

► FDDI to Ethernet Router

The FDDI to Ethernet Router interconnects Fibre Distributed Data Interface (FDDI) and Ethernet Local Area Networks (LANs). It also provides for host access to the FDDI and Ethernet network segments for communication and management purposes.

The standard mode of operation is a full unicast / multicast router, using both static (pre-configured) and dynamic routing tables to determine traffic routing. The FDDI to Ethernet Router can also run in hidden mode, where it acts as a pseudo-bridge using proxy ARP to bridge the networks.

Remote configuration and management is supported in all modes. SNMP, TFTP and other services are available on both networks.

Features

- low data latency between heterogeneous network segments
- high data throughput between heterogeneous network segments
- available in various formfactors (3U CompactPCI, 6U CompactPCI, VME, VPX, PC/104, PCI, etc.)
- Ethernet segment operates as standard up to Gigabit Ethernet (10 Gigabit Ethernet optional)
- Gigabit Ethernet segment offers reliable link failover using Reliable Link Management Technology (RLMT)
- FDDI segment offers dual attachment [DAS] for intrinsic reliable link failover (single attachment version [SAS] optional) at the MAC layer
- available in air-cooled and conduction-cooled versions
- available with fibre and copper I/O
- available with various I/O connector options: ST and SC for fibre media, RJ-45 and PMC Jn4 for copper media
- compatible with 10BASE-T and 100BASE-T if using copper I/O
- lower cost option using host carrier card onboard Ethernet ports
- optimised mechanical housing assemblies also available

