



KCOM wholesale

KCOM Ethernet Network to Network Interface (ENNI)

Ethernet Network-Network Interface (ENNI) aggregates multiple KCOM ethernet A end circuits and presents them to a customer as a single B end. This facilitates :

- > Consolidation of services from multiple low bandwidth individual circuits in Hull area into a high bandwidth single interface;
- > More efficient use of KCOM terminal equipment / your terminal equipment;
- > Significant cost reduction against backhauling multiple individual circuits enabling cost effective upscaling to higher order circuits.

This service enables you to take multiple Ethernet circuits from locations on the KCOM owned network and have them delivered as a single interface in either :

- > Hull – location at own premises or in KCOM Hull exchange served by Ancillary Services
- > Leeds KCOM National Network POP at aql DC5, Canon House, Apex Way, Leeds. LS11 5LN
- > Sheffield KCOM National Network POP at Ask4 Data Centres, Brompton Road, Sheffield. S9 2PA

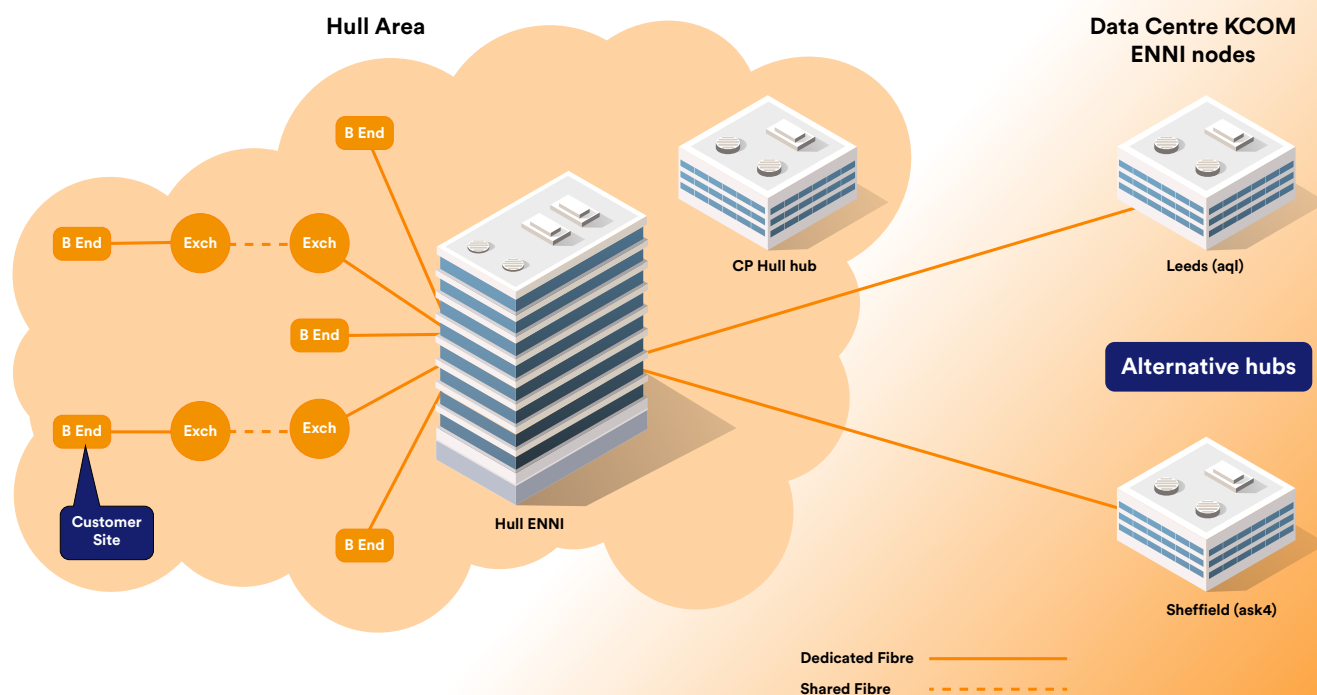
An ENNI hub can be delivered as either 1Gbps or 10Gbps. Spoke circuits can be delivered from here to any KCOM network connected site, both in the Hull Area and KCOM's growing network in East Yorkshire and Lincolnshire.

