APTEK AP100-20A
Fast Ethernet Media Converter

The **APTEK AP100-20A** is a Fast Ethernet 100Mbps Media Converter designed for high-speed data transmission over optical fiber. This device facilitates the conversion and interconnection between twisted-pair network segments (10/100Base-TX) and optical network segments (100Base-FX) using a SC Simplex optical port, transmitting and receiving over a single fiber strand. The **APTEK AP100-20A** meets the demand for extending high-speed networks over long distances, achieving continuous, relay-free connectivity for up to 20 km.

Featuring stable performance, design compliance with the Ethernet standard, and integrated lightning protection, this converter is an ideal solution for network applications requiring reliable data bandwidth and long-haul transmission. It is suitable for deploying fiber optic networks in areas such as telecommunications, cable television, intelligent FTTB/FTTH networks, and various other specialized data network systems.

Features:

- In accordance with Ethernet standards IEEE802.3 10/100Base-TX, and 100Base-FX
- Supported Ports: SC/UPC simplex 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 10M to 100M
- 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 Mbit/s
NIC Transmission Mode	10/100M adaptive with support for automatic inversion of MDI/MDIX
Optical Port Transmission Rate	100Mbit/s
Operating Voltage	5VDC
Overall Power	< 1W
Network Ports	RJ45 port
Optical Specifications	Optical Port: SC/UPC simplex
	Single-Mode
	Wavelength: TX 1310nm / RX 1550nm
	Optical Power (dBm): -15 ~ -3
	Receiving Sensitivity (dBm): -34
	Transmission Range (km): 20Km
Data Channel	IEEE802.3x and collision base backpressure supported
Working Mode	Full/half duplex supported
Transmission Rate	100Mbit/s with error rate of zero

LED

LED	Status Meaning
LINK	"ON" means connectivity of the optical channel
	"OFF" means non-connectivity of the optical channel
100M	"ON" means the rate of the electric port is 100 Mbps
	"OFF" means the rate is 10 Mbps
ACT (FP)	"ON" means no data transfer in the 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