Product Guide

BUFFALO™

Storage Wireless Multimedia

Product Overview

NAS Solutions

Buffalo™ provides storage solutions for both the home and business environments. Buffalo™ LinkStation™ and TeraStation™ Network Attached Storage (NAS) products provide a central and secure location to store, access and share files. The external solutions are designed with features, performance and reliability in mind.

Surveillance Solutions

Buffalo™ Network Video Recorder series offer easy to use, turnkey NVR appliances that offer high compatibility with Axis cameras and comes pre-installed with AXIS Camera Companion to provide seamless, drop-in installation for SMB surveillance environments. Setup is simple, requiring no complicated installation or network configurations.

Storage Solutions

Buffalo™ storage solutions will allow you to store all your data in one place. Plug them in and immediately have easy and fast access to additional storage, for example on a DriveStation™. If you want to take your data with you, you can use a MiniStation™ with Encryption to protect your data even in case of loss.

Wireless Solutions

Buffalo™ range of Wireless products offer simple and secure networking solutions for the home and business. With a variety of routers, access points and adapters to suit all needs and requirements.

BUFFALO™
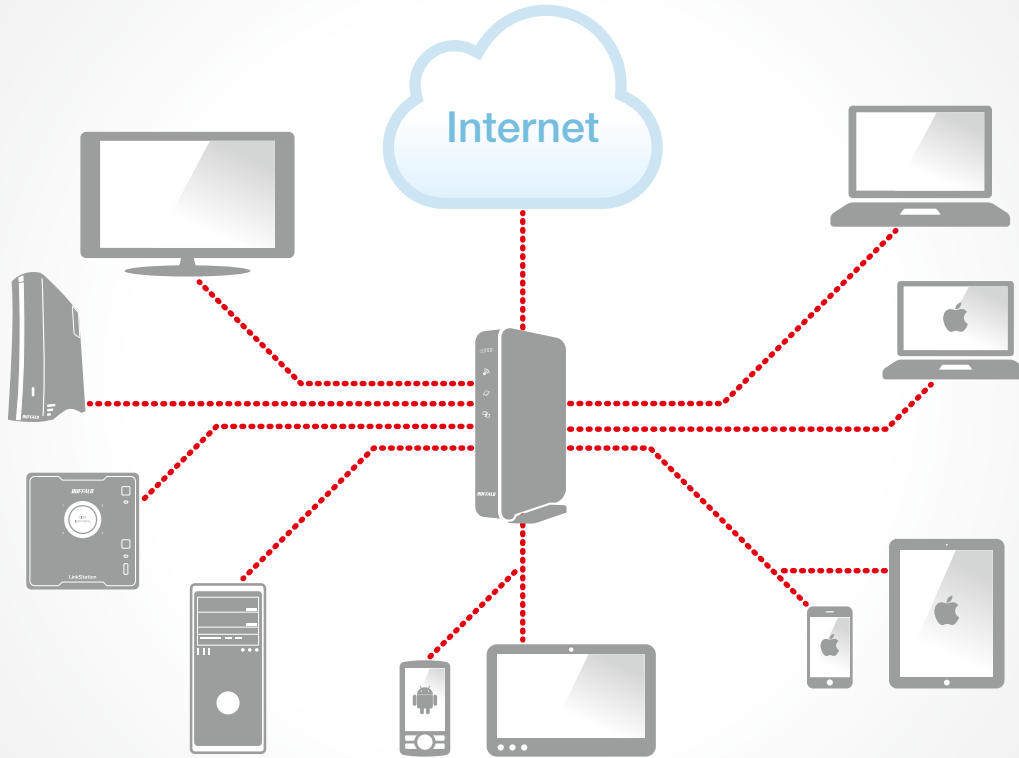
Buffalo™ at Home

A home network connects multiple devices such as computers, game consoles and multimedia solutions to communicate and share information such as an Internet connection, multimedia files, documents and a printer.

The different network types use different hardware, but they all have the same essential components:

- Router
- Network Attached Storage (NAS)
- Computers
- Smartphones and Tablets
- Televisions
- Game consoles and Media players

Buffalo™ provides a wide range of products for home computer networks including devices for file sharing, storing and streaming of music and videos, and accessing the Internet - from anywhere in your home - by connecting with Buffalo™ Wireless products.

Internet

Laptop
Business Trip

Laptop
Home Office

Wireless Router

Laptop Office

TeraStation™

Desktop-PC
with WLan
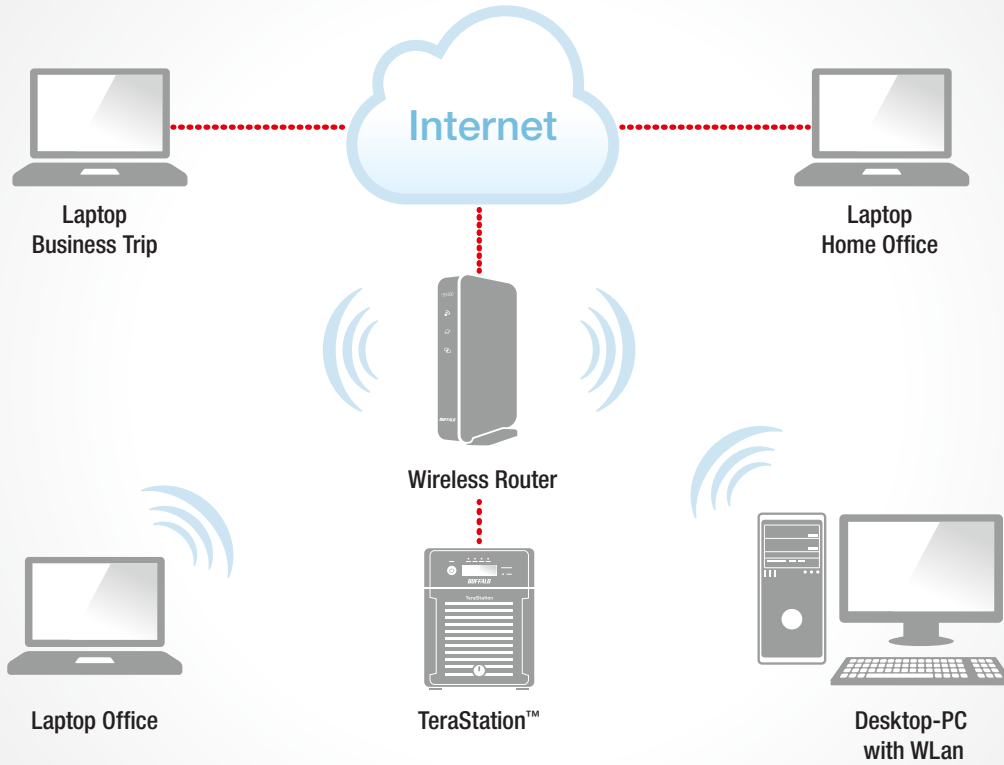
Buffalo™ in the Office

A local area network (LAN) connects computers, allowing them to share and exchange a variety of information. Here are some ways a network can help a small business:

File sharing
A network makes it easy to access the same file and prevents people from accidentally creating different versions.