There are two service options :

- > Standard Service - Contention permitted up to 400% of hub bandwidth
- > Premium Service - Uncontended

In Hull Network Termination Equipment (NTE) would be provided at your premises or, if delivered utilising Ancillary Services, the NTE would be placed within your Co-Lo Rack.

For KCOM National POPs (Leeds or Sheffield) the NTE would be the Adva National Network equipment in the KCOM racks. You will need to procure a Data Centre (DC) provided internal cable connect within the DC from your equipment to the KCOM rack. This is required as the service demarcation is at the ADVA port on the KCOM equipment .



Key Features

High efficiency aggregation of multiple circuits	
Suitable for data applications requiring guaranteed speeds and assured uptime	
Flexibility	Ubiquitous coverage of Hull area and material coverage in surrounding areas
Hub	Location in Hull, Leeds or Sheffield Bandwidth options at 1Gbps and 10Gbps
Spokes	Range of spoke access bandwidths 10Mb/s – 10Gb/s
Contention options	Standard – customer-controlled contention rates of up to 400% of hub bandwidth Premium - uncontended data transmission to your point of interconnect
Support	KCOM Field Engineering teams for Installation and Repair – local dedicated teams to ensure on time delivery and performance
Connection:	Connection from your racks to KCOM racks via patch cables in Leeds and Sheffield Managed Customer Premise Equipment installed in Hull either <ul style="list-style-type: none"> > at your nominated premises; or > in your rack within Ancillary Services provisioned KCOM exchange

Equipment provided	Adva network termination equipment (robust carrier grade)
KCOM Technical Support Team	Second line support on 0800 7022000
Installation Lead Times	1Gb/s and below 42 Working Days 10Gb/s and above 75 Working Days
Support	24 x 7 x 365 CP Technical Support Desk
Repair Time	5 Clock Hour SLA 24 x 7 x 365
Service Level Guarantees	Documented compensation scheme for breach
Availability	Hubs in Hull, Leeds or Sheffield with on net spokes serving sites in Hull, East Yorkshire and North Lincolnshire
Resilience	Available on request
Minimum Contract Term	12 Months
Contractual documentation ENNI	Reseller Agreement for Non Reference Offer Ethernet Based Services

Other Features

Real time access to
fault tracking via
portal

Dedicated account
management
and completely
unscripted UK
based technical
support answered
within the Hull area

Own staff deployed
for all service
contact

90% of all calls
answered within
30 seconds and
average wait times
for all calls less than
60 seconds

Interface Equipment

KCOM expect to utilise the equipment in the table below but reserve the right to deploy equipment of its choosing.

Speed	OLA	KCOM National POP (Leeds or Sheffield)	Other National POP
1Gbps	NTE Adva GE104	Cable from Adva120Pro to you	3rd Party CP NTE*
10Gbps	NTE Adva GE116	Cable from Adva3K3U to you	3rd Party CP NTE*
100Gbps	NTE Adva XG404	Cable from Adva3K3U to you	3rd Party CP NTE*

* 3rd Party may not use an NTE but may present a cable from their rack to your rack

Transmission Details

Carrier grade solution	ADVA FSP 150 technology is designed for intelligent service demarcation at the edge of the network. Comprehensive assurance functions and precise timing capabilities ensure high levels of stability.
Universal use	Robust security - ADVA's ConnectGuard™ Ethernet provides a secure solution to protect data over untrusted networks. ADVA provides regular security updates to network elements. It operates a system where security vulnerabilities are investigated promptly with an impact analysis, risk assessment and recommended procedure to address the vulnerability. Its equipment can provide network layer encryption as a service enhancement.
ADVA ConnectGuard™ security	Robust security - ADVA's ConnectGuard™ Ethernet provides a secure solution to protect data over untrusted networks. ADVA provides regular security updates to network elements. It operates a system where security vulnerabilities are investigated promptly with an impact analysis, risk assessment and recommended procedure to address the vulnerability. Its equipment can provide network layer encryption as a service enhancement.
Service Level Monitoring	ADVA FSP 150 technology is designed for intelligent service demarcation at the edge of the network. Comprehensive assurance functions and precise timing capabilities ensure high levels of stability.
Temperature environmentally hardened	The latest generation of ADVA FSP 150-XG400 Series equipment is designed to provide high-bandwidth capacity services with environmental hardening for streetside locations. FSP 150 devices offer fanless operations, extended temperature range and low power consumption.
Ensemble management and control	KCOM service offerings leverage ADVA's FSP 3000 open optical networking technology portfolio. Deployed in KCOM's core network, this ensures service resilience over greater distances throughout East Yorkshire and surrounding areas. The core network is composed of multi-degree ROADM equipment, providing easy scale for up to 400Gbit/s coherent wavelengths, all managed by ADVA's Ensemble Controller network management solution with point-and-click provisioning of services

