

# DNC10 Series

## PCI-Express 10 Gigabit Network Adapter

Allied Telesis DNC10 Series 10 Gigabit PCI-Express Network Adapters provide the performance and bandwidth that today's high throughput applications need.



### Power efficiency

The DNC10 Series features an energy-efficient Aquantia (Marvell) AQC10x Series chipset, which offers significantly reduced power consumption vs. comparable cards. This increased power efficiency (<2W for fiber cards, <6W for copper cards, at normal operation) helps minimize heat generated by the card, keeping the operating temperature to a minimum in your server or desktop device.

### Network speed

With the rising strain on network resources due to large file transfers, multimedia content and an increase in network users, more bandwidth is required from the network. With up to 10Gbps bandwidth, these adapters allow for more data transfer at faster speeds. They are an ideal fit for your network.

### Unique features

Each of the cards in this series has its own unique feature:

- ▶ DNC10T features Multi-Gig support (100/1G/2.5G/5G/10GT) for ultimate flexibility.
- ▶ DNC10SP supports 1G and 10G optics for future upgrade paths.
- ▶ DNC10LC has a fixed optic for enhanced physical security.

### More bandwidth with PCIe

The PCI-Express (PCIe) design provides the maximum possible bandwidth and bus efficiency. Other benefits include Wake-On-Lan (WoL) capability, and low power consumption.

### Performance and reliability

Allied Telesis network adapters are validated over a variety of operating systems and platforms, ensuring compatibility. The DNC10 Series takes full advantage of the PCIe bus architecture to maximize network throughput.

## New Features

- ▶ 802.1Q VLAN tagging & filtering
- ▶ 802.1p QoS traffic prioritization
- ▶ Flow Control
- ▶ WoL
- ▶ VLAN support
- ▶ Link aggregation (LACP)
- ▶ Failover
- ▶ Jumbo frames (up to 16348 bytes)
- ▶ PCIe v3
- ▶ PXE/UEFI Boot with SecureBoot (Microsoft CA Key)
- ▶ IPv6
- ▶ Receive side scaling (up to 8 queues)
- ▶ DeviceGuard compatible

## Specifications

### Bus Type

PCIe x 4

### Connectors

DNC10T - RJ45  
DNC10SP - SFP+  
DNC10LC - LC

### Network Type

10Gb Ethernet

### Speed

DNC10T	100/1G/2.5G/5G/10GT
DNC10SP	1G/10G (dep. on SFP+ module)
DNC10LC	10G

### Management Features

WMI  
ACPI 1.1  
PXE 2.1 Boot ROM  
SNMP  
VLAN  
LACP  
Failover  
802.1Q VLAN tagging & filtering  
802.1p QoS traffic prioritization  
2005 Flow control support

### Ethernet Standards

IEEE 802.1p	QoS
IEEE 802.1Q	VLANs
IEEE 802.2	LLC
IEEE 802.3ac	MAC
IEEE 802.3ae	10Gbps Ethernet Task Force
IEEE 802.3	Ethernet
IEEE 802.3x	Flow control auto-negotiation
IEEE 802.3ad	Link aggregation
IEEE 802.1Qaz	Enhance Transmission Selection (ETC)
IEEE 802.1Qbb	PFC
IEEE 801.1Qau	Quantized Congestion Notification (QCN)

### Drivers

Supported Windows 10  
Windows Server 2019

### Status Indicators

DNC10SP and DNC10LC have a single Link/Act LED

LED for SFP+ slots:

LINK/ACT

Off: Empty slot or the transceiver has not established a link to a remote device  
Steady On: The transceiver has established a link to a remote device  
Blinking: The transceiver is transmitting or receiving network traffic

DNC10T has two LEDs:

LED 1: solid green link, blinking green activity  
LED 2: solid green 10G, solid yellow <10G

### Power

Power consumption (max)  
DNC10T 6W  
DNC10SP 2W  
DNC10LC 2W  
Operating voltage 3.3V

### Environmental Specifications

Operating temperature  
DNC10SP/DNC10LC 0°C to 50°C (32°F to 122°F)  
DNC10T 0°C to 40°C (32°F to 104°F)  
Relative humidity 5% to 90% (non-condensing)  
Storage temperature -25°C to 70°C (-13°F to 158°F)

### Physical Characteristics

Dimensions (W x H)  
DNC10SP 9.14 x 6.86 x 1.27 cm  
(3.6 x 2.7 x 0.5 in)  
DNC10LC 9.65 x 6.86 x 1.27 cm  
(3.8 x 2.7 x 0.5 in)  
DNC10T 8.89 x 6.86 x 1.27 cm  
(3.5 x 2.7 x 0.5 in)  
Weight: 78.0 g (2.8 oz)

Ships with low-profile bracket attached to interface card.  
Standard bracket included in packaging.

### Compliance

RoHS  
UL 62368-1  
FCC/EN55032 Class B  
TUV IEC 62368-1  
EN55035  
CE  
VCCI

## Ordering Information

### AT-DNC10T-901

TAA, 100/1G/2.5G/5G/10GT Adapter Card

### AT-DNC10SP-901

TAA, SFP+ (1g/10g) Adapter Card

### AT-DNC10LC-901

TAA, 10G/LC MM Adapter Card

### Compatible SFP Modules

#### 10G Modules

##### AT-SP10SR

10GSR 850 nm short-haul, 300m with MMF

##### AT-SP10LRa/I

TAA, 10GLR 1310 nm long-haul, 10km with SMF

##### AT-SP10ER40a/I

TAA, 10G 1270/1330, 10km, I-Temp

##### AT-SP10BD10/I

10GSR 850 nm short-haul, 300m with MMF

##### AT-SP10BD20

TAA, 10G 1270/1330, 20km

##### AT-SP10BD40/I

TAA, 10G 1270/1330, 40km, I-Temp

##### AT-SP10T

10GBase-T 20m copper

### Direct Attach Cable (DAC)

##### AT-SP10TW1

1 meter SFP+ direct attach cable

##### AT-SP10TW3

3 meter SFP+ direct attach cable

##### AT-SP10TW7

7 meter SFP+ direct attach cable

#### 1G Modules

##### AT-SPSX

1000SX GbE multi-mode 850 nm fiber up to 550m

##### AT-SPSX/I

1000SX SFP, LC, MMF, 850 nm, I-Temp

##### AT-SPTX

10/100/1000T SFP, RJ-45 (100m)