Printer sharing
With a network, several computers can share the same printer.

Communication and collaboration
A network allows employees to share files, view other people's work and exchange ideas more efficiently.

Remote access
With remote access users are able to access the same files, data and messages even when they're not in the office.

Data protection
It's vital to back-up computer data regularly and to store online information in a fail-safe system, a networked or RAID device makes this possible.

Buffalo™ has a range of products perfect for the office environment and offer all the benefits and features an enterprise size company would expect, ensuring small and medium sized businesses stay connected, safe and secure.

What is Storage and why do we need it?

Storage systems are defined by technology, connectivity and capacity. These are the key elements that need to be considered before choosing the right storage solution.

Direct Attached Storage (DAS) – Simple and fast
Direct Attached Storage (DAS) or External Storage is connected directly to your computer. There are five main connectivity technologies available on the market today.

- **USB 3.0** interface with transmission speeds of up to 5 Gbit/s – which is 10 times faster than USB 2.0 (480 Mbit/s).
- **Thunderbolt:** fast external interface with similar features as FireWire for connecting external drives with 10 Gbit/s and monitors.

Network Attached Storage (NAS)
Network Attached Storage (NAS) is the term used to describe a complete storage system which is attached to a business or home network. Within the NAS several hard disk drives can be joined together to give greater capacity and in the event of drive failure, added piece of mind that the data stored is safe and secure. NAS is the better choice if you want to share data with several computers, whether you're at home or you need additional storage for your business. You can simply connect a Network Attached Storage (NAS) device to your network and access it from anywhere, even via the Internet.

Network Attached Storage (NAS)

What is RAID?

RAID combines standard drives into an array which performs better than a single disk, and at the same time, your computer sees it as a stand-alone drive.This technology can be used in different ways to achieve different results called RAID Levels/Modes.

Why would you need RAID?

RAID enables users to choose customised capacity and redundancy according to their specific needs:

- Maximised Speed and Capacity
- Increased Capacity with Simple Redundancy
- Maximum Redundancy
- For the perfect speed and security combination!

RAID Levels/Modes

JBOD: The controller treats each drive as a stand-alone disk, therefore each drive is an independent logical drive with its own drive letter. JBOD does not provide data redundancy. It is not a RAID in the sense of the meaning. Nevertheless it is among the RAID levels because the RAID controller manages it.

RAID 0: Or striping mode is used to achieve higher storage capacities with maximum speed. The data is split among several disks that are written at the same time. So for example 2 drives of 1 TB capacity in RAID 0 are faster than a single 2 TB drive.

RAID 1: Or mirroring mode is used to make an exact copy of data on each disk in the array. In this mode the capacity is half the capacity of all the hard drives within the array.

RAID 5: Or parity mode distributes data across multiple disks making the system fail proof. In this configuration the total capacity of the system is (N-1)*GB where "N" is the number of disks you have in the array, so for example four disks of 1 TB capacity provides 3 TB of total usable storage. In some more advanced systems it is possible to combine different RAID modes together.

RAID 6 works similar as RAID 5. The difference is that two hard disks could fail and the RAID would still be operable. Especially if you use SATA drives with large capacity the synchronization of the data after changing one drive could take hours, even more than a day. If you have a RAID 5 you have no protection while you need to bind a new drive to the RAID.

RAID 10: Best used for speed and redundancy. It is a combination of Mode 0 and Mode 1 and gives the read/write speed of RAID 0 and the redundancy of RAID 1.

RAID 50, 51, 60 & 61: A combined RAID mode, available on 6 and 8 bay TeraStations™

FIVE OPERATING MODES FOR MAXIMUM FLEXIBILITY:
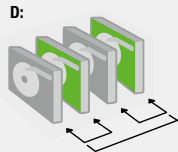
RAID 10 Mode	RAID 5 Parity Mode	RAID 1 Mirroring Mode	RAID 0 Striping Mode	Standard Mode
D:	D:	D: E:	D:	D: E: F: G:

iSCSI-Storage

What is iSCSI?
Like NAS, iSCSI storage is also connected via network cable. It utilizes a different method to transfer data (block orientated) and a different protocol – SCSI via network, therefore iSCSI. For performance reasons the network segment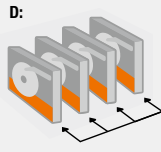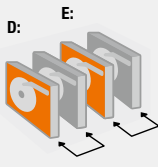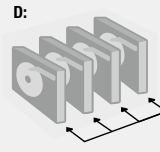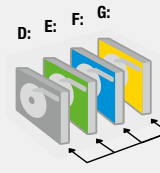 for storage is often separated from the other network and called SAN (Storage Area Network). iSCSI storage is connected via iSCSI initiator software and behaves like an internal hard drive. Once connected you format it and do all file operations on the host. Without the initiator you cannot use the storage even though you are connected to the same LAN.

Why iSCSI?
iSCSI allows for the seamless integration of new storage into any servers operating system, there is no need for any additional setup or configuration such as Access Control Lists (ACL) centralised user access management. iSCSI gives the ability to have a greater amount of storage capacities with no limitation to the size, therefore there is no need to stop and open the server to add more HDD – iSCSI adds additional external capacity. It is also easy to scale with existing iSCSI storage solutions, simply expand by adding more iSCSI devices (targets).