Diversity

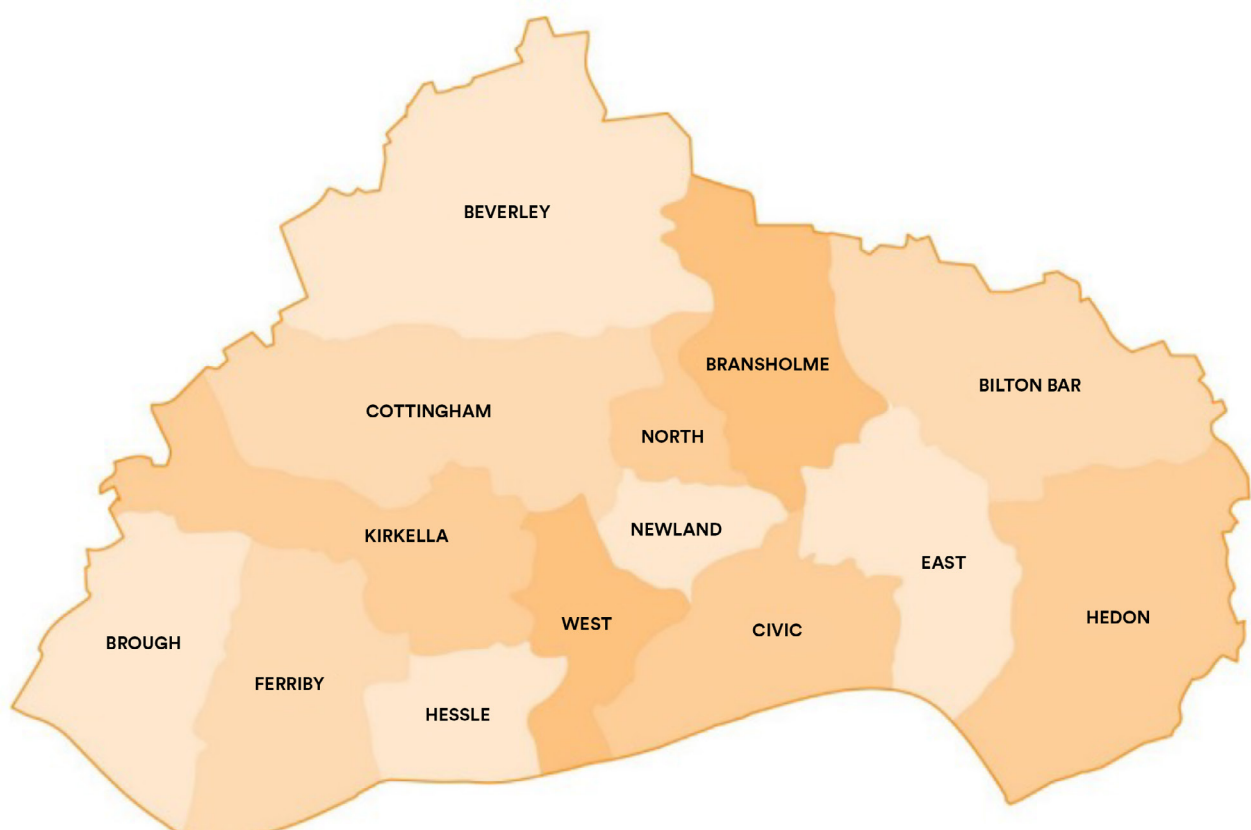
Diverse routing is available on a bespoke basis from different fibres to fully diverse site entries and diverse exchange routing. Please enquire further with your KCOM account representative.

Area Definitions

Hull Area

The Hull Area is defined as the 'Licensed Area' in the licence granted on November 1987. Map 1 illustrates the exchanges within the licensed area.

