

9. CONNECTING A NETWORK

School of Education
Faculty of Social Sciences and Humanities

Network Cabling Tools & Accessories

Network cable Crimping and Testing Tools

- Installing and maintaining twisted pair cables in a wired network is a quite a challenging task.
- It is important to understand a variety of network cable **crimping** and **testing** tools

Network Cabling Tools & Accessories

Network cable Crimping and Testing Tools

Crimping tools are used for the following purposes.

- To cut the network cable of the required length from the bundle.
- To remove the outer and inner jackets of the network cable.
- To attach the connectors on both ends of the cable.

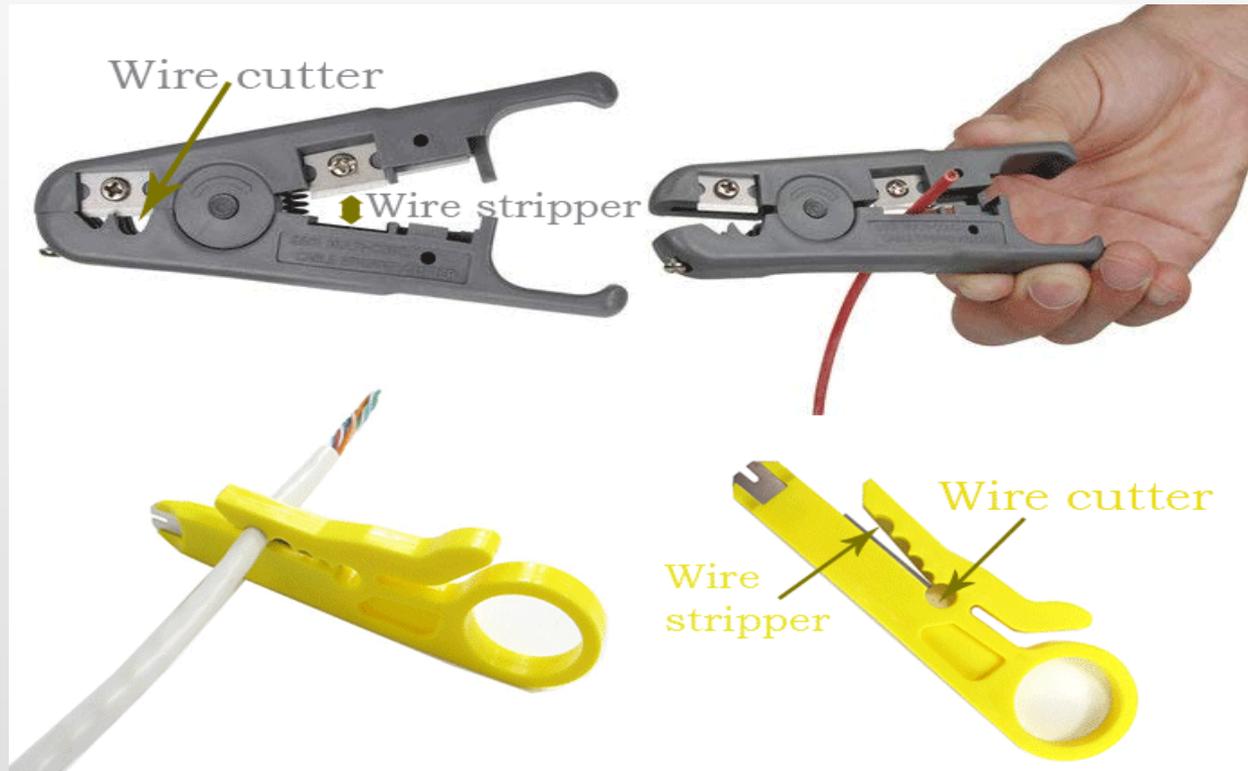
Network Cabling Tools & Accessories

Network cable Crimping and Testing Tools

- **Wire Cutter:** - To cut the network cable of the required length from the bundle
- **Wire Stripper:** - This tool is used to remove the outer and inner jackets of the network cable.

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Network cable Crimping and Testing Tools

- **Crimp tool:** - This tool is used to attach the connectors to the cable.
- Typically, this tool also includes a wire-cutter and wire-stripper.
- So if you buy a crimp tool, you don't have to buy a wire-cutter and wire-striper separately.

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Network cable Crimping and Testing Tools



Network Cabling Tools & Accessories

Network cable testing and troubleshooting tools

- To measure the length of a segment or network cable.
- To detect loose connectors.
- To identify an un-labeled network cable from all network cables.
- To find a break in the network cable.
- To certify the cable installation.

