

# 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  
 Fallower  
 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) |

### Compatible with Drivers:

Windows 11  
 Windows 10  
 Windows Server 2022  
 Windows Server 2019  
 Linux

### 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<br>(3.6 x 2.7 x 0.5 in) |
| DNC10LC | 9.65 x 6.86 x 1.27 cm<br>(3.8 x 2.7 x 0.5 in) |
| DNC10T  | 8.89 x 6.86 x 1.27 cm<br>(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)