Router

iSCSI Storage Area Network (SAN)

Access Point   Switch

iSCSI-Indicator (Driver, Software) .... **iSCSI-Indicator**

Internal Hard Drive, CD/DVD-Drive .... **C:**
D: (CD/DVD-ROM)

iSCSI-Volume as a local Hard Drive .... **E:**
F:

Network

Server with iSCSI-Service
iSCSI-Memory
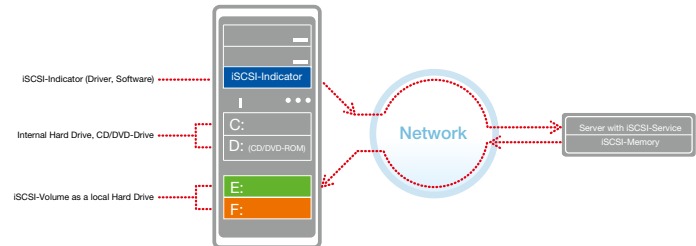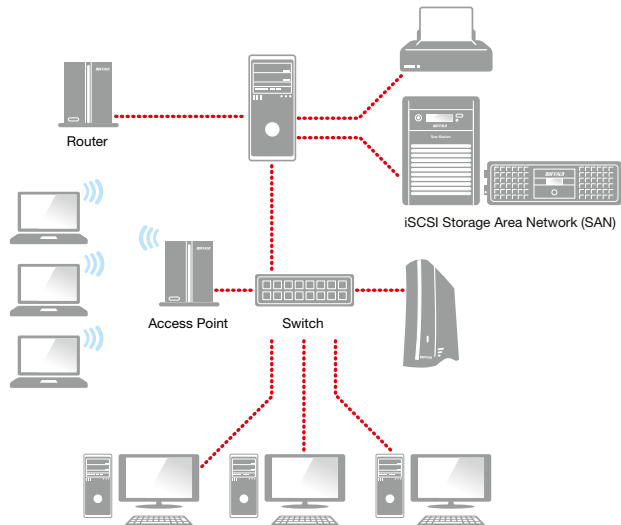
Storage Technologies

What is BitTorrent™?
BitTorrent™ is a protocol or a set of rules and descriptions of how to do things, which allow you to download files quickly by allowing people downloading the file to upload or distribute parts of it at the same time.

What is Blu-ray™?
Blu-ray™ Disc (also known as Blu-ray™ or BD) is an optical disc storage format to supersede the standard DVD format. Its main uses are for storing games, high-definition video and data storage with up to 25 GB on a single-layer disc and 50 GB on a dual-layer disc. The disc has the same physical dimensions as standard DVDs and CDs. Our latest mobile Blu-ray burner can handle the BDXL format with 128 GB on one disc.

What is DLNA?
DLNA (Digital Living Network Alliance) allows many different devices, regardless of brand, to "talk" to one another so everyone in your home can share a common pool of files. No more plugging, copying, searching and importing just to print a photo from your mobile phone. DLNA is for anyone who wishes it were easier to share multimedia files around the home. Buffalo™ NAS products include a DLNA media server. Also our routers with USB interface have a DLNA media server.

Power Management System
Buffalo™ Technology is mindful of the importance of being green by developing products that are energy efficient. For flexible power management and to reduce CO_2 emissions, each Buffalo™ product is equipped with functions to reduce power consumption. Our routers are able to work with scheduled power profiles reducing LAN/WLAN, switch off LEDs or go in sleep mode. External USB drives come with software to go in idle mode after a certain time and our NAS have a scheduled sleep mode.

What is Trend Micro™?
Antivirus software for our TeraStation™ models. The expansion pack includes a license key for the preinstalled Trend Micro™ antivirus software for NAS systems. This software protects your files on the data partitions, thus it protects the internal network, especially if BYOD is implemented.

What is IP Camera?
The Buffalo™ solution that comes with every Terastation 3000, 4000, 5000 and 7000 model manages your organisations video surveillance needs with ease. It is highly scalable regarding cameras and storage. Buffalo™ IP camera software supports around 1800 camera models from 140 manufacturers worldwide. Especially if you utilise more than one TeraStation for video surveillance the management will show its capabilities. The environment might be decentralised but the management always remains centralised.

The Buffalo™ Surveillance software suite allows to manage and scale the storage, implement policies to move videos to free storage, assign cameras, life view, Video Export, a system wide search - in fact all search commands include all devices in your storage pool and many more. It is truly a mighty solution for small installations, but as well installation in large businesses.

Storage Technologies

What is WebAccess?
Buffalo™ unique WebAccess feature allows users to instantly share and access their pictures, music or other files with friends and family via any Web browser. WebAccess is also available on all mobile devices with a web browser with the WebAccess-i app for iPhone® and iPad®, WebAccess-A for Android devices, and WebAccess Windows Phones.

What is Buffalo™ Tools Software Suite?
The Buffalo™ Tools suite of complimentary software offers enhancements such as Turbo PC EX which help to increase file transfer and copy performance compared to standard USB hard drives, whilst Buffalo™ Backup software offers easy data backup and restore solutions.

What is Novastor?
NovaBACKUP® Buffalo Edition protects the data on workstations and servers locally or online. Available on Buffalo™ LinkStation™ and TeraStation™ products, regardless of theft, user error or hardware failure NovaBACKUP® protects and restores your data.

AXIS Camera Companion
With AXIS Camera Companion, TeraStation 5200 NVR can record and playback video from any Axis network camera and users can view videos at anytime and anywhere with third party iOS and Android mobile apps. Setup is simple, requiring no complicated installation or network configurations.

What is SecureLockWare™?
Buffalo™ SecureLockWare™ is a free software security tool which offers a range of security options to encrypt your confidential data.

Secure Lock Mobile™ creates an encrypted container that offers immense advantages. Instead of encrypting the entire drive, you simply place the files and folders you want to protect in the container, where they are secure.

Secure Lock Manager Easy is included with our hardware-encrypted disk drives and is used to manage the encryption function. You can also mount the encrypted drive automatically on a trusted computer.

Thunderbolt Technology
Thunderbolt™ is a new interface developed by Intel which delivers a superior speed of 10Gb/s. This is particularly important for external storage because it delivers more throughput; and when this additional throughput is used with a Solid State Drive device, users will quickly notice and appreciate the higher speed difference Thunderbolt™ can make. Another added benefit of Thunderbolt™ is that each port can be both the host and client at the same time enabling users to 'daisy chain' up to 6 externally-powered devices.

Fully populated or as enclosures without HDDs

NAS for Business

BUFFALO™

The Buffalo™ TeraStation™ family are larger capacity Network Attached Storage products with RAID capability. If a drive fails, the Hot Swap functionality on the TeraStation™ automatically powers down the faulty drive, enabling you to safely remove and replace without losing any data, or down time. The Real Time Replication function allows the connection of a second TeraStation™ via LAN port and replicates the data to improve reliability, fault tolerance or accessibility. The perfect solution for the home office or small to medium business that needs large, easy-to-deploy, easy-to-manage, redundant network attached storage.