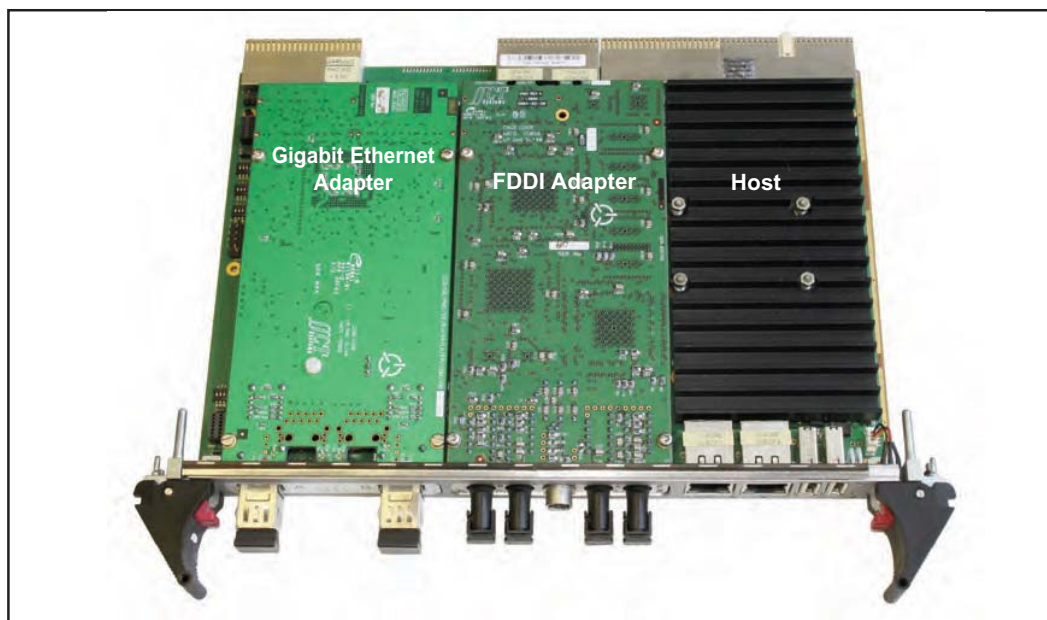


Figure 1 : 6U CompactPCI Air-Cooled FDDI to Gigabit Ethernet Router

► **FDDI to Ethernet Router**

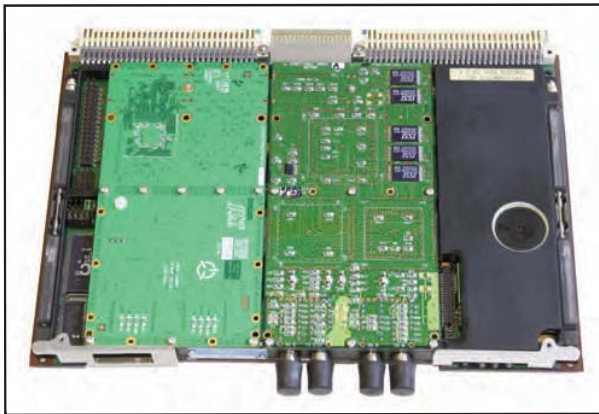


Figure 2 : 6U VME Conduction-Cooled FDDI to Gigabit Ethernet Router

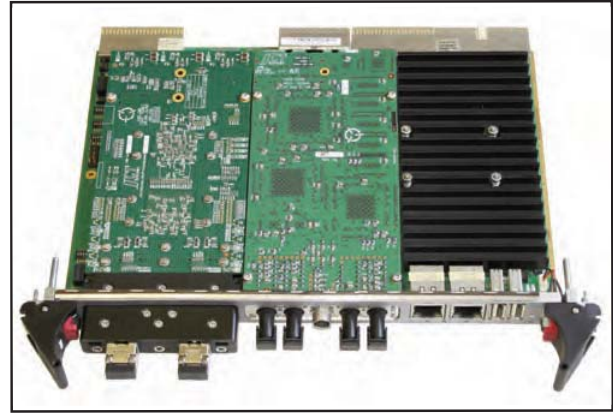


Figure 3 : 6U cPCI Air-Cooled FDDI to 10 Gigabit Ethernet Router

Specifications		
Mechanical Construction	6U cPCI, VME, VPX : dual slot PMC host carrier card with two PMC daughter cards 3U cPCI : cPCI host with two PMC carrier cards with PMC daughter cards PC/104 : PC/104 host SBC with two PCI-104 cards PCI : PCI motherboard with two PCI cards	
Thermal Management	forced-air cooling or conduction cooling	
Backplane Type	various options (3U cPCI, 6U cPCI, VME, VPX, PC/104, 32-bit PCI, 64-bit PCI, etc.)	
Power Requirements	Typical : 5 V @ 4,5 A, 3,3 V @ 2,5 A, +12 V @ 0,05 A, -12 V @ 0,05 A	
I/O Interface	FDDI : multimode fibre; ST or SC connector copper UTP; RJ-45 or backplane Gigabit Ethernet : multimode fibre; SFF/LC connector copper UTP; RJ-45 or backplane	
Visual Indicators	FDDI : ring disconnected, Port A status and Port B status Gigabit Ethernet : link-up, Link A up and Link B up channel activity, Channel A activity and Channel B activity	
Acoustic Noise	zero	
MTTR	< 1 hour onboard	
Software	embedded Linux operating system	
Characteristics		
Physical	Dimensions	Mass
	Length x Width x Height 235 mm x 175 mm x 25 mm	750 g ± 50 g
Performance Specifications		
Latency	350 µs (small network, low network load or synchronous bandwidth allocation) 3 500 µs (typical network, real-world network load or 30% to 40%, asynchronous bandwidth only)	
Throughput	95 Mbit/s (small network, low network load or synchronous bandwidth allocation) 90 Mbit/s (typical network, real-world network load or 30% to 40%, asynchronous bandwidth only)	



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Environmental Specifications			
Grade	Commercial	Industrial	Ruggedised
Temperature - Operating - Storage	0 C to +55 C -50 C to +85 C	-15 C to +75 C -50 C to +85 C	-40 C to + 85 C -60 C to +125 C
Relative Humidity	10% to 90%	5% to 90%	0% to 95%
Shock		60 g for 5 ms, ½ sine 30 g for 10 ms, ½ sine i.a.w. MIL-STD-810F Method 516.5 Procedure I	
Vibration		5 g (peak) 10 Hz to 100 Hz 0,1 g²/Hz at 15 Hz to 2 kHz i.a.w. MIL-STD-810F Method 516.5 Procedure II	
EMC		RE, CE, RS, CS i.a.w MIL-STD-461C for military equipment	

Reliability			
	Figures according to MIL-HDBK-217F, Parts Stress Method		
MTBF	Commercial and Industrial Grades	Ground Benign, Controlled, 25 C	40 000 hours
	Ruggedised Grade	Ground Benign, Controlled, 25 C Ground, Mobile, 45 C Naval, Sheltered, 40 C Airborne, Inhabited Cargo, 55 C	42 700 hours 8 600 hours 11 900 hours 8 900 hours

Part Designations															
Part Designation	Grade														
CCII/FDDIGENETR/xxxx/COM	Commercial														
CCII/FDDIGENETR/xxxx/IND	Industrial														
CCII/FDDIGENETR/xxxx/RGD	Ruggedised														
<p>Note : The four digit code (xxxx) in the part number denotes customer-selected formfactor option</p> <table> <tr> <td>3U cPCI</td> <td>CPC3</td> </tr> <tr> <td>6U cPCI</td> <td>CPC6</td> </tr> <tr> <td>6U VME</td> <td>VME6</td> </tr> <tr> <td>6U VPX</td> <td>VPX6</td> </tr> <tr> <td>PC/104</td> <td>P104</td> </tr> <tr> <td>32-bit PCI</td> <td>PCI3</td> </tr> <tr> <td>64-bit PCI</td> <td>PCI6</td> </tr> </table>		3U cPCI	CPC3	6U cPCI	CPC6	6U VME	VME6	6U VPX	VPX6	PC/104	P104	32-bit PCI	PCI3	64-bit PCI	PCI6
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Systems