

# V-FAST Intermediate Range Fibre Optic Link

The Nebula Manufacturing Inc. V-FASTA is a 1300nm (V-FASTB 1550nm) 10 or 100 megabit Ethernet bridge that supervises the fibre link in both directions. After two-way fibre integrity is established the ALARM led goes off and the twisted pair ports are turned on, signaling to the attached equipment communication can begin.

## V-FAST Interface

Two FC/PC optical connectors (TX and RX)

Laser cut off switch

Two RJ45 Twisted pair ports (2nd port is optioned for priority traffic i.e. voice or video)

## LED Indicators

PWR	Power
LASER	Laser on
ALARM	Fibre problem
Unlabelled	Future option
F DUP	Full duplex
FLK	Fibre link detected
CLN	Collision
ACT	Twisted pair activity
TLK	Port one link pulses detected
TLK	Port two link pulses detected
FAST	100 megabit operation

## Link Budget

V-FAST transmit level is -4 dBm and receive level is -34 dBm yields a link budget of 30 dB (approximately 60 km depending on fiber loss)

V-FASTA transmit level is -7 dBm and receive level is -32 dBm yields a link budget of 25 dB (approximately 50 km)

V\_FASTB transmit level is -7 dBm and receive level is -33 dBm yields a link budget of 26 dB (approximately 50 km)

Receiver overload better than -3 dBm (0 dBm typical)

Receiver optical damage greater than +3 dBm

## **Power**

Designed for redundant powering from 48 or 12 volt DC. Power consumption is 7 watts.

## **Dipswitch Option Settings**

Position	Name	Function when on
One	FAST	100 megabit operation
Two	F DUP	full duplex operation
Three	CO	override; increases interpacket gap for premises connected equipment when not powered by a 48 volt power source
Four	OP 1	option one; duplicates traffic on both ports
Five	OP 2	option two; traffic shaping option
Six	OP 3	option three; traffic shaping option

## **Factory Shipped Option Setting**

All switches set to off; 10 megabit half duplex operation