RX Bytes BAD **ASR 5000 only**	The number of bytes that were received with errors.
RX OVF	The number of overflows received.
RX SHORT OK	The number of frames, less than 64 bytes in length, received without any error.
RX SHORT CRC	The number of frames, less than 64 bytes in length, received with cyclical redundancy check (CRC) error.
RX NO SFD	The number of frames received without start frame delimiter (SFD) detection but with carrier assertion.
RX NORM CRC	The number of frames, with lengths between 64 bytes and the maximum frame size, received with an integral number of bytes and a cyclical redundancy check (CRC) error.
RX NORM ALI	The number of frames, with lengths between 64 bytes and the maximum frame size, received with a non-integral number of bytes and a cyclical redundancy check (CRC) error.
RX LONG OK	The number of frames, larger than the maximum frame size, received without any error.

Field	Description
RX LONG CRC	The number of frames, larger than the maximum frame size, received with CRC error.
RX PAUSE	The number of correct received flow-control frames.
RX FALS CRS	The number of false carrier events detected.
RX SYM ERR	The number of received frames during which physical (PHY) symbol errors were detected.
RX GPCS ERR	The number of received frames during which physical (PHY) symbol errors were detected.
Tx Counters	
TX Unicast frames	The number of Unicast frames transmitted.
TX Multicast frames	The number of Multicast frames transmitted.
TX Broadcast frames	The number of Broadcast frames transmitted.
TX Size	The number of times that data was transmitted according to the number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1518 - Greater than 1518
TX Bytes OK	The number of bytes that were transmitted without error.
TX Bytes BAD	The number of bytes that were transmitted with errors.
TX DEFER	The number of frames deferred upon the first transmit attempt due to a busy line.
TX COL	The number of regular collision events occurring during transmission.
TX SCOL	The number of frames transmitted without any error following a single collision.
TX MCOL	The number of frames transmitted without any error following multiple collision.
TX XCOL	The number of frames that have experienced 16 consecutive collisions or more.

Field	Description
TX LCOL	The number of transmission abortion due to a collision occurring after transmission of packets that are 64 byes in length.
TX PAUSE	The number of correct transmitted flow-control frames.
TX ERR	The number of frames transmitted with an error due to transmit FIFO underflow or TXERR signal assertion

show port datalink counters (ASR 5500)

Table 2: show port datalink counters Command Output Descriptions (ASR 5500)

Field	Description
Counters for port	The port for which the counters are displayed. The very next line displays the type of line card to which that port belongs.
Line Card	Line card type displayed as a text string
RX Counters	
RX Bytes	The number of received bytes.
RX Unicast frames	The number of Unicast frames received.
RX Multicast frames	The number of Multicast frames received.
RX Broadcast frames	The number of Broadcast frames received.
RX Size	The number of times that data was received according to number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1518 - Greater than 1518
RX OverSize frames	The number of oversized frames received.
RX Undersize frames	The number of undersized frames received.
RX ExceededMaxSize frames	The number of frames received that exceeded maximum size.

Field	Description
RX Fragment frames	The number of fragmented frames received.
RX Jabber frames	The number of frames that exceeded 1518 bytes with a bad CRC (long packet error).
RX Control frames	The number of control frames received
RX Pause frames	The number of pause frames received.
RX FCS Error frames	The number of Frame Check Sequence error frames received.
RX Length Error frames	The of frames received with length errors.
RX Code Error frames	The number of frames received with code errors.
RX ExMaxSize Err frames	The number of frames received that included exceeded maximum size errors.
Tx Counters	
TX Bytes	
TX Unicast frames	The number of Unicast frames transmitted.
TX Multicast frames	The number of Multicast frames transmitted.
TX Broadcast frames	The number of Broadcast frames transmitted.
TX Size	The number of times that data was transmitted according to the number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1518 - Greater than 1518
TX OverSize frames	The number of oversized frames transmitted.
TX Undersize frames	The number of undersized frames transmitted.
TX Fragment frames	The number of fragmented frames transmitted.
TX Jabber frames	The number of frames transmitted that exceeded 1518 bytes with a bad CRC (long packet error).
TX Control frames	The number of control frames transmitted

Field	Description
TX Pause frames	The number of pause frames transmitted.
TX FCS Error frames	The number of Frame Check Sequence error frames transmitted.
TX Length Error frames	The of frames transmitted with length errors.

