

**Alpha Bridge**  
**AB-MCGE-20**  
**Datasheet**



## Features

- Max. 2M buffer memory built in chip.
- Auto negotiation back pressure flow control for full duplex IEEE802.3 X and half duplex.
- Automatic identification of MDI/MDI-X cross line
- High-performance 1.4Gbps memory bandwidth.
- LED display for PWR, link/activity, full/half duplex, 100M, 1000M
- Forward 1600 bytes packet for management;
- max. transmission distance can be 120km; Optional Features:
- Supports link fault pass through function (LFP);
- Supports for end fault function;
- Support EEPROM configuration;
- Pass all packets without address and CRC check;
- Forward fragments.

## Standard

- IEEE 802.3 10 Base-T standard.
- IEEE 802.3u 100 Base-TX/FX standard.
- IEEE 802.3z 1000 Base-TX/FX standard.
- IEEE 802.3x Flow control standard.

## Description

The media converter transmits the Ethernet signal transmission media from the CAT Cable to the optical fiber. It can extend the transmission distance up to 120km. Using a media converter is an economical solution to achieve long-distance transmission based on current status.

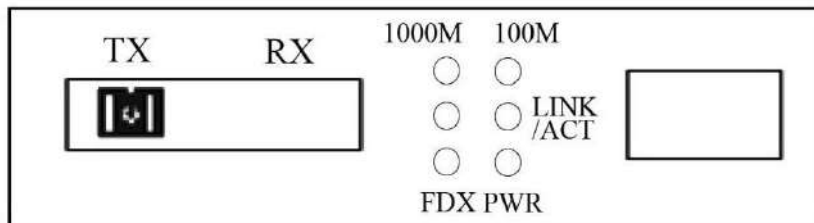
## Specification

Optical Specs.	Fiber Port	1port SC, FC/ST/LC optional
	Fiber Type	Dual Fiber or BiDi
	Wavelength & Distance	Dual Fiber: Multimode 850nm 550m; 1310nm 2km Single mode 1310nm, 1550nm from 10km to 120km BiDi: 1310/1550nm 2/10/20/40km; 1490/1550nm 60/80/100/120km
Ethernet Specs.	Cable	Twisted-pair
	Transmission Type	10/100/1000Mbps Full Duplex/Half Duplex
	Distance	100meter
BER	$< 1E^{-9}$	
Data Buffer	2M	
Power	4w	
Power Temp. Variation	0.2mw /°C	
Operate Temp.	0~70°C	
Storage Temp.	-40~85°C	
Humidity	95% non-condensing	

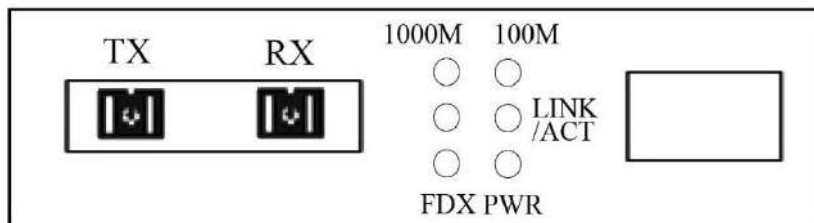
<b>Power Supply</b>	AC100~240V -50/60Hz +5V DC, -48VDC(optional)	
<b>Weight</b>	0.4KG	
<b>Dimension</b>	External power	95x70x26mm
	Internal power	140x110x30mm

### Front Panel

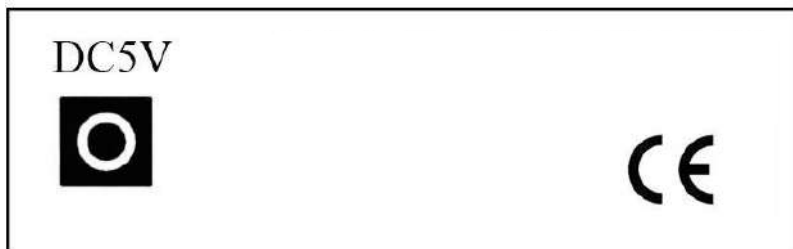
- 10/100/1000M BiDi SC front panel



- 10/100/1000M Dual SC front panel



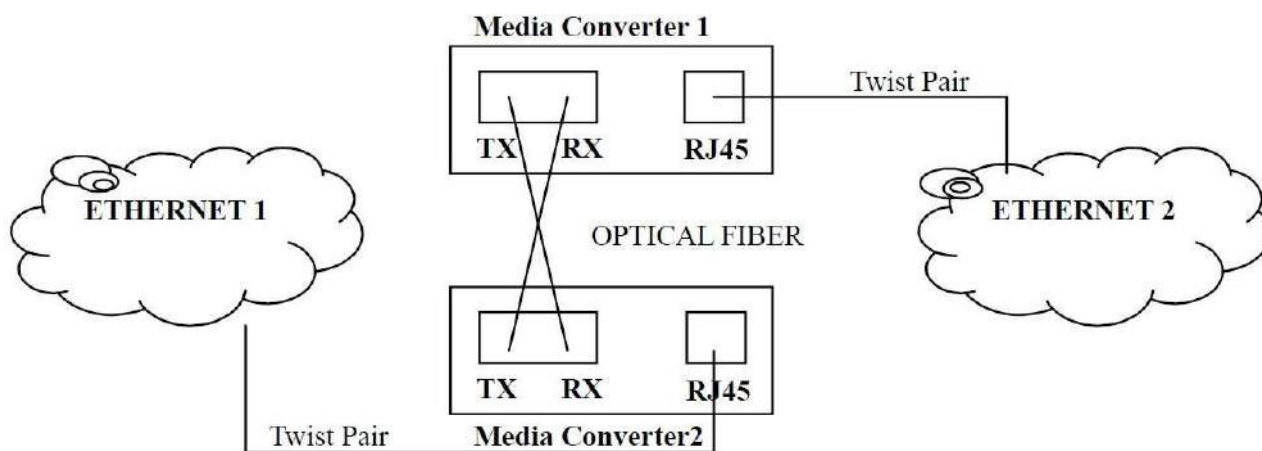
### Back Panel



### LED Indicator Description

LED	STATUS	
PWR	ON	Power ON
	OFF	Power OFF
FDX	ON	Full Duplex
	OFF	Half Duplex
100M	ON	100M Speed
	OFF	Failed
1000M	ON	1000M Speed
	OFF	Failed
100M-LINK/ACT	ON	Linked on UTP Port
	FLASH	Activity
	OFF	Not Linked
1000M-LINK/ACT	ON	Linked on Fiber Port
	FLASH	Activity
	OFF	Not Linked

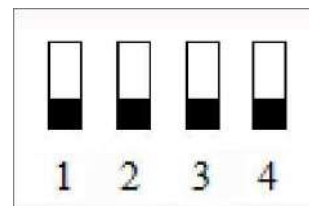
## Application



## Dip Switch

The top position is ON; the Low position is OFF

PIN 1	ON	LFP enable
	OFF	LFP disable
PIN 2	OFF	Store and forward switch
PIN 3	OFF	
PIN 2	OFF	Modified cut-through switch
PIN 3	ON	
PIN 2	ON	Converter mode
PIN 3	OFF	
PIN 2	ON	Auto change forward
PIN 3	ON	
PIN 4	ON	TP force speed mode, duplex mode



## Ordering Information

Part Number	Rate	Wavelength(nm)	Distance(km)	Tx Power	Rx Sen. (db)	Fiber
AB-MCGE-20	10/100/1000Mbps	1310	20	-8~-3	-23	SM Dual SC

Note: All information in this document is subject to change without notice.

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