

## Chapter 4 Performance Specification

**4.1 Performance Specification**

Item		Standards		
		10BASE5	10BASE2	10BASE-T
Transfer Spec.	Data Transfer Rate	10Mbps		
	Transfer System	Base Band		
	Maximum Extension Distance Between Nodes.	2,500m	925m	-
	Maximum Segment Length.	500m	185m	100m (node-hub)
	Maximum Node No.	100pcs/Segment	30pcs/Segment	Able to link to 4 hub stages.
	Node Interval	Double Integer of 2.5m	Double Integer of 0.5m	-
	Maximum Protocol Volume	1,500bytes		
	Excess Method of Communication Range	CSMA/CD		
	Frame Error Check Method	CRC 16 = $X^{16} + X^{12} + X^5 + 1$		
Basic Spec.	Internal 5V Power for Consumer (mA)	530mA		
	Dimension of External Form (mm)	250H x 35W x 140.7D		
	Weight (kg)	460g		

## Chapter 4 Performance Specification

### 4.2 Cable Specification

#### 4.2.1 Cable Standards related Ethernet/IEEE 802.3

Items	10BASE5 Coaxial Cable	10BASE2 Coaxial Cable	AUI Cable
Characteristic Impedance	50 ±2	50 ±2	78 ±5
Attenuation	Below 8.5dB for 10MHz, 500m	Below 8.5dB for 10MHz, 185m	Below 3dB for 10MHz, 50m
Transfer Rate C=Velocity of Light(300,000km/s)	Above 0.77C	Above 0.65C	Above 0.65C
Phase Jitter	Below ±7ns at 500m Trailing End	Below ±7ns at 185m Trailing End	Below ±1ns at 50m Trailing End
The Others	External Diameter with PVC Jacket: 10.287 ± 0.178mm External Diameter with FEP Jacket: 9.525 ± 0.254mm	External Diameter with PVC Jacket: 4.9 ± 0.3mm External Diameter with FEP Jacket: 4.8 ± 0.3mm	Electric Resistance of Power Wire: Below 40m /m

#### 4.2.2 An Example of Twisted-Pair Cable (UTP) of Category 5 (CTP-LAN5)

Item	Unit		Value
Conductor Resistance (Maximum)	/km		93.5
Insulation Resistance (Minimum)	M -km		2,500
Internal Voltage	V/Min.		AC 500
Characteristic Impedance	(1~100MHz)		100 ± 15
Attenuation	Below dB/100m	10MHz	6.5
		16MHz	8.2
		20MHz	9.3
Near-end Cross talk Attenuation	Below dB/100m	10MHz	47
		16MHz	44
		20MHz	42

#### Remark

Note1) You should install it after consultation with an expert because Ethernet connection cables are different according to system component and environment.

Note2) Please use the cable above category 3 for 10Mbps Ethernet communication.