Team Engineers
Solutions in Connectivity
An ISO 9001 : 2008 Company

TEAMLINK 2100

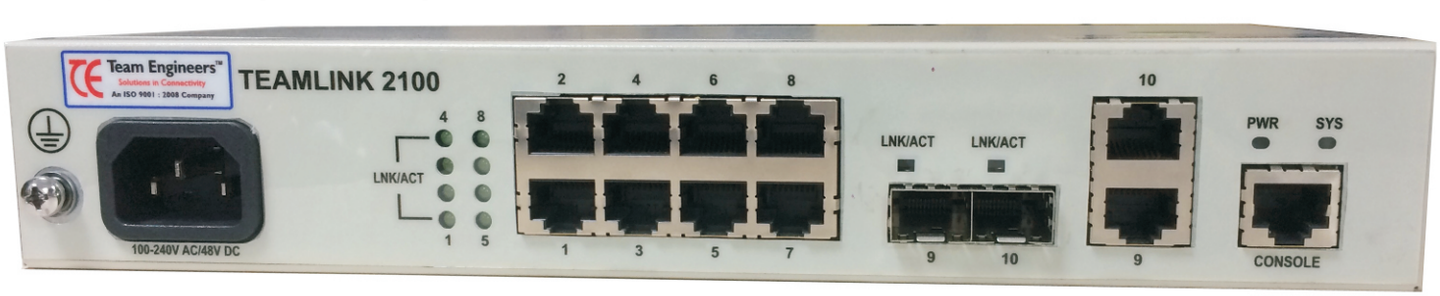
Access Ethernet Optical Switch

The TEAMLINK 2100 series carrier-grade MAN Ethernet access switch is a network-manageable Layer 2 Ethernet Optical switch, it can implement all-line speed switching. It adopts a standard chassis and various interfaces with carrier-grade stability and reliability, with four/eight 10/100BASE-T Ethernet electrical interfaces. It provides 2/4 GE COMBO(10/100/1000 Base-T or 100/1000Base-X) interfaces. In addition, it provides rich QoS policies, ACL, and protection switching mechanisms.

The TEAMLINK 2100, oriented for carrier-grade corridor access, is suitable for Indian Railways Surveillance, other Similar applications, It can also aggregate services from the corridor of a broadband residential area and services from a small network.

1.Key Features

1.1 Maximum frame length of 9 Kbytes, supporting jumbo frame
1.2 16K MAC addresses
1.3 4094 VLANs, supporting QinQ and VLAN mapping
1.4 Loop detection
1.5 Broadcast storm control
1.6 Port mirroring
1.7 VLAN as per IEEE 802.1Q
1.8 Flow control IEEE 802.3x
1.9 LLDP as per 802.1AB
1.10 Link aggregation as per IEEE 802.3ad
1.11 DHCP client and server
1.12 Spanning tree protocol as per IEEE 802.1D
1.13 Rapid spanning tree as per IEEE 802.1w
1.14 MSTP as per IEEE 802.1s
1.15 BPDU guard Spanning tree root guard
1.16 IGMP v1, v2 and v3 snooping
1.17 NTP V.3 or SNTP for retrieving date and time
1.18 RoHS compliant
1.19 Optical Safety
1.20 SFP are Class I laser product
1.21 The PCB are Class 2PCB
1.22 Protection against dust for Optical port
1.23 MTBF 14.5 Years
1.24 Trap/alarm configuration through SNMP



TECHNICAL SPECIFICATIONS

2.Ethernet Interfaces

2.1 Type and Number : IEEE 10/100 BASE T, Four
2.2 Connector type : RJ 45
2.3 Media Converter without PoE
2.4 Auto sensing of speed on 10/100 ports
2.5 Auto negotiation on Ethernet interfaces for speed and mode of communication (full duplex or half duplex)
2.6 Auto sensing of MDI/MDIX for UTP copper ports

Team Engineers
Solutions in Connectivity
An ISO 9001 : 2008 Company

TEAMLINK 2100

Access Ethernet Optical Switch

3.Network Interfaces

3.1 Type and Number : Combo port UTP IEEE 10/100/1000BASE-T RJ45 port and support for SFP for optical port,Two combo ports. Alternatively two SFP and two gigabit RJ45 ports provided
3.2 Auto sensing speed on RJ45 10/100/1000 ports
3.3 Auto sensing of MDI/MDIX for UTP copper ports
3.4 These two ports provide redundancy. In case of port failure or optical fiber problem, the traffic shall be diverted to the other port
3.5 Support Gigabit SFP

4.OAM

4.1 IEEE 802.3ah OAM
4.2 Standard OAM discovery, link monitoring, remote loopback, fault indication, and performance statistics
4.3 MIB variable acquisition
4.4 Event processing
4.5 OAM active mode and passive mode
4.6 Extended OAM protocols

5.DHCP

5.1 DHCP Client, DHCP Relay, DHCP Snooping, DHCP Option82

6.Security and QoS

6.1 Traffic classification (IP, DSCP, and CoS) and traffic policy (rate limiting, redirection, and remarking)
6.2 Interface-based and VLAN-based rate limiting
6.3 Port based user authentication IEEE 802.1x
6.4 Unicast MAC filtering
6.5 Four dispatching queues per port , mapping the 8 priority queues in IEEE 802.1p
6.6 WRR
6.7 Rate limiting per port (Ingress and Egress)
6.8 Per port broadcast, multicast and unicast storm control
6.9 MAC based ACL
6.10 Broad cast, Multicast and unicast storm control