	TeraStation™ 1200	TeraStation™ 1400D/R	TeraStation™ 3400D/R	TeraStation™ 4200D (Enclosure)	TeraStation™ 4400D/R (Enclosure)	TeraStation™ 4800D (Enclosure)
Number of Bays	2	4	4	2	4	8
Capacities	2 TB, 4 TB, 6 TB and 8 TB	4 TB, 8 TB, 12 TB and 16 TB	4 TB, 8 TB, 12 TB and 16 TB	0 TB (HDD sold separately)	0 TB (HDD sold separately)	0T B (HDD sold separately)
CPU	Marvell ARMADA 370 ARM 1.2 GHz (Dual Issue)	Marvell ARMADA 370 ARM 1.2 GHz (Dual Issue)	Marvell Armada XP MV78230 1.33 GHz dual core	Intel® Atom™ D2550 1.86 GHz dual core	Intel® Atom™ D2550 1.86 GHz dual core (Desktop), Intel® Atom™ D2700 2.13 GHz dual core (Rack)	Intel® Atom™ D2700 2.13 GHz dual core
RAM	512 MB DDR3	512 MB DDR3	1 GB DDR3	2 GB DDR3	2 GB DDR3	2 GB DDR3
LAN Ports	1	1	2	2	2	2
USB Ports	1 x USB 2.0	1 x USB 2.0 / 2 x USB 3.0	2 x USB 2.0 / 2 x USB 3.0 (Desktop), 3 x USB 2.0 / 2 x USB 3.0 (Rack)	2 x USB 2.0 / 2 x USB 3.0	2 x USB 2.0, 2 x USB 3.0 (Desktop), 2 x USB 2.0, 3 x USB 3.0 (Rack)	2 x USB 2.0, 3 x USB 3.0
Supported RAID Levels	0, 1 and JBOD	0, 1, 5, 6, 10 and JBOD	0, 1, 5, 6, 10 and JBOD	0, 1, and JBOD (depending on number of drives installed)	0, 1, 5, 6, 10 and JBOD (depending on number of drives installed)	0, 1, 5, 6, 10, 50, 51, 60, 61 and JBOD (depending on number of drives installed)
Active Directory	✓	✓	✓	✓	✓	✓
Drive Interface	SATA II or III (3 Gb/s)	SATA II or III (3 Gb/s)	SATA II	SATA II	SATA II	SATA II
Hot Swap	✓	✓	✓	✓	✓	✓
Replication	✓	✓	✓	✓	✓	✓
WebAccess	✓	✓	✓	✓	✓	✓
DLNA™ Media Server	✓	✓	✓	✓	✓	✓
NovaBACKUP® Buffalo Edition Licenses	1 x Server 10 x Users	1 x Server 10 x Users	1 x Server 10 x Users	1 x Server 10 x Users	1 x Server 10 x Users	1 x Server 10 x Users
iSCSI Target	x	x	✓	✓	✓	✓
IP Camera Support	x	x	✓	✓	✓	✓
IP Camera Licences*	x	x	✓	✓	✓	✓
Apple Time Machine®	✓	✓	✓	✓	✓	✓
Power Management System	✓	✓	✓	✓	✓	✓
Chassis	Desktop	Desktop / Rackmount	Desktop / Rackmount 1U	Desktop	Desktop / Rackmount 1U	Desktop
Operating System Support	Windows 8/8.1, RT 8.1, Windows 7, Windows Vista™, Windows Server 2012, Windows Server 2008/R2, Mac OS X 10.7 and later					
Warranty Support	3 years					
Product Code	TS1200D-EU	TS1400D-EU TS1400R-EU	TS3400D-EU TS3400R-EU	TS4200D-EU	TS4400D-EU TS4400R-EU	TS4800D-EU

*One free license, more can be added
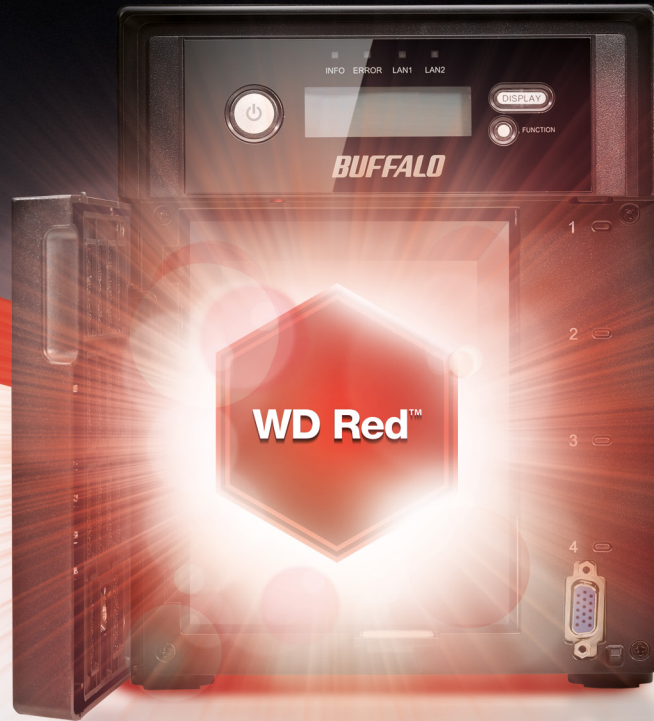
TeraStation™ 5000DWR/RWR

BUFFALO™

Massive Storage Capacity for Small and Medium Businesses

The TeraStation™ 5000 family comes fully populated with high-reliability WD Red™ drives and equipped with the Intel® Atom™ dual core Processor D2550/D2700, providing faster transfer of large files, faster file access from multiple computers. The performance is top of the class for small and medium businesses. Available in 2, 4, 6 or 8-bay versions, the TeraStation™ 5000

provides various functions to support your business such as IP camera recording, support for iSCSI target, a faster and easy-to-use web user interface and 2GB of fast DDR3 memory installed. High-speed data transfer with SuperSpeed USB 3.0 for those who require faster data transfer speeds. The drives also feature four or five USB ports for greater flexibility.

