

The Hyper Photonix HSD1-400-DR-C2S transceiver is designed for 500m optical communication applications, and it is compliant with QSFP-DD MSA, CMIS 4.0, IEEE 802.3bs, and 400GAUI-8 standards. The 425 Gigabit signal is carried over four parallel lanes at 1310nm. The module's transmitter converts 8-channel 53.125 Gbps electrical data to 4 parallel optical output signals, each supporting 106.25 Gbps. The receiver converts 4-channel 106.25 Gbps optical input data to 8-channel electrical output data.

### Features

- QSFP-DD MSA 5.1 and CMIS 4.0 compliant
- MPO-12 APC connector
- 8x53.125Gbps PAM4 400GAUI-8 host interface
- 4x106.25Gbps (53.125GBd PAM4) optical signal
- Up to 500m over SMF with KP-FEC
- Power dissipation  $\leq 9W$
- Operating case temperature: 0°C to 70°C
- IEEE 802.3bs 400GBASE-DR4 compliant
- Built-in digital diagnostic functions
- 3.3V power supply voltage
- RoHS compliant



### Applications

- 400GBASE-DR4 Ethernet
- Data center networks

### Specifications

| Part Number       | HSD1-400-DR-C2S |
|-------------------|-----------------|
| Data Rate         | 425Gbps         |
| Supply Voltage    | 3.3V            |
| Power Consumption | $\leq 9W$       |
| Wavelength        | 1310nm          |
| Optical Connector | Dual MPO-12/APC |
| Transmitter       | DFB             |
| Receiver          | PIN             |
| Case Temperature  | 0°C to 70°C     |
| Reach             | 500m over SMF   |