

8. LLC address assignments

Table 1 records the current assignment of individual LSAP address values.

Table 1 - Individual LLC address values

LLC address value (applicable to SSAP and individual DSAP) Hexadecimal / Binary	Organisation responsible for the document	Document references				
00 Z000 0000	ISO/IEC JTC1/SC6	ISO/IEC 8802-2 (1)				
80 Z000 0001 through to FC Z011 1111	----	Unreserved use				
02 Z100 0000	ANSI ASHRAE ISO/IEC JTC 1/SC6	IEEE 802.1B (2) ANSI/ASHRAE 135-1995 (13) ISO/IEC 10038 (3)				
82 Z100 0001						
42 Z100 0010						
C2 Z100 0011						
22 Z100 0100						
A2 Z100 0101						
62 Z100 0110						
E2 Z100 0111						
12 Z100 1000						
92 Z100 1001						
52 Z100 1010						
D2 Z100 1011						
32 Z100 1100						
B2 Z100 1101						
72 Z100 1110						
F2 Z100 1111	ANSI	IEEE 802.10B (11)				
0A Z101 0000						
8A Z101 0001						
4A Z101 0010						
CA Z101 0011						
2A Z101 0100						
AA Z101 0101			ANSI	IEEE 802 (4)		
6A Z101 0110						
EA Z101 0111						
1A Z101 1000						
9A Z101 1001						
5A Z101 1010						
DA Z101 1011						
3A Z101 1100						
BA Z101 1101						
7A Z101 1110						
FA Z101 1111	ANSI	ARPANET/IP (5)				
06 Z110 0000						
86 Z110 0001						
46 Z110 0010						
C6 Z110 0011						
26 Z110 0100						
A6 Z110 0101			ISO/IEC JTC1/SC6	ISO/IEC 8802-2 (12)		
66 Z110 0110						
E6 Z110 0111					IEC TC13	IEC62056-46 (14)
16 Z110 1000						
96 Z110 1001						
56 Z110 1010						
D6 Z110 1011						
36 Z110 1100						
B6 Z110 1101						
76 Z110 1110						
F6 Z110 1111	IEC IEC ISO	IEC 955 (6) IEC 955 (7) ISO 9506 (8)				
0E Z111 0000						
8E Z111 0001						
4E Z111 0010						
CE Z111 0011						
2E Z111 0100						
AE Z111 0101						
6E Z111 0110						
EE Z111 0111						
1E Z111 1000						
9E Z111 1001						
5E Z111 1010						
DE Z111 1011						
3E Z111 1100						
BE Z111 1101						
7E Z111 1110	ISO/IEC JTC 1/SC6 ISO/IEC JTC 1/SC6	ISO/IEC 8208 (9) ISO/IEC TR 9577 (10)				
FE Z111 1111						

Note:

- i. The bit marked 'Z' is the least significant bit and represents:
 - The *command/response identifier bit* in an SSAP field; or
 - The *address type designation bit* (set to the value '0' - Individual) in a DSAP field.
- ii. LSAP values that are neither assigned nor identified for unreserved use are reserved.

The following numbered list provides additional information about each of the protocols in table 1. The numbers in the list correspond to the numbers in parenthesis shown in the document reference column.