show port datalink counters (VPC-SI, VPC-DI)

Table 3: show port datalink counters Command Output Descriptions (VPC-SI, VPC-DI)

Field	Description
Counters for port	The port for which the counters are displayed. The very next line displays the type of line card to which that port belongs.
Line Card	Line card type displayed as a text string
RX Counters	
RX Unicast frames	The number of Unicast frames received.
RX Multicast frames	The number of Multicast frames received.
RX Broadcast frames	The number of Broadcast frames received.
RX Size	The number of times that data was received according to number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1522
RX Bytes OK	The number of bytes that were received without error.
RX Bytes BAD	The number of bytes that were received with errors.
RX SHORT OK	The number of frames, less than 64 bytes in length, received without any error.
RX SHORT CRC	The number of frames, less than 64 bytes in length, received with cyclical redundancy check (CRC) error.
RX OVF	The number of overflows received.

Field	Description
RX NORM CRC	The number of frames, with lengths between 64 bytes and the maximum frame size, received with an integral number of bytes and a cyclical redundancy check (CRC) error.
RX LONG OK	The number of frames, larger than the maximum frame size, received without any error.
RX LONG CRC	The number of frames, larger than the maximum frame size, received with CRC error.
RX PAUSE	The number of correct received flow-control frames.
RX FALS CRS	The number of false carrier events detected.
RX SYM ERR	The number of received frames during which physical (PHY) symbol errors were detected.
Tx Counters	
TX Unicast frames	The number of Unicast frames transmitted.
TX Multicast frames	The number of Multicast frames transmitted.
TX Broadcast frames	The number of Broadcast frames transmitted.
TX Size	The number of times that data was transmitted according to the number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1522 - Greater than 1522
TX Bytes OK	The number of bytes that were transmitted without error.
TX Bytes BAD	The number of bytes that were transmitted with errors.
TX PAUSE	The number of correct transmitted flow-control frames.
TX ERR	The number of frames transmitted with an error due to transmit FIFO underflow or TXERR signal assertion

show port dinet

Displays the DI-network port statistics.

Table 4: show port dinet Command Output Descriptions

Field	Description
counters	
SLOT/CPU/NPU	Displays the slot, CPU, NPU details of the DI-network port.
utilization	
SLOT/CPU/NPU	Displays the slot, CPU, NPU details of the DI-network port.
bps	Displays bits per second.
pps	Displays packets per second.
verbose	Displays the option to view complete port details.

show port info

Displays detailed configuration and functional information for a specified interface port.

The command output varies depending on the type of port interface configured. Three tables are provided for the various port interface types available:

- Ethernet
- Frame Relay (ASR 5000 only)
- ATM (ASR 5000 only)

Table 5: show port info Command Output Descriptions for Ethernet Port Line Card

Field	Description
Port Type	The configured port type. Supported Ethernet port types and data transfer rates.
Role	The communication role played by this port. • **Management Port**: Port has been designated for remote management access. • **Service Port**: Port handles subscriber traffic.
Description	The textual description given to the port during software configuration. If no description was configured, **(None Set)** appears in this field.
Controlled By Card **ASR 5000 only**	The slot number and type of the front-installed application card to which this Ethernet line card is mapped.

Field	Description
Redundancy Mode	The redundancy mode configured for this Ethernet line card port. Possible redundancy modes are: • **Card**: No redundancy will be used. • **Port**: Port redundancy will be used.
Framing Mode **ASR 5x00 only**	Ethernet
Redundant With	The slot number and port number of the Ethernet card that is redundant with this Ethernet line card. If a redundant port is not available, **Not Redundant** appears in this field.
Preferred Port **Not for VPC-DI, CF**	Indicates if this card will assume revertive (auto-recovery) redundancy functionality should this line card be brought back into service after a failure.
Physical ifIndex	The static identification number for the slot/port combination on this Line Card. This ID is used in SNMP traps sent when the link status of the Ethernet port goes up or down.
Administrative State	**Enabled** indicates that this card has been configured for use via software.
Configured Duplex **ASR 5x00 only**	Indicates the port's configured duplex mode. Possible modes are: • **Auto**: The port auto-detects the appropriate mode (Full- or Half-duplex) for communicating with the network. • **Full duplex** • **Half duplex**
Configured Speed **ASR 5x00 only**	The maximum data rate configured for this port. Possible rates are: • **Auto**: The port auto-detects the appropriate data rate for communicating on the network. • **10 Mbps** • **100 Mbps** • **1000 Mbps** (ASR 5000: supported on Ethernet 1000 Line Cards, Quad Gigabit Ethernet Line Cards, and SPIO Cards)
Configured Flow Control **ASR 5000 only**	**Quad Gigabit Ethernet Line Card (QGLC) only**: **Enabled** indicates that Ethernet MAC level flow control has been enabled for this Ethernet port. Note that this is not necessarily the operational state of flow control, as both sides of the connection must agree to flow control during Ethernet negotiation.
Interface MAC Address **ASR 5500 only**	The interface media access control (MAC) address for the port.