	TeraStation™ 5200	TeraStation™ 5400	TeraStation™ 5400RWR	TeraStation™ 5800
Number of bays	2	4	4	8
Capacities	2 TB, 4 TB, 6 TB and 8 TB	4 TB, 8 TB, 12 TB and 16 TB	8 TB, 12 TB and 16 TB	8 TB, 16 TB, 24 TB and 32 TB
CPU	Intel® Atom™ D2550 1.86 GHz dual core	Intel® Atom™ D2550 1.86 GHz dual core	Intel® Atom™ D2700 2.13 GHz dual core	Intel® Atom™ D2700 2.13 GHz dual core
RAM	2 GB DDR3	2 GB DDR3	2 GB DDR3	2 GB DDR3
LAN Ports	2	2	2	2
USB Ports	2 × USB 2.0, 2 × USB 3.0	2 × USB 2.0, 2 × USB 3.0	2 × USB 2.0, 3 × USB 3.0	2 × USB 2.0, 3 × USB 3.0
Supported RAID Levels	0, 1, JBOD	0, 1, 5, 6, 10, JBOD	0, 1, 5, 6, 10, JBOD	RAID 0, 1, 5, 6, 10, 50, 51, 60, 61, JBOD
Active Directory	✓	✓	✓	✓
Drive Interface	SATA (3 Gbit/s)	SATA (3 Gbit/s)	SATA (3 Gbit/s)	SATA (3 Gbit/s)
Hot Swap	✓	✓	✓	✓
Replication	✓	✓	✓	✓
WebAccess	✓	✓	✓	✓
DLNA™ Media Server	✓	✓	✓	✓
NovaBACKUP® Buffalo Edition Licenses	1 x Server 10 x Users	1 x Server 10 x Users	1 x Server 10 x Users	1 x Server 10 x Users
iSCSI Target	✓	✓	✓	✓
IP Camera Support	✓	✓	✓	✓
IP Camera Licences*	✓	✓	✓	✓
Apple Time Machine®	✓	✓	✓	✓
Power Management System	✓	✓	✓	✓
Chassis	Desktop	Desktop	Rackmount 1U	Desktop
Operating System Support	Windows 8-8.1 (32/64 bit), Windows® 7 (32/64 bit), Windows Vista® (32/64 bit), Windows Server® 2012, Windows Server® 2008, Windows Server® 2003, Windows® 2000 Server, Mac OS® X 10.4–10.9			
Warranty Support	3 years			
Product Code	TS5200DWR-EU	TS5400DWR-EU	TS5400RWR-EU	TS5800DWR-EU

*One free license, more can be added

TeraStation™ 7120R

Ultra high performance 12-bay raid 2U Enterprise-Class NAS

Buffalo's TeraStation™ 7120R / 7120R Enterprise offer high performance, 12-bay network and iSCSI storage packed with advanced features and functions including IP camera and video surveillance support. TeraStation™ 7120R / 7120R Enterprise are ideal for businesses looking to implement a reliable RAID-based network storage solution for large networks and business critical applications. Featuring the powerful Intel® Xeon® E3-1275 quad core processor and up to 8 GB of upgradable DDR3 RAM, both TeraStations provide exceptional performance and run many services simultaneously with minimal performance degradation – experience maximum network throughput while replication and backup tasks run in the background. The Enterprise version is already equipped with 8GB DDR3-RAM, while the standard version contains 4GB and is expandable up to another 4 GB DDR3-RAM.
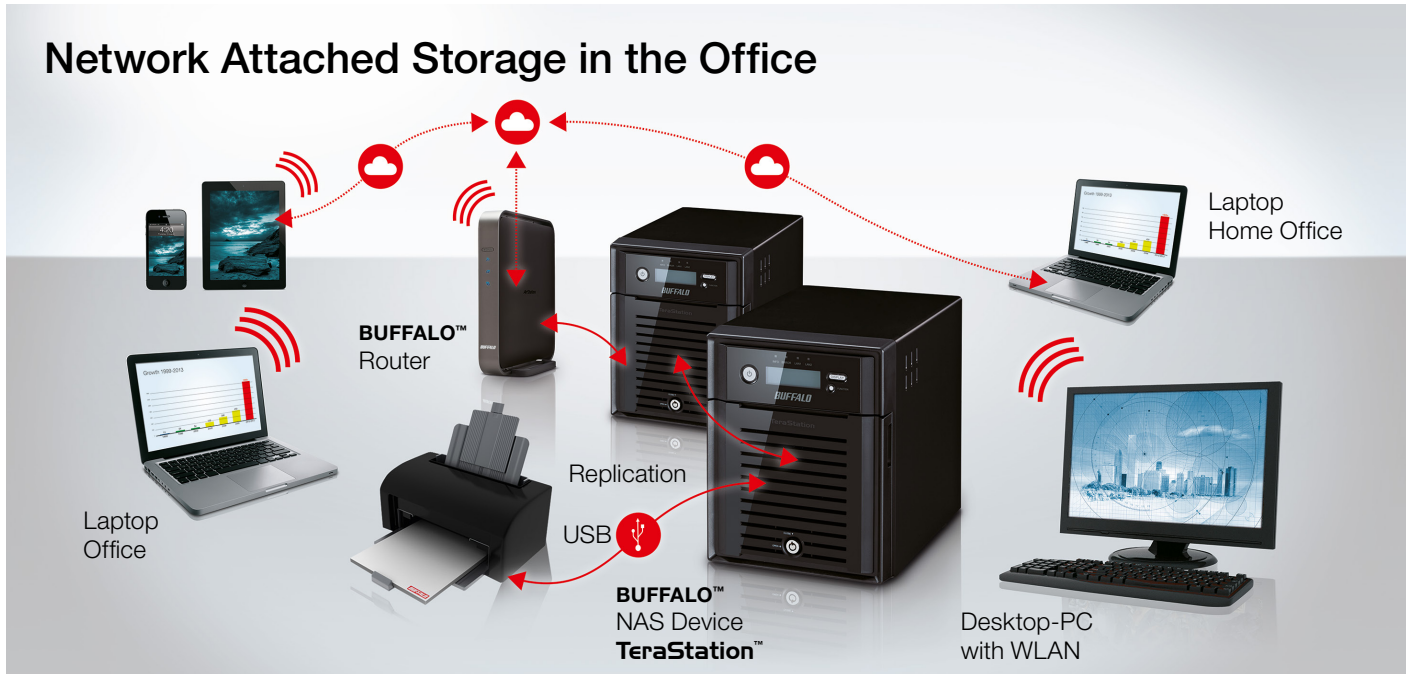
	TeraStation™ TS7120R	TeraStation™ TS7120R Enterprise
Number of Bays	12	12
Capacities	8 TB, 12 TB	24 TB, 36 TB, 48 TB
CPU	Intel® Xeon® E3-1225 3.1 GHz 4C/4T	Intel® Xeon® E3-1275 3.4 GHz 4C/8T
RAM	4GB DDR3 ECC (2x2)	8 GB DDR3 ECC (2x4)
LAN Ports	4	4
USB Ports	6 x USB 2.0 (front x 2)	6 x USB 2.0 (front x 2)
Supported RAID Levels	0, 1, 5, 6, 10, 51, 61 & JBOD	0, 1, 5, 6, 10, 51, 61 & JBOD
Active Directory	✓	✓
Drive Interface	SATA III 6 GB/s	SATA III 6 GB/s
Hot Swap	✓	✓
Replication	✓	✓
WebAccess	✓	✓
DLNA™ Media Server	✓	✓
NovaBACKUP® Buffalo Edition Licenses	1 x Server 10 x Users	1 x Server 10 x Users
iSCSI Target	✓	✓
IP Camera Support	✓	✓
IP Camera Licences*	✓	✓
Apple Time Machine®	✓	✓
Power Management System	✓	✓
Chassis	Rackmount 2U	Rackmount 2U
Operating System Support	Windows 8/8.1, RT 8.1, Windows 7, Windows Vista™, Windows Server 2012, Windows Server 2008/R2, Mac OS X 10.7 and later	
Warranty Support	3 years	
Product Code	TS-2RZS	TS-2RZH

