Transceiver status and DDMI

Restriction:

- Default the LPmode is high-power mode in ECSONiC.
- known issue:
- This issue is fixed in SONiC.Edgecore-SONiC_20201229_070315_ec202006_101. "show interface transceiver presence" will duplicate on AS5835-54X 100G port. For example, there's only one 100 port on the AS5835-54X.

```
admin@sonic:~$ show interfaces transceiver presence
Port      Presence
---------- -----------
Ethernet0   Not present
...
Omitted
...
Ethernet47  Not present
Ethernet48  Present
Ethernet52  Present
Ethernet56  Present
Ethernet60  Present
Ethernet64  Not present
Ethernet68  Not present
```

- [SONIC-3069] DDMI information is parsing incorrectly on 400G interface.(The issue has fixed in 202012.2)

Presence of SFP transceiver

```
admin@sonic:~$ show interfaces transceiver presence
Port Presence
---------- -----------
Ethernet0 Present
Ethernet4 Not Present
omitted...
```

Status of low-power mode of QSFP/QSFP+/QSFP28 transceiver

admin@sonic:~$ show interface transceiver lpmode
Port Low-power Mode
---------- ---------------
Ethernet0 Off
Ethernet4 Off
Ethernet8 Off
omitted...

Note.By default is high power mode. If you want to modify it, you can use following command to enable or disable it.

admin@sonic:~$ sudo config interface transceiver lpmode Ethernet0 enable
Enabling low-power mode for port Ethernet0... OK

Information stored on the EEPROM on SFP transceiver

admin@sonic:~$ show interfaces transceiver eeprom
Ethernet0: SFP EEPROM detected
    Connector: Unknown
    DOM Capability:
        Rx_power_support: no
        Temp_support: no
        Tx_power_support: no
        Voltage_support: no
    Encoding: Unknown
    Extended Identifier: Unknown
    Extended RateSelect Compliance: Unknown
    Identifier: QSFP28 or later
    Length Cable Assembly(m): 173
    Nominal Bit Rate(100Mbs): 32
    Specification compliance:
        10/40G Ethernet Compliance Code: 10GBase-LR
        Fibre Channel Speed: 1600 Mbytes/Sec
        Fibre Channel link length/Transmitter Technology: Intermediate distance (I)
        Fibre Channel transmission media: Miniature Coax (MI)
        SAS/SATA compliance codes: SAS 6.0G
        SONET Compliance codes: OC 48, long reach
    Vendor Date Code(YYYY-MM-DD Lot): 2017-06-28
    Vendor Name:
    Vendor OUI: 70-72-cf

```
      Vendor PN: ET7402-100DAC-1M
      Vendor Rev: 01
      Vendor SN: J11925000403
```

Ethernet4: SFP EEPROM Not detected

omitted..

Optionally, you can get DDMI (Digital Diagnostics Monitoring) by specifying the -d or --dom flag.

```
admin@sonic:~$ show in transceiver eeprom Ethernet4 -d
Ethernet4: SFP EEPROM detected
    Connector: No separable connector
    DOM Capability:
        Rx_power_support: no
        Temp_support: no
        Tx_power_support: no
        Voltage_support: no
    Encoding: 64B66B
    Extended Identifier: Power Class 4(3.5W max)
    Extended RateSelect Compliance: QSFP+ Rate Select Version 1
    Identifier: QSFP28 or later
    Length Cable Assembly(m): 3
    Nominal Bit Rate(100Mbs): 255
    Specification compliance:
    Vendor Date Code(YYYY-MM-DD Lot): 2015-07-13
    Vendor Name: Edgecore
    Vendor OUI: 70-72-cf
    Vendor PN: ET7402-100AOC-3M
    Vendor Rev: 01
    Vendor SN: J11833006010
    ChannelMonitorValues:
        RX1Power: -0.2609dBm
        RX2Power: -0.5002dBm
        RX3Power: -0.3391dBm
        RX4Power: -0.5002dBm
        TX1Bias: 5.5920mA
        TX2Bias: 5.5860mA
        TX3Bias: 5.6120mA
        TX4Bias: 5.6060mA
    ChannelThresholdValues:
        RxPowerHighAlarm  : 4.0000dBm
        RxPowerHighWarning: 2.0000dBm
        RxPowerLowAlarm   : -18.0134dBm
        RxPowerLowWarning : -14.0012dBm
        TxBiasHighAlarm   : 15.0000mA
        TxBiasHighWarning : 12.0000mA
        TxBiasLowAlarm    : 0.0000mA
        TxBiasLowWarning  : 2.0000mA
```

```
ModuleMonitorValues:
     Temperature: 23.0000C
     Vcc: 3.1910Volts
 ModuleThresholdValues:
     TempHighAlarm  : 85.0000C
     TempHighWarning: 70.0000C
     TempLowAlarm   : -10.0000C
     TempLowWarning : 0.0000C
     VccHighAlarm   : 3.6000Volts
     VccHighWarning : 3.5000Volts
     VccLowAlarm    : 2.9000Volts
     VccLowWarning  : 3.1000Volts
```

Use another command sfputil instead of show interface transceiver eeprom to display DDMI of SFP transceiver.

```
admin@sonic:~$ sudo sfputil show eeprom -p Ethernet4 --dom
Ethernet4: SFP EEPROM detected
    Connector: No separable connector
    Encoding: 64B66B
    Extended Identifier: Power Class 4(3.5W max)
    Extended RateSelect Compliance: QSFP+ Rate Select Version 1
    Identifier: QSFP28 or later
    Length Cable Assembly(m): 3
    Length OM1(m): 0
    Length OM2(m): 0
    Length OM3(2m): 0
    Length(km): 0
    Nominal Bit Rate(100Mbs): 255
    Specification compliance:
    Vendor Date Code(YYYY-MM-DD Lot): 2015-07-13
    Vendor Name: Edgecore
    Vendor OUI: 70-72-cf
    Vendor PN: ET7402-100AOC-3M
    Vendor Rev: 01
    Vendor SN: J11833006010
    ChannelMonitorValues:
        RX1Power: -0.2609dBm
        RX2Power: -0.5002dBm
        RX3Power: -0.3391dBm
        RX4Power: -0.5002dBm
        TX1Bias: 5.5920mA
        TX2Bias: 5.6180mA
        TX3Bias: 5.6120mA
        TX4Bias: 5.6040mA
    ModuleMonitorValues:
        Temperature: 23.0000C
        Vcc: 3.1910Volts
```