- 1) Used in ISO/IEC 8802-2 as the Null Address.
- 2) Used by IEEE 802.1b (IEEE 802.1b : IEEE Standard for Local Area Networks and Metropolitan Area Networks Network Management) to indicate LLC Sublayer Management.
- 3) Used in ISO/IEC 10038 (ISO/IEC 10038 : 1993, Information technology - Telecommunications and information exchange between systems - Local area networks - Media Access Control (MAC) bridges) to identify the Bridge Spanning Tree Protocol.
- 4) Used in IEEE 802 (IEEE Std 802-1990, IEEE Standard for Local Area Networks and Metropolitan Area Networks: Overview and Architecture of Network Standards) to identify the SNAP SAP.
- 5) Used in ARPANET (RFC 791 : ARPANET/IP, Internet Protocol, DARPA Internet Program Protocol Specification) to identify the Internet Protocol.
- 6) Used in IEC 955 (IEC 955 : 1989, Process Data Highway, Type C (Proway C), for Distributed Process Control Systems) to identify Network Management Maintenance and Initialization.
- 7) Used in IEC 955 (IEC 955 : 1989, Process Data Highway, Type C (Proway C), for Distributed Process Control Systems) to identify Active station list Maintenance.
- 8) Used in ISO/IEC 9506 (ISO 9506 : 1990, Industrial Automation Systems - Manufacturing Message Specification - Part 1 : Service Definition 1st Edition; Part 2 : Protocol Specification 1st Edition; Part 3 : Robot Specific Message Systems) to identify Manufacturing Message Service.
- 9) Used to identify ISO/IEC 8208 (ISO/IEC 8208 : 1995, Information technology - Data Communication - X.25 packet layer protocol for data terminal equipment) as the Network Layer Protocol.
- 10) Used to identify ISO/IEC TR 9577 (ISO/IEC TR 9577 : 1993, Information technology - Telecommunications and information exchange between systems - Protocol identification in the network layer).
- 11) Used by IEEE 802.10B (IEEE 802.10B : IEEE Standard for Local Area Networks and Metropolitan Area Networks Standard for Interoperable Local Area Network (LAN) Security (SILS) Part B) to identify the Secure Data Exchange Protocol.
- 12) Used in ISO/IEC 8802-2 to identify the Source Routing Route Determination Entity.
- 13) Used by ASHRAE (American Society for Heating, Refrigeration, and Air Conditioning Engineering) in BACnet - A Data Communication Protocol for Building Automation and Control Networks (ANSI/ASHRAE 135-1995).
- 14) Used in IEC62056-46 (Data exchange for meter reading, tariff and load control – Part 46: Data Link Layer using HDLC Protocol) to identify the Service user layer entity.

Table 2 records the current assignment of group LSAP address values.

Table 2 - Group LLC address values

LLC address value (applicable to a Group DSAP) Hexadecimal / Binary	Organisation responsible for the document	Document reference
01 1000 0000 through to FD 1011 1111	-----	Unreserved use
03 1100 0000		Reserved for assignment by ISO/IEC JTC1/SC6
83 1100 0001		"
43 1100 0010		"
C3 1100 0011		"
23 1100 0100		"
A3 1100 0101		"
63 1100 0110		"
E3 1100 0111		"
13 1100 1000		"
93 1100 1001		"
53 1100 1010		"
D3 1100 1011		"
33 1100 1100		"
B3 1100 1101		"
73 1100 1110		"
F3 1100 1111		"
0B 1101 0000		"
8B 1101 0001		"
4B 1101 0010		"
CB 1101 0011		"
2B 1101 0100		"
AB 1101 0101		"
6B 1101 0110		"
EB 1101 0111		"
1B 1101 1000		"
9B 1101 1001		"
5B 1101 1010		"
DB 1101 1011		"
3B 1101 1100		"
BB 1101 1101		"
7B 1101 1110		"
FB 1101 1111		"
07 1110 0000		"
87 1110 0001		"
47 1110 0010		"
C7 1110 0011		"
27 1110 0100		"
A7 1110 0101		"
67 1110 0110		"
E7 1110 0111		"
17 1110 1000		"
97 1110 1001		"
57 1110 1010		"
D7 1110 1011		"
37 1110 1100		"
B7 1110 1101		"
77 1110 1110		"
F7 1110 1111		"
0F 1111 0000		"
8F 1111 0001		"
4F 1111 0010		"
CF 1111 0011		"
2F 1111 0100		"
AF 1111 0101		"
6F 1111 0110		"
EF 1111 0111		"
1F 1111 1000		"
9F 1111 1001		"
5F 1111 1010		"
DF 1111 1011		"
3F 1111 1100		"
BF 1111 1101		"
7F 1111 1110	ISO/IEC JTC1/SC6	"
FF 1111 1111	ISO/IEC JTC1/SC6	ISO/IEC 8802-2 (1)

Note:

- i. The leftmost bit in this table is the least significant bit and represents the *address type designation bit* (set to the value '1' - Group) in the DSAP field.
- ii. The meaning and use of reserved Group LLC addresses are for further study.
- iii. LSAP values that are neither assigned nor identified for unreserved use are reserved.

The following numbered list provides additional information about each of the protocols in table 2. The numbers in the list correspond to the numbers in parenthesis shown in the document reference column.

- 1) Used in ISO/IEC 8802-2 as the global DSAP address.