Field	Description
Fixed MAC Address **ASR 5500 only**	The fixed media access control (MAC) address for the port.
MAC Address **ASR 5000 and VPC-SI/VPC-DI**	The media access control (MAC) address for the port. If Virtual MAC addressing is enabled, the MAC address is followed by **(Virtual)**.
Boxer Interface TAP **ASR 5000 only** **VPC-DI, SF only**	Indicates whether this interface has been tapped for debugging or simulation purposes.
Link State	The port's link status: **Up** or **Down**.
Link Duplex **ASR 5x00 only**	The actual duplex mode (**Auto**, **Full** or **Half**) currently being used for the link.
Link Speed **ASR 5x00 only**	The actual data rate currently being supported by the port.
Flow Control **ASR 5x00 only**	Indicates the current *negotiated* state of Ethernet MAC level flow control (**Enabled** or **Disabled**. Also see **Configured Flow Control** above).
Link Aggregation Group	If this port is configured as part of a Link Aggregation Group (LAG), this field indicates the group number to which this port belongs and whether the port is a Master or a Member. If the port is not configured as part of a Link Aggregation Group, **None** appears in this field.
(min_link) **ASR 5500 only**	Indicates the minimum number of links that must be available for this LAG to be up (usable).
(mode)	Indicates whether this LAG is redundant or non-redundant.
LAG Toggle Link **ASR 5000 only**	**Yes** indicates that the QGLC will generate "port link down" and "port link up" events for this LAG port.
LAG Redundancy Mode	If this port is configured as part of a LAG, this field indicates the Redundancy Mode configured for this Link Aggregation Group: • **Standard**: During failover to the redundant card the amount of bandwidth available will be reduced from what was available for the original LAG. • **Switched**: Used when the Active LAG ports and are connected to different external switches in the service provider's network.
LAG Hold Time	If *LAG Redundancy Mode* is set to **Switched**, this field indicates the time, in seconds, that will elapse before the system determines that the failover LAG ports must be switched again. This prevents the system from switching rapidly back and forth between the cards during routine maintenance (for example when Ethernet cables are being removed and reconnected between cards).

Field	Description
Link Aggregation Master	If this port is configured as part of a LAG, this field identifies the slot and port number hat is the Master of this Link Aggregation Group.
Link Aggregation State	Indicates the result of the LACP negotiation.
Untagged: *(No VLAN IDs have been configured)*	
Logical ifIndex	The dynamically assigned identification number for the IP interface bound to this port. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards.
Operational State	The operational state and mode of the card, in the format <state, mode>. Possible operational states are Up or Down. Possible operational modes are: • **Active**: Indicates that the card is an active component that will be used to process subscriber data sessions. • **Standby**: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • **Offline**: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be because the card is not installed correctly (for example, the card interlock switch is not locked) or that its software processes have been halted.
Tagged VLAN: *(VLAN IDs have been configured)*	
Logical ifIndex	The dynamically assigned identification number for the IP interface bound to this port. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards.
VLAN Type	**Subscriber** indicates that the VLAN has been associated with a subscriber. **Standard** is not associated with a subscriber.
VLAN Priority	The value of the 802.1p priority bit as an integer from 0 through 7, with 7 being the highest priority. (ASN-GW only)
Administrative State	**Enabled** indicates that this card has been configured for use via software.

