

# M SERIES AND T SERIES PIC/FPC COMPATIBILITY MATRIX

Flexible PIC Concentrators (FPCs) house the Physical Interface Cards (PICs) and are installed in front-side slots in the Juniper Networks® M40e, M120, M320, T320 Multiservice Edge Routers and the Juniper Networks T640 and T1600 Core Routers. The Juniper Networks M7i and M10i Multiservice Edge Routers have built-in FPCs. The ability to mix and match PICs within a single FPC

slot offers unparalleled interface density and flexibility, making cost-effective use of valuable rack space while enabling service providers to efficiently scale the network.

For investment protection and smooth migration, many PICs are portable between M40e, M120, M320, T320, T640 and T1600 routers. M7i and M10i PICs are also interchangeable.

PIC TYPE	M7i	M10i	M40e		M120			M320			T320			T640/T1600				
	BUILT-IN	BUILT-IN	FPC 1	FPC 2	FPC 1	FPC 2	FPC 3	FPC 1	FPC 2	FPC 3	FPC 1	FPC 2	FPC 3	FPC 1	FPC 2	FPC 3	FPC 4	
<b>SONET/SDH PICs</b>																		
OC-3c/STM-1, 2-port	▪	▪																
OC-3c/STM-1, 4-port	▪	▪	▪	▪	▪	▪		▪	▪		▪	▪		▪	▪			
OC-12c/STM-4, 1-port	▪	▪	▪		▪			▪			▪			▪				
OC-12c/STM-4, 4-port				▪		▪			▪		▪					▪		
OC-48c/STM-16, 1-port SFP		▪		▪		▪			▪		▪					▪		
OC-48c/STM-16, 4-port SFP							▪			▪			▪				▪	
OC-192c/STM-64, 1-port							▪			▪			▪				▪	
OC-192c/STM-64, 1-port XFP							▪			▪			▪				▪	
OC-192c/STM-64, 4-port XFP																		▪
OC-768c/STM-256, 1-port																		▪
<b>Multi-Rate SONET/SDH PICs</b>																		
OC-3/STM-1, 2-port SFP	▪	▪																
OC-12/STM-4 or OC-3/STM-1, 1-port SFP	▪	▪	▪		▪			▪			▪			▪				
OC-12/STM-4, 1-port or OC-3/STM-1, 4-port, SFP	▪	▪	▪		▪	▪		▪	▪		▪	▪		▪	▪			
OC-48/STM-16 or OC-12/STM-4 or OC-3/STM-1, 1-port SFP			▪			▪			▪		▪			▪				
<b>Ethernet PICs</b>																		
Fast Ethernet, 4-port TX	▪	▪	▪		▪			▪			▪			▪				
Fast Ethernet, 8-port FX	▪	▪	▪		▪			▪			▪			▪				
Fast Ethernet, 12-port TX	▪	▪	▪		▪			▪			▪			▪				
Fast Ethernet, 48-port TX				▪		▪			▪		▪			▪				
1-Gigabit Ethernet, 1-port SFP	▪	▪	▪		▪			▪			▪			▪				
1-Gigabit Ethernet, 2-port SFP				▪		▪			▪		▪			▪			▪	
1-Gigabit Ethernet, 4-port SFP				▪		▪			▪		▪			▪			▪	
1-Gigabit Ethernet, 10-port SFP							▪			▪			▪				▪	
10-Gigabit Ethernet, 1-port XENPAK							▪			▪			▪				▪	
10-Gigabit Ethernet, 1-port DWDM							▪			▪			▪				▪	
10-Gigabit Ethernet, 4-port XFP																		▪

