SPITFIRE ETHERNET CIRCUIT INFORMATION

SPITFIRE®

NTE: Network Termination Equipment   Etherway: the maximum potential bandwidth of the physical fibre/copper bearer

CPE: Customer Premises Equipment   Etherflow: the actual purchased bandwidth (over a given Etherway)

Copper Ethernet (BT Wholesale)

NTE Type:	Hatteras/Overture HN408CP [https://www.google.co.uk/images?q=hn408cp].
NTE Interface:	RJ45.
CPE:	The CPE normally needs to be capable of VLAN tagging. Spitfire commonly* supplies a Cisco C1111-4P***/C1111-8P/C1117.
How to Connect:	RJ45 port on the NTE, via cross-over cable, to RJ45 port 0/0/0 on CPE.

Fibre Ethernet (BT Wholesale, TalkTalk Business or Openreach)

Etherway:	<1 Gb/s	1 Gb/s - Default Fibre Presentation	1 Gb/s - Optional RJ45 Presentation	10 Gb/s
NTE Type:	ADVA FSP150CP [https://www.google.co.uk/images?q=fsp150cp].			
NTE Interface:	RJ45.	SFP Module (Multi-mode; MMF) with an LC Interface [https://www.google.co.uk/images?q=fibre+lc+connector].	RJ45. *Subject to availability. Must have been requested at point of sale.*	SFP Module (Single-mode; SMF) with an SC Interface [https://www.google.co.uk/images?q=fibre+sc+connector].
CPE:	≤200 Mb/s Etherflow: Spitfire commonly* supplies a Cisco C1111-4P***/C1111-8P/C1117 or a Juniper SRX320/SRX340** >200 Mb/s Etherflow: Spitfire commonly* supplies a Juniper SRX320/SRX340**			A 10 Gb/s Etherway requires 10 Gb termination. At the time of writing Spitfire does not commonly* supply these routers.
How to Connect:	Cisco C1111-4P***/C1111-8P/C1117: RJ45 port on the NTE, via cross-over cable, to RJ45 port 0/0/0 on CPE Juniper SRX320/SRX340**: RJ45 port on the NTE via cross-over cable, to RJ45 port 7 on CPE.	Cisco C1111-4P***/C1111-8P/C1117: LC interface on the NTE, via LC-LC fibre optic patch lead, to LC interface (usually port G0/0/0) on CPE. Juniper SRX320/SRX340**: LC interface on the NTE, via LC-LC fibre optic patch lead, to LC interface (usually port 15) on CPE.	Cisco C1111-4P***/C1111-8P/C1117: RJ45 port on the NTE via cross-over cable, to RJ45 port 0/0/0 on CPE. Juniper SRX320/SRX340**: RJ45 port on the NTE via cross-over cable, to RJ45 port 7 on CPE.	

Fibre Ethernet (Virgin Media Business)

Type:	Default RJ45 Presentation	Optional Fibre Presentation
NTE Type:	The NTE varies (but is commonly an Alcatel-Lucent OmniSwitch).	
NTE Interface:	RJ45.	MMF. If the NTE has multiple ports, the one to use is typically FE1/1 or GE1/9. Spitfire Provisioning will normally confirm the port number to use.
CPE:	≤200 Mb/s Circuits: Spitfire commonly* supplies a Cisco C1111-4P***/C1111-8P/C1117 or a Juniper SRX320/SRX340** >200 Mb/s Circuits: Spitfire commonly* supplies a Juniper SRX320/SRX340**	
How to Connect:	Cisco C1111-4P***/C1111-8P/C1117: RJ45 port (commonly FE1/1 or GE1/9) on the NTE, via cross-over cable, to RJ45 port 0/0/0 on CPE Juniper SRX320/SRX340**: RJ45 port (commonly FE1/1 or GE1/9) on the NTE via cross-over cable, to RJ45 port 7 on CPE.	Cisco C1111-4P***/C1111-8P/C1117: LC interface on the NTE, via LC-LC fibre optic patch lead, to LC interface (usually port G0/0/0) on CPE. Juniper SRX320/SRX340**: LC interface on the NTE, via LC-LC fibre optic patch lead, to LC interface (usually port 15) on CPE.

Fibre Ethernet (COLT)

NTE Type:	The NTE varies (but is commonly an Accedian MetroNODE LT-S).
NTE Interface:	RJ45. If the NTE has multiple ports, the one to use is typically FE1/1 or GE1/9 but Spitfire Provisioning will normally confirm the port number to use.
CPE:	Varies.
How to Connect:	RJ45 port on the CPE, via cross-over cable, to RJ45 port on the NTE (commonly FE1/1 or GE1/9).

FTTC Ethernet (BT Wholesale)

NTE Type:	The FTTC Ethernet service uses VDSL2 and terminates on an Openreach NTE5.
NTE Interface:	Openreach NTE5.
CPE:	The customer CPE router must include an integrated VDSL2 modem - for Cisco routers, a VDSL2 WAN Interface Card (WIC). Spitfire may also supplies a DrayTek router which includes a VDSL2 modem.
How to Connect:	POTS lead from router (either DSL port or DSL WIC) to Openreach NTE5. Please also follow the DSL Information Sheet at https://www.spitfire.co.uk/about/knowledge-base/ especially to avoid double filtering!

FTTC Ethernet (TalkTalk Business)

NTE Type:	The FTTC Ethernet service uses VDSL2 and terminates on an Openreach NTE5. TalkTalk Business typically provide a Comtrend VR3030 modem [https://www.google.co.uk/images?q=Comtrend+VR3030] as the NTE.
NTE Interface:	RJ45 port on the TalkTalk Business VDSL2 modem.
CPE:	Spitfire may supply a DrayTek router.
How to Connect:	RJ45 port on the TalkTalk Business NTE, via cross-over cable, to the WAN port on the CPE router.
Notes:	A steady DSL light on the TalkTalk Business NTE indicates sync. The Internet light will remain extinguished (this is correct behavior).

A note on the use of Media Converters

Spitfire recommends against the use of Media Converters such as those used to convert between fibre and copper. It is instead recommended that a customer's router be directly connected to the supplier NTE via a single cable. Any advice or guidance from Spitfire in relation to Media Converters would be limited and provided on a non-guaranteed basis. Spitfire-supplied routers have the interface and cable to match the interface on the NTE without the need for a Media Converter.

Additional Information

The above information was correct at the time of publishing.
This document is intended as a support reference guide and not for sales purposes.
*N.B. supplied hardware is likely to change over time.
**Juniper SRX340 is usually recommended over a SRX320 for use with Ethernet circuits of 500 Mb/s or greater (for BT Wholesale, TalkTalk Business or Openreach that refers to the Etherflow).
***Cisco C1111-8P is usually recommended over a C1111-4P for use with Ethernet circuits of 500 Mb/s or greater (for BT Wholesale, TalkTalk Business or Openreach that refers to the Etherflow).
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For assistance please contact Spitfire Support
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