Field	Description
Operational State	The operational state and mode of the VLAN, in the format <state, mode>. Possible operational states are Up or Down. Possible operational modes are: • **Active**: Indicates that the card is an active component that will be used to process subscriber data sessions. • **Standby**: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • **Offline**: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be because the card is not installed correctly (for example, the card interlock switch is not locked) or that its software processes have been halted.
Number of VLANs	The total number of VLANs associated with this port.
SFP Module **ASR 5x00 only**	**NOTE:** This field appears only for Ethernet line cards that support the use of a small form-factor pluggable (SFP) transceiver module. Refer to the **show hardware card** command for additional information.

Table 6: show port info Command Output Descriptions for Frame Relay Port Line Card (ASR 5000)

Field	Description
Port Type	The configured port type: **STM1/OC3 Channelized**
Description	The textual description given to the port during software configuration. If no description was configured, **(None Set)** appears in this field.
Controlled By Card	The slot number and card type of front-installed application card to which this line card is mapped.
Redundancy Mode	The redundancy mode configured for this line card. Possible redundancy modes are: • **Card Mode**: No redundancy will be used. • **Port Mode**: Port redundancy will be used.
Framing Mode	**SDH** (default is E1) or **SONET** (default is DS1)
Redundant With	The slot number and port number of the line card that is redundant with this line card. If a redundant port is not available, **None** appears in this field.
Preferred Port	Indicates whether or not this card will assume revertive (auto-recovery) redundancy functionality should this card be brought back into service after a failure.

Field	Description
Physical ifIndex	The static identification number for the slot/port combination on this Line Card. This ID is used in SNMP traps sent when the link status of the Ethernet port goes up or down.
Administrative State	**Enabled** indicates that this card has been configured for use via software.
Link State	The port's link status: **Up** or **Down**.
Line Timing	Indicates whether or not this port has been configured to recover a timing clock from the line or port on the peer end of the connection for distribution to all chassis line cards. Line timing can be obtained from the following sources: • **BITS**: Line timing is recovered from the BITS port on the SPIO card • **line-timing**: Line timing is obtained through the line or port connected to the far end port. • **internal clock**: The line timing is obtained from the chassis' internal clock source. This internal clock is configured and enabled via the **clock-source internal** CLI command.
SFP Module	This field indicates if a small form-factor pluggable (SFP) module is installed on the card and its type. Possible SFP types are M5 or M6.

Field	Description
Path *x* e1 *y* **or** Path *x* ds1 *y*	Identifies a specific routing path configuration (configured with the **path** command) associated with a frame relay DLCI (data link connection identifier, configured with the **dlci** command). Information provided includes: • The exact mapping of containers (C), virtual containers (VC), tributary units (TU) and/or tributary unit groups (TUG) that is/are appropriate for the configured channel characteristics. For example: **tu12-au3 1/1**. • The framing mode being used. For **ds1** the options are: **esf** (extended superframe), **sf** (superframe), and **unframed**. For **e1** the options are: **cas** (standard mapping with CAS), **cas-crc4** (CRC4 mapping with CAS), **crc4** mapping and **standard** mapping. • The mapping mode being used (**bit-sync** or **byte-sync**). For each configured path being utilized, the following additional information also is provided (for release 8.1 and later, the following items are configured with the **frame-relay** command): • **Timeslots**: Identifies the number of timeslot groupings for multiple fractional DS1/E1 channels. The maximum number of timeslots that can be defined is 8. • **Frame Relay Intf Type**: Indicates the frame relay interface type: **DCE** (Data Communication Equipment), **DTE** (Data Terminal Equipment), or **NNI** (Network to Network interface). The default is **DTE**. • **Frame Relay LMI Type**: Indicates the frame relay local management interface (LMI) protocol type: **ANSI**, **CISCO**, **Q933a**, or **None**. The default is **None**.