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	BUILT-IN	BUILT-IN	FPC 1	FPC 2	FPC 1	FPC 2	FPC 3	FPC 1	FPC 2	FPC 3	FPC 1	FPC 2	FPC 3	FPC 1	FPC 2	FPC 3	FPC 4
<b>Ethernet IQ PICs</b>																	
1-Gigabit Ethernet IQ, 1-port SFP	▪	▪	▪		▪			▪			▪			▪			
1-Gigabit Ethernet IQ, 2-port SFP				▪		▪			▪			▪				▪	
<b>Ethernet IQ2 PICs</b>																	
1-Gigabit Ethernet IQ2, 4-port SFP oversubscription	▪	▪	▪		▪			▪			▪			▪			
1-Gigabit Ethernet IQ2, 8-port SFP oversubscription				▪		▪			▪							▪	
1-Gigabit Ethernet IQ2, 8-port SFP line rate								▪			▪			▪			▪
10-Gigabit Ethernet IQ2, 1-port XFP line rate								▪			▪			▪			▪
<b>ATM2 IQ PICs</b>																	
E3 IQ, 2-port	▪	▪															
DS3 IQ, 4-port	▪	▪	▪		▪			▪			▪			▪			▪
E3 IQ, 4-port			▪		▪			▪			▪			▪			▪
OC-3/STM-1 IQ, 2-port	▪	▪	▪		▪			▪			▪			▪			▪
OC-12/STM-4 IQ, 1-port	▪	▪	▪		▪			▪			▪			▪			▪
OC-12/STM-4 IQ, 2-port				▪		▪			▪			▪				▪	
OC-48/STM-16 IQ, 1-port				▪		▪			▪			▪				▪	
<b>Channelized IQ PICs</b>																	
ChE1, IQ, 10-port	▪	▪	▪		▪			▪			▪			▪			
ChT1, IQ, 10-port	▪	▪	▪		▪			▪			▪			▪			
ChDS3 IQ, 4-port	▪	▪	▪		▪			▪			▪			▪			▪
ChOC3 IQ, 1-port	▪	▪	▪		▪			▪			▪			▪			▪
ChSTM-1 IQ, 1-port	▪	▪	▪		▪			▪			▪			▪			▪
ChOC-12 IQ, 1-port	▪	▪	▪		▪			▪			▪			▪			▪
<b>Non-Channelized PDH PICs</b>																	
T1, 4-port	▪	▪	▪		▪			▪			▪			▪			
E1, 4-port	▪	▪	▪		▪			▪			▪			▪			
DS3, 2-port	▪	▪															
DS3, 4-port			▪		▪			▪			▪			▪			▪
E3, 2-port	▪	▪															
E3 IQ, 4-port			▪		▪			▪			▪			▪			▪

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<b>Serial PICs</b>																	
EIA-530, 2-port	▪	▪	▪		▪												
<b>Services PICs</b>																	
Encryption Services (ES)	▪	▪	▪		▪			▪			▪					▪	
Monitoring Services II								▪			▪					▪	
Monitoring Services III									▪			▪					▪
Multi Services 100	▪	▪	▪		▪			▪			▪					▪	
Multi Services 400							▪			▪		▪					▪
Multi Services 500				▪				▪					▪				▪
Link Services PIC, 4 ML bundles	▪	▪	▪					▪									
Link Services PIC, 32 ML bundles	▪	▪	▪					▪									
Link Services PIC, 128 ML bundles	▪	▪	▪					▪									
Tunnel PIC type 1	▪	▪	▪		▪			▪			▪					▪	
Tunnel PIC type 2				▪		▪			▪			▪					▪
Tunnel PIC type 3								▪					▪				▪
Tunnel PIC type 4																	▪

For more information, and details about PIC support on specific FPC hardware revision, please consult the PIC guide of the related platform:

- M Series routers: [www.juniper.net/techpubs/hardware/m-series.html](http://www.juniper.net/techpubs/hardware/m-series.html)
- T Series routers: [www.juniper.net/techpubs/hardware/t-series.html](http://www.juniper.net/techpubs/hardware/t-series.html)

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Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at [www.juniper.net](http://www.juniper.net).

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