APTEK AP110-20

Gigabit Ethernet Media Converter

APTEK AP110-20 is a Gigabit Ethernet Media Converter used for optical transmission via high-speed Ethernet. It is capable of switching between twisted pair and optical and relaying across 10/100/1000Base-TX and 1000Base-FX network segments, meeting long-distance, high-speed, and high-bandwidth Ethernet workgroup users' needs, achieving high-speed remote interconnection for up to 20 km's relay-free computer data network.

With steady and reliable performance, design in accordance with the Ethernet standard, and lightning protection, it is particularly applicable to a wide range of fields requiring a variety of broadband data network and high-reliability data transmission or dedicated IP data transfer network, such as telecommunication, cable television, railway, military, finance and securities, customs, civil aviation, shipping, power, water conservancy and oilfield etc, and is an ideal type of facility to build broadband campus network, cable TV and intelligent broadband FTTB/FTTH networks

Features:

- In accordance with Ethernet standards IEEE802.3 10/100Base-TX, 1000Base-TX and 1000Base-FX
- Supported Ports: SC/UPC duplex for optical fiber; RJ45 for twisted pair. Auto-adaptation rate and full/half-duplex mode supported at twisted pair port
- Auto MDI/MDIX supported without the need for cable selection
- Up to 6 LEDs for status indication of the optical power port and the UTP port
- External DC power supplies provided
- Conflicting frames detection in half-duplex and flow control in full duplex are supported

Applications:

- For the intranet prepared for expansion from 100M to 1000M
- For an integrated data network for multimedia such as image, voice and etc.
- For point-to-point computer data transmission
- For a computer data transmission network in a wide range of business applications
- For a broadband campus network, cable TV, and intelligent FTTB/FTTH data tape
- In combination with a switchboard or other computer network, it facilitates: chain-type, star-type and ring-type networks and other computer networks

Technical Parameters

Parameters	Value
Number of Network Ports	1 channel
Number of Optical Ports	1 channel
NIC Transmission Rate	10/100/1000 Mbit/s
NIC Transmission Mode	10/100/1000M adaptive with support for automatic inversion of MDI/MDIX
Optical Port Transmission Rate	1000Mbit/s
Operating Voltage	5VDC
Overall Power	<3W
Network Ports	RJ45 port
Optical Specifications	Optical Port: SC/UPC duplex
	Single-Mode
	Wavelength: TX 1310nm / RX 1310nm
	Optical Power (dBm): -8 ~ -3
	Receiving Sensitivity (dBm): -24
	Transmission Range (km): 20Km
Data Channel	IEEE802.3x and collision base backpressure supported
Working Mode	Full/half duplex supported
Transmission Rate	1000Mbit/s with error rate of zero

LED

LED	Status Meaning
1000M	"ON" means the rate of the electric port is 1000 Mbps
100M	"ON" means the rate of the electric port is 100Mbps
1000M and 100M	"OFF" means the rate of the electric port is 10Mbps or no connection
LINK/ACT (FP)	"ON" means connectivity of the optical channel
	"FLASH" means data transfer in the channel
	"OFF" means non-connectivity of the optical channel
LINK/ACT (TP)	"ON" means connectivity of the electric circuit
	"FLASH" means data transfer in the circuit
	"OFF" means non-connectivity of the electric circuit
FDX	"ON" means full duplex electric port
	"OFF" means half-duplex electric port
PWR	"ON" means normal operation of DC 5V power supply adaptor
	"OFF" means no power or the device is broken

Operating Environment

Parameters	Value
Power Adapter	Input 100-240VAC, 50/60Hz
	Output 5VDC
Operating Temperature	0°C to +50°C
Storage Temperature	-20°C to +70°C
Operating humidity (non-condensing)	5% to 90%

Mounting Dimensions Sketch