



# Data Sheet

## FUJITSU PLAN EP QL41212 25/10GbE SFP28

Dual-port Dual-rate 10/25Gbit/s PCIe 3.0 Network Interface Card

Ethernet cards enable data exchange between all the devices connected in a local network (LAN). A networked IT infrastructure that functions well is of great significance when managing and controlling critical business processes in a company. The wide range of complex information transported across the network relies on fast and reliable data processing by the network cards.

Port 10/25GbE Network Interface Cards deliver advanced Ethernet solutions designed for Fujitsu Server PRIMERGY and PRIMEQUEST systems with general purpose operating systems.



### PLAN EP QL41212 25/10GbE SFP28

The Fujitsu PLAN EP QL41212 is based on Cavium's QLogic® FastLinQ™ QL41212HLCU Dual Port RDMA Network Interface Adapter. This intelligent Ethernet adapter uses QLogic's eighth generation technology to deliver true 10/25Gb per second (10/25Gbps) Ethernet performance per port. Integrated, advanced networking eliminates I/O bottlenecks and conserves CPU cycles. 25Gb Ethernet (25GbE) enables network bandwidth to be cost-effectively scaled in support of next-generation server and storage solutions residing in cloud and web-scale data center environments. The 25GbE results in a single-lane connection similar to existing 10GbE technology—but it delivers 2.5 times greater bandwidth.

Compared to 40GbE solutions, 25GbE technology provides superior switch port density by requiring just a single switch lane compared to the 40GbE with four lanes. Fujitsu PLAN EP QL41212 Dual-

Main Features	Benefits
<b>Scalable performance</b> <ul style="list-style-type: none"> <li>■ Industry's most powerful 25G Ethernet network adapter with both iWARP and RoCE RDMA and 10G compatibility</li> </ul>	<ul style="list-style-type: none"> <li>■ This Ethernet network adapter is backward compatible with existing 10GbE installations while allowing an upgrade to 25GbE infrastructure. Boosts host CPU efficiency with hardware offloads for GRE, NVGRE, and VXLAN tunnels. NPAR is unique to this adapter and allows network partitioning</li> </ul>
<b>Flexible technology support</b> <ul style="list-style-type: none"> <li>■ Universal RDMA— iWARP and RoCE Remote Direct Memory Access</li> </ul>	<ul style="list-style-type: none"> <li>■ Delivers choice and flexibility with concurrent support for RoCE v2 and iWARP technologies; Recommended as a discrete PCIe adapter for scale-up of Fujitsu's default DynamicLoM iWARP adapter capabilities</li> </ul>
<b>Efficient networking</b> <ul style="list-style-type: none"> <li>■ Intelligent Hardware Offload Adapter with iSCSI - iBFT.</li> </ul>	<ul style="list-style-type: none"> <li>■ Increase VM density and accelerate multitenant networks with full offload for tunneling protocols; iSCSI Boot will be commercially supported once the server UEFI is implemented</li> </ul>
<b>Connectivity</b> <ul style="list-style-type: none"> <li>■ NPAR and General Purpose Operating System Support</li> </ul>	<ul style="list-style-type: none"> <li>■ Enables provisioning of 25GbE or 10GbE ports for greater deployment flexibility through switch-independent NIC partitioning</li> </ul>
<b>Simplified Management</b> <ul style="list-style-type: none"> <li>■ Designed for UEFI</li> </ul>	<ul style="list-style-type: none"> <li>■ Works best on UEFI (Unified Extensible Firmware Interface) PRIMERGY and PRIMEQUEST servers; Supports legacy boot as well, however Fujitsu's ServerView Update Tools and iRMC network inventory are not supported on legacy</li> </ul>

## Technical details

### Technical details

Controller Silicon	Cavium QLogic FastLinQ(TM) QL41212 10/25 Dual-Port Gigabit Ethernet Controller
Released drivers list link	<a href="http://support.ts.fujitsu.com/Download/Index.asp">http://support.ts.fujitsu.com/Download/Index.asp</a>
Number of Connectors	2
Number of external ports	2
Auto Negotiation support	Yes
Bus type	PCIe 3.0
Bus transfer rate	8GT/s
Bus width	x8
Network protocol and standards compatibility	IEEE 802.1q VLAN IEEE 802.1Qaz Enhanced Transmission Selection (ETS) IEEE 802.1Qbb Priority Flow Control (PFC) IEEE 802.3x Flow Control IPv4, IPv6 and mixed IPv4/IPv6 network protocols
HW Virtualization	SR-IOV: up to 240 virtual functions, 120 per port, NPAR: up to 16 physical functions, 8 per port
Interrupt Levels	MSI-X
WoL	No
Virtualization	Server Virtualization - Windows Server 2016 Hyper-V Virtual Machine Queue (VMQ) and Virtual Machine Multi-Queue (VMMQ) - SR-IOV Network Virtualization Offload - VXLAN - NVGRE
Teaming	Windows Server 2016 Teaming Driver