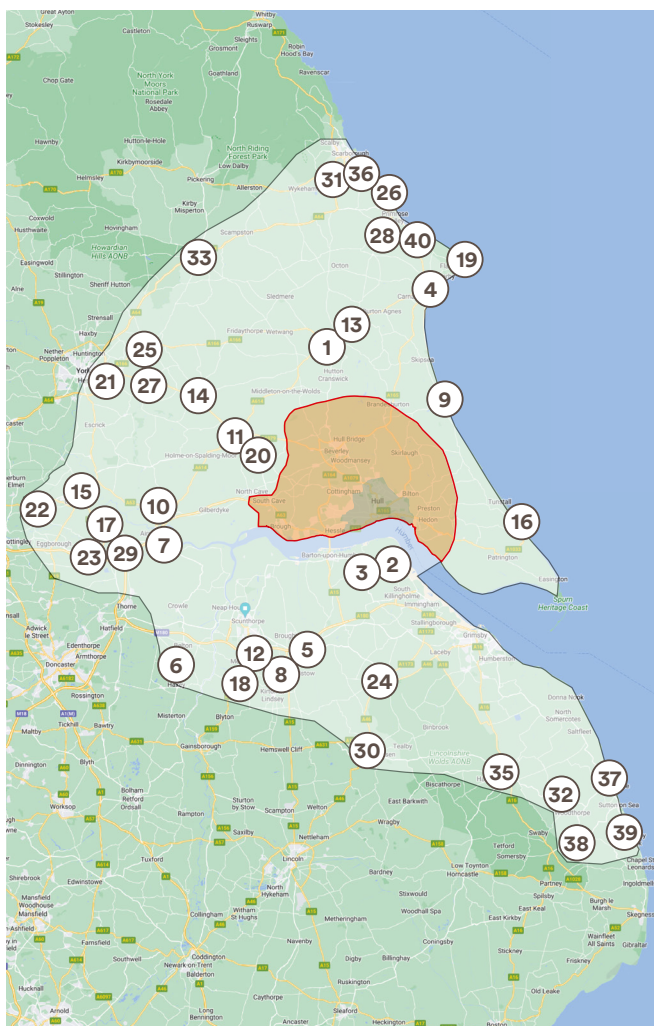
Map1



Expansion Area

The Expansion Area constitutes those areas where KCOM has built its network outside the area defined as the 'Hull Area' above. This network is expanding and currently operates in the East Riding of Yorkshire and North East Lincolnshire as illustrated in Map 2

Map2



Phase 1			
Order	Area	Released Property Count	Status
1	Driffield	6519	Complete
2	Barrow/Goxhill	922	Completed
3	Barton	3710	Completed
4	Bridlington	16589	Completed
5	Brigg/Broughton	5481	Completed
6	Epworth / Haxey / Crowle	4001	Completed
7	Goole	8863	Completed
8	Hibaldstow / Kirton in Linsey/Scawby	2452	Completed
9	Hornsea	4346	Completed
10	Howden	2048	Completed
11	Market Weighton	3272	Completed
12	Messingham	1591	Completed
13	Nafferton	1066	Completed
14	Pocklington	4260	Completed
15	Selby	8708	Completed
16	Withernsea	2990	Completed
Total		76818	

Phase 2			
Order	Area	Planned premise volumes	ETC
17	Brayton	1709	17-Jul-23
18	Scotter	1339	23-Aug-23
19	Flamborough	1395	29-Aug-23
20	Thorpe Willerby	1818	17-Oct-23
21	Dunnington	1450	17-Oct-23
22	Hambleton	647	15-Nov-23
23	Snaith & Cowick	1696	11-Dec-23
24	Caistor	1444	12-Jan-24
25	Stamford Bridge	1921	22-Jan-24
26	Filey	5763	26-Jan-24
27	Wilberforss	599	22-Feb-24
28	Hunmanby	1674	23-Apr-24
29	Camblesforth	258	17-May-24
30	Market Rasen	3229	6-Jun-24
31	East Ayton	1379	18-Jun-24
32	Withern	214	20-Jun-24
33	Malton & Norton on Derwent	9756	14-Aug-24
34	Seamer & Irton	1389	21-Aug-24
35	Louth	4500	10-Sep-24
36	Crossgates	688	24-Oct-24
37	Mablethorpe & Sutton	7064	13-Dec-24
38	Alford	2037	22-Jan-25
39	Eastfield	3410	19-Mar-25
40	Cayton	1183	26-Mar-25
Total		56,562	

For further information please contact our sales team at wholesalesales@kcom.com