Vi-Link
Fiber Optic Communications

Fiber Optic Fault Tolerant Self-Healing Data Transceiver (ODT/R)

Datacom Equipment Series

Model VK230

Product Description

VILINK ITS equipment: VK230 is an extremely flexible and low cost solution for connecting multiple devices together in a *fault tolerant data self-healing network*. Unlike most modems, there are no limitations on the number of nodes present in the network. Using *Packet Data Transmission technology*, the VK230 can transmit and receive data at speeds up to 112 Kbps throughout the network. Each unit is capable of receiving data from either an uplink or downlink and then re-transmitting the data to the respective uplink or downlink direction.

With an embedded micro-controller in the unit, all configurations and equipment settings can be easily managed through the *Network Monitoring System (NMS)*. Control signals which are used to control data path are *user programmable*, featuring: *master, sub-master and slave node* settings, anti-streaming logic (even though there is no data bubbling in the VK230 network), poll and respond data transmission timing, data rate, data terminating and other unique functions.

The *Graphics User Interface (GUI)* of the VK230 Network Monitoring System provides an user-friendly menu on a *standard PC* generally located at a control center. The network engineer may also utilize Vilink's TCP/IP Network Software Module option for monitoring multiple VK230 networks. There is also available a SNMP software package. The VK230 is designed with *Automatic Gain Controls (AGC)* technique, a unique modulation scheme and state of the art circuit design. Specific optics provide the flexibility to meet any system requirement. The VK230 also provides a female DB25 for data connections, a female RJ11 for NMS PC connections, and a two-terminal block for power connection.

Features

- *Support RS-232, RS-422 and RS-485 Interfaces*
- *Asynchronous Data Speed Up To 112 Kbps*
- *Master/Slave Configurations*
- *Distances Up To 50 Km Between Two Nodes*
- *Dual Optic With AGC Receivers*
- *Supervisory and Management with (GUI) NMS*
- *TCI/IP Software Package*

Applications

- *ITS Traffic Applications*
- *SCADA Networks*
- *Metro Networks*
- *Gas & Oil Fields Monitoring Applications*
- *Railroad Networks*
- *Military Applications*
- *Data Acquisition Applications*

Ordering Information

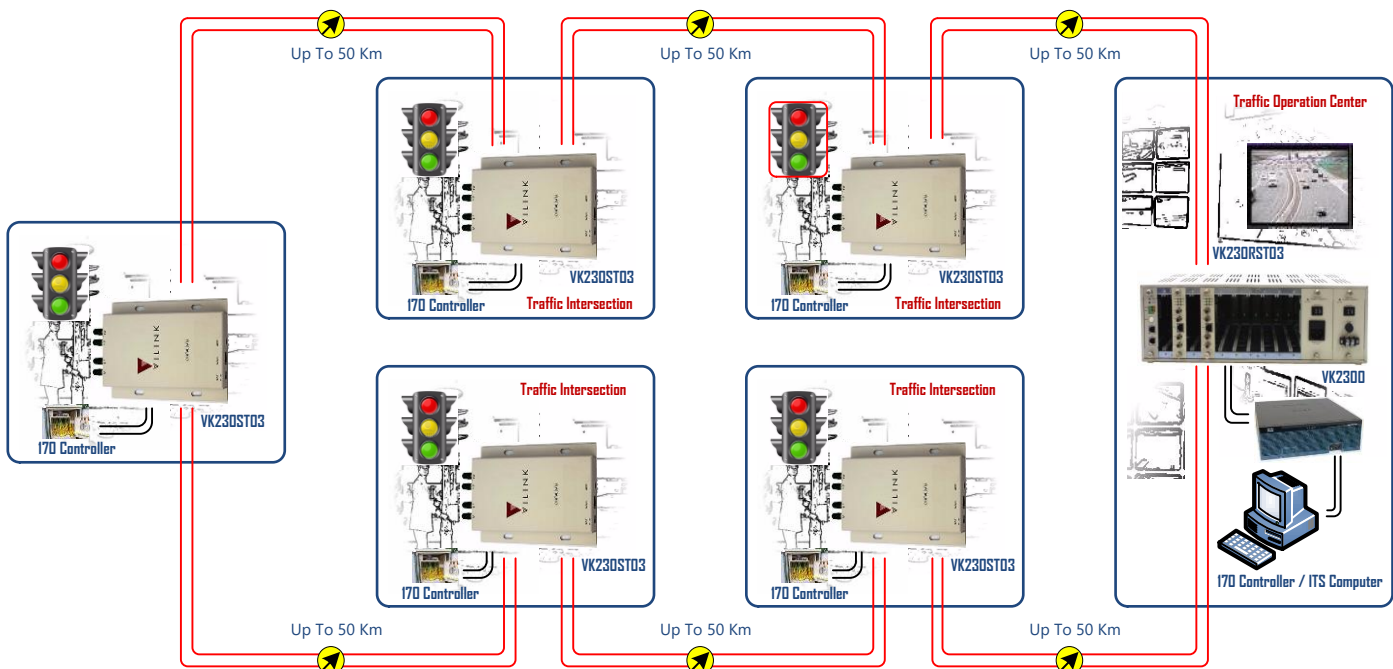| Model	Descriptions
VK230ST03	Fiber Optic Self-Healing Data Transceiver (ODT/R), 1310nm SM ST 50Km, +12 VDC
VK230RST03	Fiber Optic Self-Healing Data Transceiver (ODT/R) Rack Card Master Unit, 1310nm SM ST 50Km
	*** Please Consult Factory for Additional Model Numbers***

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System:

Error Rate	1 in 10^{12} or Better
Protocol	Poll & Respond Scheme
Ring Connection	Up to 250 nodes
Indicators	PWR, TXE, RXE, TXW, RXW
Configuration	Point-to-Point or Broadcast
Network Interface	NMS-PC with GUI
IP Address	Device ID
Local Connection	RJ12
Data Format	RS-232 Protocol

Environment:

Operating	-34^0 C to $+74^0$C
Storage	-40^0C to $+95^0$C
Humidity	98% Non-Condensing

Physical:

Dimension	6" x 4" x 1.25"
Power	+12 VDC @1 Amp

Optical Ports:

Transmitter	Lasers
Output Power	-3 dBm min @single mode
Receiver	PIN-TIA
Sensitivity	-32 dBm with AGC
Wavelength	1310nm SM (Nominal)
	850nm MM (short Distance)
	1550nm SM (Long Distance)
Connectors	ST

Data Port:

Standard	EIA-RS-232/RS422 Switchable
Data Rate	DC to 112 Kbps
Default Set Up	9.6 Kbps
Transmission	ATM Package
Mode	Slave, Master, Sub-Master
Redundant	Self-Healing
Connector	Female DB-25

Application

Typical VK230 In Traffic Control Application