## Technical details

Flow Control	IEEE 802.3-2012 and Ethernet flow control
Additional features	Microsoft SDDC PREMIUM and STANDARD Logo Qualifiers for Storage Spaces Direct
Offloading	- TCP Stateless Offloads (include checksum, TSO, TSS, RSS, and RSC) - TX/RX IP, TCP & UDP checksum offload (IPv4, IPv6) capabilities
Data transfer rate up to	25 Gbit/s

## Supported Interface Modules / Cables

Order code	Application	Type / mode	Connector / cable Length
S26361-F4055-E701	Ethernet 25 Gbit/s	MMF (SWL)	LC-style / up to 100m
S26361-F4055-L701	Ethernet 25 Gbit/s	MMF (SWL)	LC-style / up to 100m
S26361-F4054-E701	Ethernet 25 Gbit/s	MMF (SWL)	LC-style / up to 100m
S26361-F4054-L701	Ethernet 25 Gbit/s	MMF (SWL)	LC-style / up to 100m
S26361-F3986-E3	Ethernet 10 Gbit/s	SFP+ / MMF (SWL)	LC-style / up to 400m
S26361-F3986-L3	Ethernet 10 Gbit/s	SFP+ / MMF (SWL)	LC-style / up to 400m
S26361-F3986-E4	Ethernet 10 Gbit/s	SFP+ / SMF (LWL)	LC-style / up to 10km
S26361-F3986-L4	Ethernet 10 Gbit/s	SFP+ / SMF (LWL)	LC-style / up to 10Km
S26361-F3986-E5	Ethernet 10 Gbit/s ; 1 Gbit/s	SFP+ / MMF (SWL)	LC-style / up to 400m
S26361-F3986-L5	Ethernet 10 Gbit/s ; 1 Gbit/s	SFP+ / MMF (SWL)	LC-style / up to 400m
S26361-F3986-E6	Ethernet 10 Gbit/s ; 1 Gbit/s	SFP+ / SMF (LWL)	LC-style / up to 10km
S26361-F3986-L6	Ethernet 10 Gbit/s ; 1 Gbit/s	SFP+ / SMF (LWL)	LC-style / up to 10km
S26361-F3989-E600	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 2m or 5m
S26361-F3989-L102	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 2m
S26361-F3989-L105	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 5m
S26361-F3989-L110	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 10m
Description optional cable	10Gbit/s optical transceiver module for MMF (S26361-F3986-E3, -L3 and MC-0JXE51, MCX0JXE51): - OM1 (Multi Mode Fiber 62.5/125µm, 200 MHz*km) up to 33m - OM2 (Multi Mode Fiber 50.0/125µm, 500 MHz*km) up to 82m - OM3 (Multi Mode Fiber 50.0/125µm, 2000 MHz*km) up to 300m - OM4 (Multi Mode Fiber 50.0/125µm, 4700 MHz*km) up to 400m 10Gbit/s optical transceiver module for SMF (S26361-F3986-E4, -L4): - OS1 (Single Mode Fiber 9µm) up to 10kn: 10Gbit/s active twinax cable: - Amphenol 2m, 5m, 10m (S26361-F3989-L102, -L105, -L110) - Brocade 1m, 3m, 5m (S26361-F3873-L501, -L503, -L505) - Cisco 7m, 10m (S26361-F4571-E107, -L107, -E110, -L110) 10Gbit/s passive twinax cable: - Cisco 1m, 3m, 5m (S26361-F4571-E101, -L101, -E103, -L103, -E105, -L105) 25G Direct Attach Copper DAC - Cisco 100GBase QSFP to 4xSFP25G Passive Copper Splitter Cable 1m, 2m, 3m (Cisco P/N: QSFP-4SFP25G-CU1M, QSFP-4SFP25G-CU2M, QSFP-4SFP25G-CU3M)		

## Environment

Power consumption	Dual Port SFP+ 10GBase-SR typ. 16 W, max. 18 W Dual Port SFP+ 10GBase-LR typ. 16 W, max. 18 W Dual Port SFP+ 10G Twinax typ. 16 W, max. 18 W Dual Port SFP28 25G typ. 16 W, max. 18W Dual Port SFP28 25G DAC typ. 16 W, max. 18 W
Temperature (operating)	0 - 55 °C
Storage temperature	-40 - 65 °C

## Compliance

Compliance notes	According to the corresponding system
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>

# More information

**Fujitsu products, solutions & services**

In addition to Fujitsu with PLAN EP QL41212 25/10GbE SFP28, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

**Fujitsu Portfolio**  
Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

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**Software**  
[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

**More information**

Learn more about Fujitsu PLAN EP QL41212 25/10GbE SFP28, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.  
[www.fujitsu.com/primergy](http://www.fujitsu.com/primergy)

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Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.  
Please find further information at <http://www.fujitsu.com/global/about/environment>



**Green  
Policy  
Innovation**

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