Field	Description
	• • **Frame Relay LMI n391**: Indicates the number of keep-alive exchanges that will occur before the system requests a full status through the n391 local management interface. Possible values are 1 through 255. The default is 6. • **Frame Relay LMI n392**: Indicates the Error threshold value. It specifies the total number of errors within the event count specified by n393 local management interface to bring down the link. Possible values are 1 through 10 and default is 2. • **Frame Relay LMI n393**: Indicates the Monitored Events count. This monitored event count is set for the n392 local management interface. Possible values are 1 through 10. The default is 2. • **Frame Relay DLCI**: The specific Frame Relay PVC DLCI ID descriptor number associated with this path. • **Logical ifindex**: The dynamically assigned identification number for the IP interface bound to this Frame Relay PVC DLCI. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards. • **Admin State**: **Enabled** Indicates that this Frame Relay DLCI PVC has been configured for use via software. • **Operational State**: The operational state and mode of the Frame Relay PVC DLCI, in the format <state, mode>. Possible operational states are **Up** or **Down**. Possible operational modes are: • **Active**: Indicates that the Frame Relay PVC DLCI is an active component that will be used to process subscriber data sessions.
	• **Standby**: Indicates that the Frame Relay PVC DLCI is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur • **Offline**: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that the card is not installed correctly (e.g., the card interlock switch is not locked) or that its software processes have been halted. • **Shaping**: Indicates the type of egress traffic shaping being used to control flow for this DLCI. Possible values are: **cir** (Committed Info Rate), **cir-eir** (Committed Info Rate with Excess Rate), **ppr** (Peak Packet Rate), and **wfq** (Weighted Fair Queueing). • **Number of DLCI**: The number of the Data Link Connection Identifier(s) (DLCI) associated with this timeslot. The DLCI is configured via the **dlci** command. The DLCI identifies the virtual connection so the receiving end knows which information connection a frame belongs to. • **Reserved Bandwidth**: The amount of bandwidth (in bits per second) reserved for this E1 or DS1 path. • **Number of DLCI**: The total number of DLCIs associated with this port

Table 7: show port info Command Output Descriptions for ATM Line Card (ASR 5000)

Field	Description
Port Type	The configured port type: **STM1/OC3 ATM**.
Description	The description given to the port during software configuration. If no description was configured, **(None Set)** will be displayed.
Controlled By Card	The slot number and type of front installed application card to which this line card is mapped.
Redundancy Mode	The redundancy mode of the card. The possible modes are: • **Normal**: Normal card redundancy. • **Port**: Port redundancy will be used.
Framing Mode	**SDH** (default for E1) or **SONET** (default for DS1)
Redundant With	The slot number and port number of the line card that is redundant with this line card. If a redundant port is not available, **None** appears in this field.
Preferred Port	Indicates whether or not this card will assume revertive (auto-recovery) redundancy functionality should this card be brought back into service after a failure.
Physical ifIndex	The static identification number for a slot/port combination. This ID is used in SNMP traps sent when the link status of the port goes up or down.
Administrative State	Indicates whether or not the card has been configured for use via software. If it has been configured, **Enabled** appears in this field.
Link State	The link status, either **Up** or **Down**.
Line-timing	Indicates whether or not this port has been configured to recover a timing clock from the line or port on the peer end of the connection for distribution to all chassis line cards. Line timing can be obtained from the following sources: • **BITS**: Line timing is recovered from the BITS port on the SPIO card • **line-timing**: Line timing is obtained through the line or port connected to the far end port. • **internal clock**: The line timing is obtained from the chassis' internal clock source. This internal clock is configured and enabled via the **clock-source internal** CLI command.
SFP Module	This field indicates if a small form-factor pluggable (SFP) module is installed on the card and its type. Possible SFP types are M5 or M6.

Field	Description
PVC VPI xxx VCI yyy	Indicates the virtual path identifier (VPI) and virtual connection identifier (VCI) numbers configured for a Permanent Virtual Connection (PVC). For each defined PVC VPI and VCI, the following associated information also is provided: • **Traffic Type**: Either **AAL2** (ATM Adaptation Layer 2) or **AAL5** (ATM Adaptation Layer 5). The default is **AAL5**. • **Logical ifIndex**: The dynamically assigned identification number for the IP interface bound to this port. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards. • **Admin State**: **Enabled** indicates that this port has been configured for use via software. • **Operational State**: The operational state and mode of the card, in the format <state, mode>. Possible operational states are **Up** or **Down**. Possible operational modes are: • **Active**: Indicates that the card is an active component that will be used to process subscriber data sessions. • **Standby**: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • **Offline**: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that the card is not installed correctly (such as, the card interlock switch is not locked) or that its software processes have been halted. • **Encapsulation**: **AAL5 llc-snap** (logical link layer encapsulation) or **AAL5 vc-mux** (virtual circuit multiplexing).
	• **Shaping**: The type of traffic shaping (rates) configured for this PVC: **cbr** (constant bit rate), **ubr** (unspecified bit rate), **ubr+** (unspecified bit rate with minimum cell rate) or **vbr** (variable bit rate).
Number of PVCs/CCs	The total number of PVCs configured for this port.
Reserved Bandwidth	The amount of bandwidth (in cells/second) reserved. The bandwidth can be utilized by a single PVC or it can span across multiple PVCs.

