



Customer Interface Publication: CIP0016

KCOM GROUP PLC

Technical Characteristics of the 10Mbit/s, 100Mbit/s digital leased line and 1Gb, 10Gb Digital interfaces

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The information in this document is provided in accordance with the requirements of the Radio Equipment and Telecommunications Terminal Equipment Regulations 2000 (Statutory Instrument 2000 No. 730) to publish (in accordance with the EC Radio and Telecommunications Terminal Equipment Directive 99/05/EC) technical characteristics of interfaces to the public fixed telephone network.

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Note : this publication replaces the interface publications KCL CIP008 and Torch CIP005 on the same subject and all previous version of this document – see document history.

1 Scope

This document specifies the technical characteristics of the 10Mbit/s, 100Mbit/s, 1Gb and 10Gb digital leased line interfaces operated by KCOM Group PLC delivered to a customer at the Network Terminating Point (NTP). These interfaces are part of the KCOM Group PLC “Megaline”, managed router, Point to point, Wholesale and LAN extension service offerings.

Much of the information contained in this document has been published previously in various documents such as ITU-T ETSI and BSI standards.

Changes to the network that affect the correct working of approved terminal equipment will be published by KCOM Group PLC in various documents made available from the address below. If the changes impact on this document then it will be updated.

Enquiries relating to the technical content of this document and the availability of other publications should be directed to:

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2 The Network Termination Point

For 10Mbit and 100Mbit interfaces the network termination point shall be presented as an RJ45 connector socket. The sockets shall be mounted on the Network Terminating and Test Apparatus (NTTA) / Network Terminating Equipment. The socket connection details are as follows:

Pin Number	Signal
1	Transmit +
2	Transmit -
3	Receive +
4	Unused
5	Unused
6	Receive -
7	Unused
8	Unused

For 1Gbit interfaces the network termination point shall be presented as an RJ45 connector socket. The sockets shall be mounted on the Network Terminating and Test Apparatus (NTTA) / Network Terminating Equipment. The socket connection details are as follows:

Pin Number	Signal
1	TP0 +
2	TP0 -
3	TP1+
4	TP1-
5	TP2+
6	TP2-
7	TP3+
8	TP3-

For 10Gb interfaces only fibre based connections are available.

The interfaces for 1Gb and 10Gb Fibre connections are available as either Single Mode 1310nm LC connections or for MultiMode 850nm dual fibre LC connections.

3 Electrical Characteristics of the Interface

KCOM Group PLC 10Mbit/s and 100Mbit/s, 1Gb and 10Gb digital leased line interface services are delivered in accordance with IEEE 802.3[1] ("Ethernet").

4 Ethernet capabilities of the service.

These are dependent on the Product service requested that uses this interface specification.

5 Safety & EMC Information

5.1 Safety

The normal working voltages of the 10Mbit/s and 100Mbit/s digital leased line interfaces are defined in IEEE 802.3[1]. The interface presented to the customer is classified as unexposed as defined in CENELEC Report/ETSI Guide ROBT-002/EG 201 212 [2].

5.2 EMC

The network equipment and network terminating equipment related to the provision of the interface comply with the current EMC regulations.

Whilst predominantly installed in commercial and light industrial environments, this does not preclude the interface being installed in other environments e.g. residential , industrial. This should be taken into account by the terminal equipment manufacturer when determining the limits of compliance relevant to their equipment in relation to the protection requirements of the EMC directive

6 Terminal Equipment Specifications

There are no recommended terminal equipment performance specifications available. The manufacturer is referred to the service definition specified in IEEE 802.3[1].

The minimum recommended terminal equipment EMC specifications are listed in the Official Journal of the European Communities for use under the Electromagnetic Compatibility Directive (89/336). The lists are updated regularly and the terminal manufacturer is recommended to comply with the listed standards applicable to their equipment and the target electromagnetic environment.

The minimum recommended terminal equipment electrical safety specifications are listed in the Official Journal of the European Communities for use under the Low Voltage Directive (73/23/EEC). The lists are updated regularly and the terminal manufacturer is recommended to comply with the listed standards applicable to their equipment.

7 Glossary

BSI	British Standards Institute
EC	European Community
EMC	Electromagnetic Compatibility
IEEE	Institute of Electrical and Electronic Engineers
NTE	Network Termination Equipment
NTP	Network Terminating Point
NTTA	Network Terminating and Test Apparatus
PD	Published Document
TE	Terminal equipment

8 References

Ref	Standard	Title	Date
[1]	IEEE 802.3 : 1998	Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks— Specific requirements—Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications	1998
[2]	R0BT-002/EG 201 212 V.1.2.1 (1998-11)	Electrical Safety ; Classification of interfaces for equipment to be connected to telecommunications networks	1998

The above documents may be obtained from:

- British Standards Institution
Customer Services
Sales Department
389 Chiswick High Road
London
W4 4AL

Telephone: 0345 086 9001
Facsimile: 0208 996 7001

9 History

Date	Issue	Comments	Author
		Precursor documents Technical Characteristics of the 10Mbit/s and 100Mbit/s leased line interface [Issue 1.0 May 2000] TCH CIP005 Technical Characteristics of the 10Mbit/s and 100Mbit/s digital leased line [Issue 1.0 May 2000] KCL CIP008	M.Budd
December 2003	Issue 1.0	KCOM Group PLC publication to replace the above	M. D. Crowther
August 2007	Issue 1.1	Kingston Communications (HULL) PLC publication to replace the above	M. D. Crowther
April 2016	Issue 1.2	KC name change to KCOM and formatting A. Woodard changes	
November 2017	Issue 1.3	Updates for 1Gb and 10Gb specifications	I. Peet