4.1

A) Characteristics of coaxial cable

Diameter:

External Diameter

Thin: 5mm

Thick: 25mm

Connector types

F-types connectors

N-Type Connectors

BNC - Bayonet Neill-Concelman connectors

TNC -Threaded Neill-Concelman

QMA connectors

Length of the connectors

F-types connectors 18mm

N-Type Connectors 28mm

BNC - Bayonet Neill-Concelman connectors 25mm

TNC -Threaded Neill-Concelman 28mm

QMA connectors 20mm

**B) Twisted pair cable**

Diameter

0.4-0.8 mm

List of connector components

Copper conductors

PVC insulator

Twisted pair separator

Jacket

Strain relief boot

Length of plug to NIC

It ranges from 21.5mm to 100,000mm

The cables are provided on standard lengths of 1000mm, 2000mm, 3000, 5000mm and 10000.

Diameter of plug(ceramic, metal) submodule[mm]

2.2mm

C) **Characteristics of the optical fiber cable:**

Diameter of the outer plastic jacket

Single-mode fiber cable 2.0mm – 4.0 mm

Multimode fiber cable 2.0 – 3.0mm

**List of cable types according to length**

LC (Lucent Connector) Connector – 1.25mm

SC (Standard Connector) Connector – 2.5mm

ST (Straight Tip) Connector – 2.5mm

FB (Fiber Connector) Connector – 2.5mm

**Diameter of the plug**

2.5mm

4.2

A)

X = 12 = 10.8 dBs

X = 14 = 11.5dBs

X = 16 = 12 dBs

B)

13dBs, x = 20

-68 dBs x= 158 x 10-9

-70 dBs, x = 100 x 10-9

4.3

Version number: 6.2

Number of possible VM types: 6 though the value can change depending on the number of operating systems.

VM network interfaces

Bridged network,

Network Address translation,

Host-only network,

Internal network,

Custom network interface

Possible number of VM network interfaces.

The possible number of VM network interfaces depends on the virtualization platform. There can be up to 10 possible VM network interfaces.

B) Oracle VM VirtualBox does not have a direct file structure to the virtual machine created.

It relies on the centralized location where VM settings and disk images are stored

1. Virtual machines settings
   1. They are stored in XML files with a “.vbox” extension example VM.vbox
2. Virtual disk image
   1. The VM-s operating system is stored here in a “.vd” Example VM.vdi