show port npu counters

The output of this command displays four types of counters per counter type:

- Rx Frames
- Rx Bytes

- Tx Frames
- Tx Bytes

Table 8: show port npu counters Command Output Descriptions

Field	Description
Counters for port	The port for which the counters are displayed. The very next line displays the type of line card that the port belongs to.
Unicast	The number of Unicast frames and bytes received and transmitted.
Multicast	The number of Multicast frames and bytes received and transmitted.
Broadcast	The number of Broadcast frames and bytes received and transmitted.
IPv4 unicast	The number of Unicast IP version 4 frames and bytes received and transmitted.
IPv4 non-unicast	The number of non-Unicast IP version 4 frames and bytes received and transmitted.
IPv6 unicast	The number of Unicast IP version 6 frames and bytes received and transmitted.
IPv6 non-unicast	The number of non-Unicast IP version 6 frames and bytes received and transmitted.
Fragments received	The number of packet fragments qualified for re-assembly.
Packets reassembled	The number of packets that were successfully re-assembled.
Fragments to kernel	The number of qualified packet fragments that were sent to the kernel for re-assembly.
HW error	The number of packets discarded due to first-in, first-out (FIFO) overrun or underrun.
Port non-operational	The number of packets discarded due to port not operational.
SRC MAC is multicast	The number of packets discarded due to source MAC address is multicast.
Unknown VLAN tag	The number of packets discarded due to an unrecognized virtual local area network (VLAN) tag.
Other protocols	The number of packets discarded due to incorrect protocol type (neither IP or ARP).
Not IPv4	The number of packets discarded due to non IPv4
Bad IPv4 header	The number of packets discarded due to invalid IPv4 header
IPv4 MRU exceeded MRU exceeded	The number of packets discarded due to packet length is too long. **Note** From 21.20.19 release onwards, the **IPv4 MRU exceeded** counter has been changed to **MRU exceeded**. MRU exceeded is a generic counter for all types of packets.
TCP tiny fragment	The number of packets discarded due to TCP tiny fragment
No ACL match	The number of packets discarded due to not match from ACL lookup
Filtered by ACL	The number of packets discarded due to ACL filter

Field	Description
TTL expired	The number of packets discarded because their time-to-live parameter was exceeded.
Flow lookup twice	The number of packets discarded due to flow lookup to be performed twice (prevent microcode from looping)
Unknown IPv4 class	The number of packets discarded due to unknown classification received from hardware
Too short: IP	The number of packets discarded due to IP packet too short
Too short: ICMP	The number of packets discarded due to ICMP packet too short for lookup key
Too short: IGMP	The number of packets discarded due to IGMP packet too short for lookup key
Too short: TCP	The number of packets discarded due to TCP packet too short for lookup key
Too short: UDP	The number of packets discarded due to UDP packet too short for lookup key
Too short: IPIP	The number of packets discarded due to UDP packet too short for lookup key
Too short: GRE	The number of packets discarded due to GRE header size < 8 bytes
Too short: GRE key	The number of packets discarded due to GRE header says key present but header size < 13 bytes
Don't frag discards	Packets requiring fragmentation that are discarded by the NPU because the IP header don't fragment bit is set.
Fragment packets	Packets fragmented by the NPU due to exceeding MTU of egress port.
Fragment fragments	Total number of fragments fragmented by the NPU and sent to the egress port.
IPv4VlanMap dropped	Total number of IPv4 VLAN map packets that were dropped.
IPSec NATT keep alive	Total number of NAT-Traversal keep alive packets.
MPLS Flow not found	Total number of packets dropped when an MPLS flow was not found.
MPLS unicast	The number of MPLS Multicast frames and bytes received and transmitted.

