

# Ethernet Frame Types

There are four different types of Ethernet frames available, Ethernet\_II, IEEE 802.3, IEEE 802.2\_SAP and 802.2\_SNAP.

## Ethernet\_II Frame Format:

Preamble 8 bytes	DA 6 bytes	SA 6 bytes	Type 2 bytes	Data	FCS 4 bytes
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## 802.3\_Ethernet Frame Format:

Preamble 8 bytes	DA 6 bytes	SA 6 bytes	Length 2 bytes	Data	FCS
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## 802.2\_SAP Frame Format:

1	1	1 or 2	Variable
Dest SAP	Source SAP	Ctrl	Data

## 802.2\_SNAP (Subnetwork Architecture Protocol) Frame Format:

1	1	1 or 2	3	2	Variable
Dest SAP AA	Source SAP AA	Ctrl 03	OUI ID	Type	Data

The Ethernet frame type is specified in the Length/Type field, which is two octets long.

Value in Field	Frame Type
1500 (0x05dc hex) or less	Ethernet 2.0 (Ethernet_II)
2048 (0x0800 hex)	IP
33079 and 33080 (0x8137, 0x8138 hex)	Novell IPX
No Length/Type Field	Novell IPX

For example, if the value in this field is 1500 (0x05dc hex) or less, it indicates the number of octets to follow in the data field. Network engineers know this as the original Ethernet 2.0 (Ethernet\_II) frame type. If the value is 1536 (0x0600 hex) or greater, it indicates the network-layer protocol. In most networks today, this value will be 2048 (0x0800 hex), which is the assigned protocol type for IP. The other most commonly found protocol type values are 33079 and 33080 (0x8137, 0x8138 hex), which is for Novell IPX.