*One free license, more can be added

TeraStation™ – Optional Software Licences

	Optional Accessories	Product Code
AntiVirus Licences	Trend Micro NAS Security Pack 1 year for TeraStation™ Trend Micro NAS Security Pack 3 years for TeraStation™ Trend Micro NAS Security Pack 5 years for TeraStation™	OP-TSVC-1Y OP-TSVC-3Y OP-TSVC-5Y
Video Surveillance Camera Licences	Camera LicencePack 1 pc. Camera LicencePack 3 pcs. Camera LicencePack 5 pcs. Data Service LicencePack	OP-LP-CAM1 OP-LP-CAM3 OP-LP-CAM5 OP-LP-CAMDS

Network Attached Storage in the Office

Laptop
Home Office

BUFFALO™
Router

Laptop
Office

Replication

USB

BUFFALO™
NAS Device
TeraStation™

Desktop-PC
with WLAN

TeraStation™
Windows Storage Server

WD Red™

Windows Storage Server 2012

The Buffalo™ Windows Storage Server 2012 R2 has been specially designed to provide an entry Network Attached Storage (NAS) solution for small office/Medium office environments that fully integrates within a Windows environment. Create effective NAS solutions that can adapt to and solve the simplest or most complex storage needs, with the ease and familiar intuitive administration that Windows brings.

The Buffalo™ Windows Storage Server 2012 Workgroup Edition or Standard Edition (Rackmount & 6-bay version) provides a fast and reliable platform, built on the proven Windows Server™ 2012 family code base with all of its superior security, stability and management advantages. With new search capabilities, simplified set-up and storage management, and is specially tuned by Buffalo™ to provide optimal NAS performance.

Windows File Sharing and Network File System (NFS)
High-performance SMB/CIFS for Windows and NFS inter-operability.

Predictable and Easy to Adopt
As the Buffalo™ Windows Storage Server 2012 R2 shares the same code base as the Windows Server™ 2012 family code, there is no need for separate application compatibility testing. Also, antivirus and back-up applications that work with Windows Server 2012 operating systems will work with Windows Storage Server 2012 R2.

Search Enhancements
Indexing Service extracts the information from a set of documents and organises it in a way that makes it quick and easy to access that information through the Search function for computers running Windows. This information can include text from within a document (its contents), and the characteristics and parameters of the document (its properties), such as the author's name.

MMC Administration Model
Common, intuitive user experience across Windows-based products.

TeraStation™ Windows Storage Server

The new TeraStation™ WS5000R2 series with Windows Storage Server 2012 R2 combines high-performance network attached storage with the power and convenience of Windows operating system.

	TeraStation™ WS5400DRW2	TeraStation™ WS5400DRW2	TeraStation™ WS5400RRS2	TeraStation™ WS5600DSR2
Number of Bays	2	4	4	6
Capacities	4 TB and 8 TB	4 TB, 8 TB and 12 TB	8 TB and 16 TB	12 TB and 24 TB
CPU	Intel® Atom™ D2550 1.86 GHz dual core	Intel® Atom™ D2550 1.86 GHz dual core	Intel® Atom™ D2700 2.13 GHz dual core	Intel® Atom™ D2700 2.13 GHz dual core
RAM	4 GB DDR3	4 GB DDR3	4 GB DDR3	4 GB DDR3
Internal Operating System	Microsoft Storage Server 2012 Workgroup Edition R2 (up to 50 users)		Microsoft Storage Server 2012 Standard Edition R2 (unlimited users)	
USB Ports	2 x USB 3.0 / 2 x USB 2.0	2 x USB 3.0 / 2 x USB 2.0	3 x USB 3.0 / 2 x USB 2.0	3 × USB 3.0 / 2 × USB 2.0
LAN Ports	2	2	2	2
Supported RAID Levels	0/1, Spanning, JBOD	0/1/5, Spanning, JBOD	0/1/5, Spanning, JBOD	0/1/5, Spanning, JBOD
AD-Integration	LDAP, Kerberos			
Drive Interface	SATA (3 Gbit/s)	SATA (3 Gbit/s)	SATA (3 Gbit/s)	SATA (3 Gbit/s)
Hot Swap	✓	✓	✓	✓
NovaBACKUP® Buffalo Edition Licenses	1 x Server, 10 x Users	1 x Server, 10 x Users	1 x Server, 10 x Users	10
iSCSI Target	✓	✓	✓	✓
IP Camera Support	✓	✓	✓	✓
IP Camera Licences*	✓	✓	✓	✓
Chassis	Desktop	Desktop	Rackmount 1U	Desktop
Operating System Support	Windows 8/8.1, RT 8.1, Windows 7, Windows Vista™, Windows Server 2012, Windows Server 2008/R2, Mac OS X 10.7 and later			
Warranty Support	3 years			
Product Code	WS5200DRW2EU	WS5400DRW2EU	WS5400RRS2EU	WS5600DSR2EU

*One free license, more can be added

IP Surveillance Storage

Buffalo Technology, together with Axis Communications, now offer a complete end-to-end surveillance solution: Buffalo's TeraStation 5200 Network Video Recorder and LinkStation 420 NVR are Axis-qualified and come pre-installed with award-winning AXIS Camera Companion interface.

The TS5200DS and LS420DS deliver Buffalo's high-performance hardware and architecture fully populated with high-quality WD Red hard drives. Combined with AXIS Camera Companion users get plug-and-play, seamless, drop-in installation for Network Video Recording in 20 minutes – or less!