Field	Description
Size **ASR 5000 and VPC-SI**	The number of frames and bytes that were received and transmitted according to the following size ranges: - Less than 17 - 17 through 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 2047 - 2048 through 4095 - 4096 though 4500 - Greater than 4500
Size **ASR 5500 only**	The number of frames and bytes that were received and transmitted according to the following size ranges: - 0 through 63 - 64 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 2047 - 2048 through 4095 - 4096 though 8191

show port table

Table 9: show port table Command Output Descriptions

Field	Description
Port	Specifies the chassis slot and port numbers (<slot>/<port>) for all installed line cards.
Role	The communication role played by this port. • **Mgmt**: Port has been designated for remote management access. • **Srvc**: Port handles subscriber traffic.

Field	Description
Type	The card type descriptor.
Admin	Indicates whether or not the card has been configured for use via software. If it has been configured, **Enabled** will be displayed. If not, **Disabled** will be displayed.
Oper	The operational state of the card – **Up** or **Down**.
Link	The link status – **Up** or **Down**.
State	The operational mode of the card that the port belongs to. The card can be in one of the following modes: • **Active:** Indicates that the card is an active component that will be used to process subscriber data sessions. • **Standby:** Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • **Offline:** Indicates that the card is installed but is not ready to process subscriber data sessions. This could be because it is not completely installed (for example. the card interlock switch is not locked). Refer to the *Installation Guide* for additional information.
Pair	Interface slot/port number of LAG peer port. LAG Port Status: • LA+ = Port is actively used for distributing • LA- = Port failed to negotiate LACP • LA~(tilde) = Port negotiated LACP but another peer was selected • LA*(asterisk) = Port is (re)negotiating LACP • LA# = Port has been gone down because the min-link criteria is not met (ASR 5500 only)
Redundant	Interface slot/port number of redundant LAG peer port.
Untagged:	Indicates the administrative, operational, link and active/standby states of an untagged (non-VLAN) port.
Tagged: VLAN <vlan_id>	Indicates the administrative, operational, link and active/standby states of a VLAN port.

show port transceiver (ASR 5500)

Table 10: show port transceiver Command Output Descriptions (ASR 5500)

Field	Description
Port <slot/port>	Specifies the chassis slot and port number for the port.

Field	Description
SFP Transceiver info	Identifies the type of transceiver installed in the port.
SFP Vendor info	**Vendor Name:** Identifies the vendor's name **Vendor IEEE ID:** Displays the module vendor's IEEE ID.
SFP Vendor Rev. info	Displays the revision level for this vendor's module.
SFP Parts info	**P/N:** Displays the vendor's part number for this transceiver. **S/N:** Displays the vendor's serial number for this module. **Date:** Displays the vendor's manufacturing date for this module.
Nominal Bitrate	Displays the nominal bitrate for this module in megabits per second,
Length 50/125um	Core size = 50/125 microns
Length 62.5/125um	Core size = 62.5/125 microns
Wavelength	Displays the wavelength in nanometers (nm).
Diagnostic Monitor	Indicates whether diagnostic monitoring is supported (Yes/No).
Internally Calibrated	Indicates whether this module is internally calibrated (Yes/No).
Externally Calibrated	Indicates whether this module is externally calibrated (Yes/No).
SFF-8472 Compliance	Indicates whether this module complies with SFF-8472 – Diagnostic Monitoring Interface for Optical Transceivers (Yes/No).
Alarms	**Low Alarm Threshold** – trigger value for Low Alarm parameter **Low Warn Threshold** – trigger value for Low Warning Alarm parameter **Actual Value** – current actual parameter value **High Warn Threshold** – trigger value for High Warning Alarm parameter **High Alarm Threshold** – trigger value for High Alarm parameter
Alarm Threshold Parameters	**Temp (C)** – temperature (Centigrade) **Voltage (V)** – DC voltage **Bias (mA)** – laser bias current in milliamperes **TxPower (dBm)** – transmit power in decibels **RxPower (dBm)** – receive power in decibels

show port utilization table

Important The **verbose** option for this command displays port utilization with kilobit accuracy using decimal points.

Table 11: show port utilization table Command Output Descriptions

Field	Description
Port <slot/port>	Specifies the chassis slot and port number for the port.
Type	Identifies the port type.
Average Port Utilization (in mbps)	
Current	Displays average current port utilization in megabits per second (Mbps).
5min	Displays average port utilization over the last 5-minute interval in Mbps.
15min	Displays average port utilization over the last 15-minute interval in Mbps.
Rx	Displays port utilization for received packets.
Tx	Displays port utilization for transmitted packets.