Datasheet

RC414 Universal Fiber-Optic Media Converter

Equipped with two fixed fiber interfaces that could be customized according to customers' requirement, RC414 could perform any kind of conversion between any two kinds of fiber optic cables. By incorporating one multimode and one single mode fiber interfaces, it acts as a multimode-to-single-mode fiber converter; by incorporating one dual-strand and one single strand fiber interfaces, it acts as a dual-strand-to-single-strand fiber converter; or by incorporating exactly the same fiber interfaces, it acts as a fiber repeater.

RC414 could handle various data speed from 155Mbps to 1.25Gbps. It is compatible with all types of user traffics that belong to this speed range. It is totally transparent to subscriber services and will not cause any interference to other existing traffics.

Additionally, customers can customize different types of fiber interfaces to reach different transmission distances (from 2 to 120km) as per their requirements. RC414's 3R function will re-time, re-shape, and re-amplify the signal patterns to ensure quality signal-to-noise ratios.

RC414 155M/1.25G Universal Fiber-Optic Media Converter

Feature

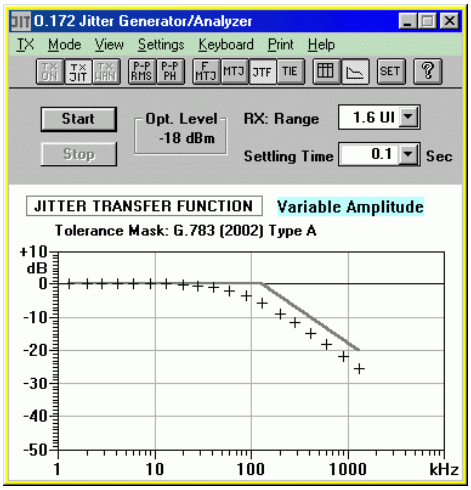
Construction	Chassis module, compatible with RC001 and RC002 series chassis
Fiber optic options	Single-mode/multimode; single strand/dual-strand fiber
Transmission distance	Dual-strand fiber: up to 120km Single strand fiber: up to 50km
3R function	Re-timing, re-shaping, and re-amplification
Fault-pass-through	Fault-pass-through is a troubleshooting function that allows the media converter to monitor the optical link by shutting down the client side interface if receiving optical signals cannot be detected on line side interface, and vice versa
ALS	Automatic Laser Shutdown function will have the optical transmission shut down if optical receiving signals cannot be detected
Management capability	Compliant to SNMPv1/v2c/v3 Through Raisecom iEMS network management system, carriers and network administrators are able to monitor, configure, and manage the device through a user-friendly GUI

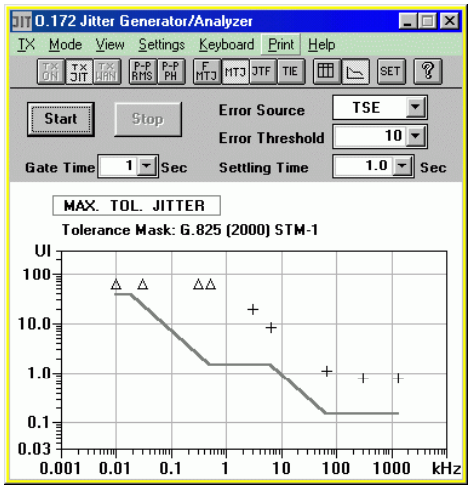
Specification

Fixed Interface	2*fiber interface SC/PC connector
Indicators:	PWR for Power Supply 2*LNK for optical port status 2*LCK for optical port status
Speed	STM-1 (155M) STM-4 (622M) Gb (1.25G)
Dimensions	Module: 91(W)*155(D)*25(H)mm
Power supply	AC: 90~264V, 47~63Hz DC: -75~-36V Power supplies are provided by chassis
Power consumption	≤ 3.5W (at max load)
Working ambience	Temp: 0~45 centigrade RH: 5~90% non-condensing
Storage ambience	Temp: -40~80 centigrade RH: 20~90% non-condensing
Safety Compliance	CE, UL and NEBS

Jitter Performance

Speed level		ITU-T requirement	Typical value of RC414
STM-1 (optical)	500Hz ~ 1.3MHz	< 0.30UI	0.050
	65KHz ~ 1.3MHz	< 0.10UI	0.030
STM-4 (optical)	1000Hz ~ 5MHz	< 0.30UI	0.004
	250KHz ~ 5MHz	< 0.10UI	0.004





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Ordering Information

Part Number		Description
RC414-X-Y-Z		Modular 155M/1.25G manageable media converter *SS23 and SS25 connectors are only available at C3(155M) rate
Suffix	X=	C3: 155Mbps Gb: 1.25Gbps
	Y=	M: Multimode, dual-strand, 850nm, 0~2 km S1: Single mode, dual-strand, 1310nm, 0~25 km S2: Single mode, dual-strand, 1310nm, 10~60 km S3: Single mode, dual-strand, 1550nm/DFB, 15~120 km SS13: Single mode, single strand, 1310nm TX, 1550nm RX, 0~25 km SS15: Single mode, single strand, 1550nm TX, 1310nm RX, 0~25 km *SS23: Single mode, single strand, 1310nm TX, 1550nm RX, 10~50km *SS25: Single mode, single strand, 1550nm TX, 1310nm RX, 10~50km
	Z=	M: Multimode, dual-strand, 850nm, 0~0.55 km S1: Single mode, dual-strand, 1310nm, 0~25 km S2: Single mode, dual-strand, 1310nm, 10~60 km S3: Single mode, dual-strand, 1550nm/DFB, 25~100 km SS13: Single mode, single strand, 1310nm TX, 1550nm RX, 0~20 km SS15: Single mode, single strand, 1550nm TX, 1310nm RX, 0~20 km *SS23: Single mode, single strand, 1310nm TX, 1550nm RX, 10~50km *SS25: Single mode, single strand, 1550nm TX, 1310nm RX, 10~50km

Annex - Fiber Interface Specification

Data speed	Model type	Connector type	Transmit wavelength (nm)	Launch power (dBm)	Saturation (dBm)	Receiving sensitivity (dBm)	Typical distance (km)	Optical loss (dB/km)
STM-1 (155M)	M	SC	1310	-18~-14	-14	< -29	0~2	3
	S1	SC	1310	-15~-8	-8	< -34	0~25	0.5
	S2	SC	1310	-5~0	-8	< -34	10~60	0.5
	S3	SC	1550	-5~0(DFB)	-10	< -36	15~120	0.25
	SS13	SC	1310	-12~-3	-8	< -30	0~25	0.5
	SS15	SC	1550	-12~-3	-8	< -30	0~25	0.5
	SS23	SC	1310	-5~0	-8	< -32	10~50	0.5
	SS25	SC	1550	-5~0	-8	< -32	10~50	0.5
Gb (1.25G)	M	SC	850	-10~-3	-3	< -15	0~0.55	3
	S1	SC	1310	-10~-3	-3	< -23	0~25	0.5
	S2	SC	1550	-3~2(DFB)	-3	< -20	10~60	0.25
	S3	SC	1550	-3~2(DFB)	-3	< -30(APD)	25~100	0.25
	SS13	SC	1310	-10~-3	-3	< -20	0~20	0.5
	SS15	SC	1550	-10~-3	-3	< -20	0~20	0.5

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