The full solution can be completed by adding up to 16 Axis cameras to the TeraStation or up to 8 cameras to the LinkStation: Thus giving small companies and SMBs a complete rock-solid, Axis-qualified solution, as well as warranty and Buffalo's expert technical support all from one hand.

- Easiest and quickest surveillance installation on the market
- Fully populated in the factory
- High performance, industry grade WD Red HDDs for 24/7 recording
- Seamless integration of award-winning AXIS Camera Companion software
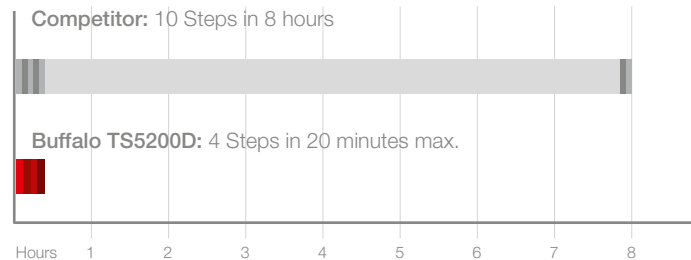- Service out of one hand: Technical support from Buffalo

Surveillance Storage for Axis network cameras

Setup process versus similar storage devices:

Competitor's Enclosure NAS with AXIS Camera Companion and 3 cameras* versus Buffalo TeraStation™ 5200 NVR and LinkStation™ 420 NVR

	NVR enclosures from various vendors	Buffalo TS5200 NVR / LS420 NVR
Unpack the unit, connect to power and network	0:05	0:05
Install 2 HDD's (screw on frame, insert)	0:10	0:00
Install OS (for comparable units)	0:15	0:00
Boot	0:05	0:02
Create RAID1	0:06	0:00
RAID check	7:00	0:00
Create shared folder	0:02	0:00
Install AXIS camera companion, create AXIS account	0:05	0:05
Setup first 3 cameras to record on NAS	0:10	0:05
Configure NAS for 3 cameras	0:20	0:00
Total	**8:18**	**0:17**

Competitor: 10 Steps in 8 hours

Buffalo TS5200D: 4 Steps in 20 minutes max.

Hours 1   2   3   4   5   6   7   8

* Competitor set up times may vary depending on hardware type and network conditions

	LinkStation™ 420 NVR	TeraStation™ 5200 NVR
Number of Bays	2	2
Capacities	2 TB, 4 TB	2 TB, 4 TB, 8 TB
CPU	Marvell Armada 370 dual issue	Intel® Atom™ D2550 dual core
RAM	512 MB DDR3	2 GB DDR3
Internal Operating System	Linux	Linux
Supported Axis Network Cameras	up to 8	up to 16
USB Ports	1	2x USB 2.0, 2x USB 3.0
LAN Ports	1	2
Supported RAID Levels	RAID 0, 1, and JBOD (units shipped in RAID 1)	
AD-Integration	LDAP	LDAP
Drive Interface	SATA 2 or 3, 3 Gb/s	SATA 2 or 3, 3 Gb/s
Average Power Consumtion	25 Watts	47 Watts
Hot Swap	x	✓
iSCSI Target	x	✓
IP Camera Support	✓	✓
IP Camera Licences	included	included
Chassis	Desktop	Desktop
Operating System Support	Windows 8/8.1 (32/64 bit), Windows® 7 (32-bit/64-bit), Windows Vista® (32-bit/64-bit), Windows® XP, Windows Server® 2012/2012 R2, Windows Server® 2008/2008 R2, Windows Server® 2003, Windows® 2000 Server, Mac OS® X 10.4-10.9	
24h VIP Support	✓	✓
Warranty Support	3 Years	
Product Code	LS420D0202S-EU LS420D0402S-EU	TS5200D0202S-EU TS5200D0402S-EU TS5200D0802S-EU

Up to 16 cameras TeraStation / up to 8 cameras LinkStation
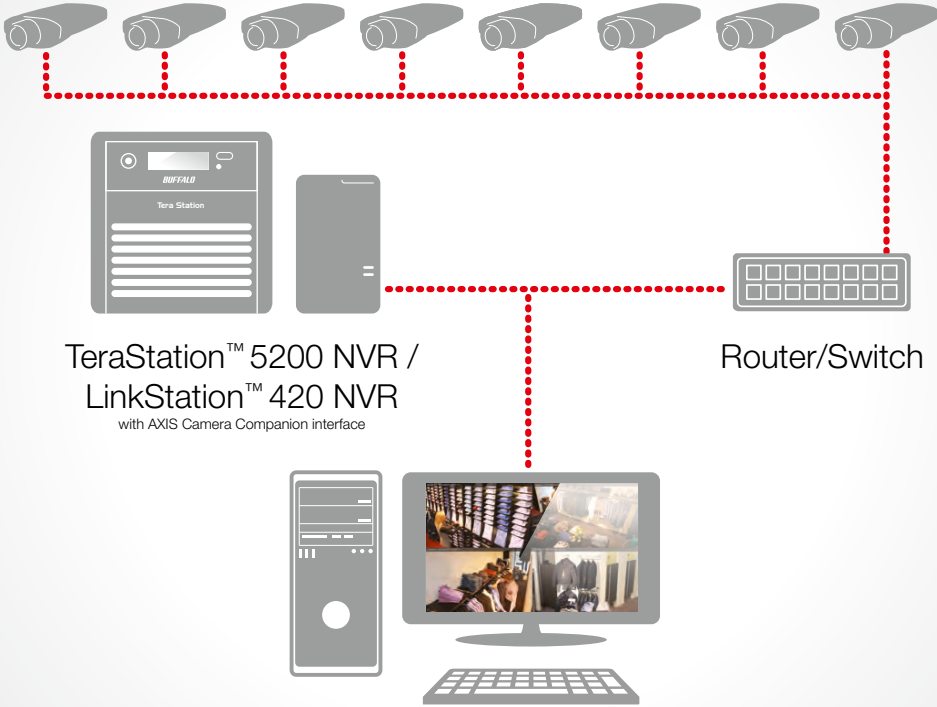
TeraStation™ 5200 NVR /
LinkStation™ 420 NVR
with AXIS Camera Companion interface

Router/Switch

PC for live viewing and configuration
Download AXIS Camera Companion from www.axis.com

Buffalo
Technology Solutions

You will find detailed information about professional Buffalo™ solutions for business clients on our website at **www.buffalo-technology.com/solutions**.