Network Cabling Tools & Accessories

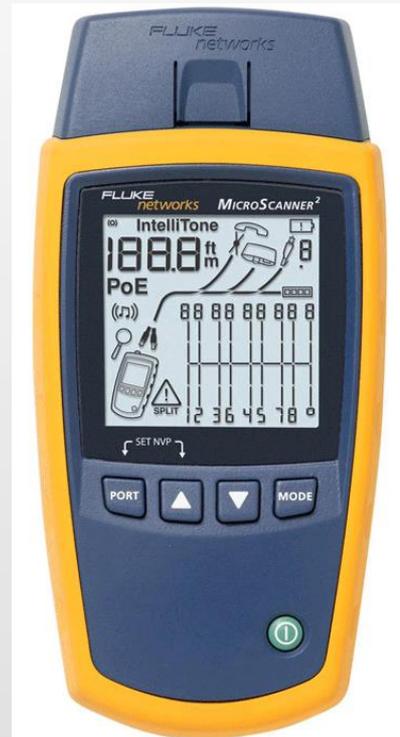
Network cable Crimping and Testing Tools

- **Cable certifier:-** tests a network cable and certifies that the cable installation meets a special wiring standard such as Cat 5e, Cat 6, Cat 6a, and so forth.
- This device can check and test total segment length, crosstalk, noise, wiremap, resistance, impedance, and the capability to transfer data at the maximum frequency rated for the cable.

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Network cable Crimping and Testing Tools

- Cable certifier



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Network cable Crimping and Testing Tools

- **Basic cable tester:-** the price is cheaper than cable certifier but with the same functions.



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Network cable Crimping and Testing Tools

- **Tone generator and the probe:** trace the unlabeled network cables and identify network cables that run from a central location to remote locations.
- This device comes in two pieces: the **tone generator** and the **probe**.
- The tone generator generates tones or signals and places them on the network cable.
- The probe detects these signals on the other end of the cable.

Network Cabling Tools & Accessories

Network cable Crimping and Testing Tools

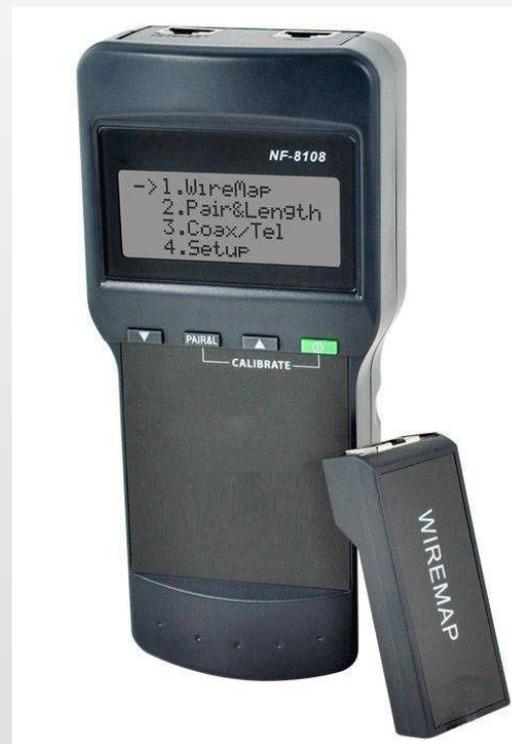
- Tone generator and the probe



Network Cabling Tools & Accessories

Network cable Crimping and Testing Tools

- **Time domain reflector:** measure the length of a network cable and the breaks in the cable



Network Cabling Tools & Accessories

Fibre optic tools

- There are **splicing** fiber optic tools, **test** fiber optic tools and **cleaning** fiber optic tools.

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Fibre optic tools: Splicing

- A fusion splice machine is used to join optical fibres together to achieve a low loss connection.



Network Cabling Tools & Accessories

Fibre optic tools

- **Test** fiber optic tools



FiberChek Probe Microscope



P5000i Fiber Microscope



FiberChek Sidewinder



SmartClass Fiber OLP-82/-82P



SmartClass Fiber OLP-85/-85P



SmartClass Fiber OLTS-85/-85P

Network Cabling Tools & Accessories

Fibre optic tools

- **Cleaning** fiber optic tools.



Network Software

- Any software that interacts, increases and facilitates the functions of a computer network is called **network software**.
- Two basic types of networking:
 - **allows two computers to share, send and receive data files via network**
 - **allows shared access liberty to all the users and systems that are part of the network**

Network Software

Types of network software.

- **Network operating system (NOS):** NOS is a system that offers a shared platform for all the connected computers that can run a shared application. Eg: Net and Novell
- **Shared network:** A networking software whose applications are centrally saved and each individual computer can access the applications on their own. Eg: Oracle

Network Software

Types of network software.

- **Client server network programs:** one component of such applications are stored on client's system and the other one is stored on server.
- Both systems then communicate with each other and utilizes their part of the component accordingly.
- Eg: Microsoft exchange.