7.Management and Diagnostics

7.1 SNMPv1/ v2cto enable management by third party SNMP manager
7.2 RMON (1,2,3,9)
7.3 CLI based management via console port and Telnet
7.4 WEB management
7.5 SSH
7.6 Trace route and Ping test
7.7 FTP and TFTP
7.8 Different levels of access
7.9 Link monitoring
7.10 Monitoring of power supply failure

8.Indications

8.1 Power
8.2 Alarm
8.3 Connection data forwarding indication
8.4 Ethernet link
8.5 10/100 Mbps speed indication

TEAMLINK 2100

Access Ethernet Optical Switch

9.Multicast

9.1 IGMP Snooping, IGMP MVR, IGMP filtering, IGMP Proxy

10.Service protection and monitoring

10.1 Interface protection
10.2 LACP
10.3 Ethernet ring
10.4 STP, RSTP, and MSTP
10.5 Layer 2 and Layer 3 SLA

11.Electrical Safety

11.1 Shall complyEN60590 or IEC 60950 or UL 60950 or CSA 60950 or equivalent IS 13252

12.EMC Compliance

12.1 Emission Compliance :

12.1.1 EN 55022 class A/B or CISPR22 class A/B or CE class A/B or FCC class A/B

12.2 Immunity Compliance :

12.2.1 EN6100-4-3 or IEC61000-4-3
12.2.2 EN6100-4-4 or IEC61000-4-4
12.2.3 EN6100-4-5 or IEC61000-4-5
12.2.4 EN6100-3-3 or IEC61000-3-3

13.SFPs

13.1 1000BASE-LX10 :

13.1.1 Nominal optical wavelength: 1310 nm
13.1.2 Optical power Tx Max: -3dBm
13.1.3 Optical power Tx Min: -9dBm to -11 dBm
13.1.4 Rx saturation: -3dBm
13.1.5 Rx sensitivity: -19.5 dBm
13.1.6 Compliant to MSA, IEEE 802.3z

13.2 1000BASE-EX :

13.2.1 Nominal optical wavelength: 1310 nm
13.2.2 Difference between Tx Min optical power and Rx Sensitivity 21dB
13.2.3 Compliant to MSA, IEEE 802.3z

13.3 1000BASE-BX10-10U :

13.3.1 Nominal optical wavelength: Tx-1310 nm, Rx- 1490nm
13.3.2 Optical power Tx Max: -3dBm
13.3.3 Optical power Tx Min: -9dBm
13.3.4 Rx saturation: -3dBm
13.3.5 Rx sensitivity: -19 dBm
13.3.6 Compliant to IEEE 802.3-2005/IEEE 802.3ah

13.4 1000BASE-BX10-10D :

13.4.1 Nominal optical wavelength: Tx-1490 nm, Rx- 1310 nm
13.4.2 Optical power Tx Max: -3dBm
13.4.3 Optical power Tx Min: -9dBm
13.4.4 Rx saturation: -3dBm
13.4.5 Rx sensitivity: -19 dBm
13.4.6 Compliant to IEEE 802.3-2005/IEEE 802.3ah

Team Engineers
Solutions in Connectivity
An ISO 9001 : 2008 Company

TEAMLINK 2100

Access Ethernet Optical Switch

Power Supply

Operating Voltage 100 V to 240 V AC 50/60 Hz Operation and -48 V DC nominal on range -36 V to - 60 V DC or 110 V DC
Single Power Supply Supports both the AC and DC voltages
Reverse polarity protection for DC operation
Over voltage protection for both AC and DC operation

Environment

Testing as BSNL QM-333 or IEC 60068 or IS 9000 or equivalent ISO or MIL STD -810 To show compliance to following parameters

Operating Temperature : 0 ~ 50°C
Humidity : 10% ~90% non-condensing
Storage Temperature : -20 ~ 70°C

Ordering Access Ethernet Optical Switch

1000BASE-LX10	Requires a pair of mono-monde fibers. Data rate 1000Mbps, Approximate range 10Km
1000BASE-EX	Requires a pair of mono-monde fibers. Data rate 1000Mbps, Approximate range 40Km
1000BASE-BX-10U	Requires only one mono-monde fibers for both Trans and Receive. The device at other end must have 1000BASE-BX-10D type of SFP. Data rate 1000Mbps, Approximate range 10Km
1000BASE-BX-10D	Requires only one mono-monde fibers for both Trans and Receive. The device at other end must have 1000BASE-BX-10U type of SFP. Data rate 1000Mbps, Approximate range 10Km

Team Engineers
Solutions in Connectivity
An ISO 9001 : 2008 Company

Team Engineers Advance Technologies India (P).Ltd
Plot No. A-1/2/A, Industrial Park, Uppal,
Hyderabad - 39,Telangana(India)
Phone : +91 -40-27204730 / 4873 / 4874,Fax : +91-40-27204731
e-mail : info@teamengineers.in, www.teamengineers.in