■ **High performance and reliability**
Find out more about the powerful all-new TeraStations that provide blazing transfer speeds incorporating the very latest market-leading processors. With the addition of large capacity DDR3 memory, these NAS and iSCSI devices are designed to support 24/7 operation utilising high performance components.

■ **File Sharing and Data Protection**
Provides a host of business-class features from cross-platform network file sharing to data replication, backup, and failover.

■ **Replication & Failover**
Replication mirrors the data in a folder on the source TeraStation™ to a share on another TeraStation™ in near real time. TeraStation™ also supports fail over fault tolerance in the network.

■ **Storage Virtualization**
Create NAS and iSCSI volumes on a single RAID array. Supports simultaneous usage of NAS and iSCSI in one device

■ **Bring Your Own Device**
Is your company aware of the issues that Bring Your Own Device brings to your business? See how Buffalo products can provide a secure environment for your data protection, while enabling your employees to use their personal mobile devices for work.

■ **Buffalo Surveillance Server**
Store video captured with an IP camera directly on a TeraStation series storage device via a network.
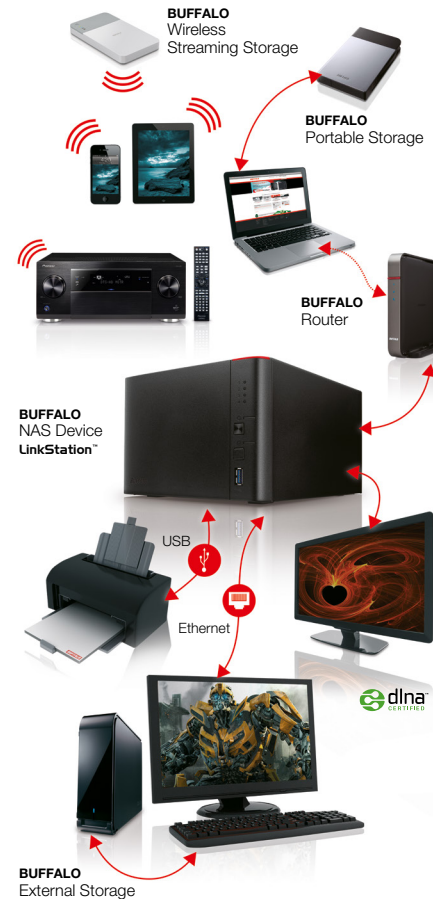
Why Network Attached Storage in the Home?

- When you have the need to **share data files across multiple PC's** – a NAS device is the perfect solution.

- NAS gives you the ability to **expand your shared storage space.** Simply add an external storage device, via the USB port, to the NAS device.

- Peace of Mind – NAS devices often contain more than one hard disk drive, often arranged into logical, redundant storage containers or RAID arrays for added redundancy/security – **thus protecting data in the case of disk failure** and subsequent data loss.

- Cost benefits – NAS devices offer an **affordable solution for homes and small businesses** that require more storage space.

- Convenience – NAS offers a **simple** solution for **sharing photos, data files, music or videos** stored in one central location, accessible to anyone on the secure network, via lots of devices – PC, laptop, smart TV, mediaserver, game console, smartphone, tablet etc.

- Access your data anywhere – With the **WebAccess feature** you have the freedom **to access your data from anywhere via an Internet portal.** Download and view files whilst on the move. You no longer need to carry your digital world with you.

- Secure Data – Schedule regular back-ups to ensure you **never lose your data** with the NovaBACKUP® software, with 5 or 10 licenses included with all Buffalo™ Network Attached Storage products.

BUFFALO
Wireless
Streaming Storage

BUFFALO
Portable Storage

BUFFALO
Router

BUFFALO
NAS Device
LinkStation™

USB

Ethernet

BUFFALO
External Storage

Network Attached Storage for the Home

The LinkStation™ Multimedia shared network products are for the home that requires a central location to share data files, photos, video and music. In addition to the storage capabilities, they can stream multimedia to a PC, a Mac and other DLNA CERTIFIED™ media players. The LinkStation™ family seamlessly integrates with iTunes® and allows access to music files from your iTunes® software. Available with single, dual and quad drives and capacities that range from 1 TB to 16 TB, save and share your digital life from one place, with the Buffalo™ LinkStation™ range. Network Attached Storage for the Professional Multimedia Home User.

	LinkStation™ 520D	LinkStation™ 441D	LinkStation™ 421	LinkStation™ 410 and 420
Number of Drives	2	4	2	1 (LS410D-EU) / 2 (LS420D-EU)
Capacities	2 TB, 4 TB, 6 TB, 8 TB	0 TB, 4 TB, 8 TB, 12 TB, 16 TB	0 TB (HDD sold separately)	LS410D: 2, 3, 4 TB / LS420D: 2, 4, 6, 8 TB
CPU	Realtek RTD1195N Dual Core CPU	Marvell ARMADA 1.2 GHz, 370 ARM Dual Issue	Marvell ARMADA 370, 1.2 GHz ARMv7 Dual Issue	Marvell ARMADA 370, 1.2 GHz ARMv7 Dual Issue
RAM	256 MB DDR3	512 MB DDR3	512MB DDR3	DDR3 512 MB
Data Transfer Rate	approx. 110+ Mbps	100+ Mbps	approx. 100 Mbps	approx. 100 Mbps
USB Ports	1 x USB 3.0	1 x USB 2.0, 2 x USB 3.0	1 x USB 2.0 (back), 1 x USB 3.0 (front)	1
LAN Ports	1	1	1	1
Supported RAID Levels	0, 1 and JBOD	JBOD, 0, 1, 5, 10	0, 1 and JBOD	LS410 x / LS420: 0, 1, and JBOD
Active Directory	x		✓	✓
HDD Controller	SATA II or III, 3 Gb/s	SATA II or III, 3 Gb/s	SATA	SATA
WebAccess	x	✓	✓	✓
DSD Support	x	✓	✓	✓
DLNA™ Media Server	✓	✓	✓	✓
NovaBACKUP® Buffalo Edition	5	5	5	5
BitTorrent™	✓	✓	✓	✓
Apple Time Machine®	✓	✓	✓	✓
Apple Bonjour®	✓	✓	✓	✓
iTunes® Integration	✓	✓	✓	✓
Power Management System	✓	✓	✓	✓
Operating System Support	Windows 8.1, Windows 8, Windows 7, Windows Vista, Windows XP, Windows Server 2012/2012 R2, Windows Server 2008/2008 R2, Mac OS 10.7 and later*			
Warranty Support	2 years	2 years	2 years	2 years
Chassis Colour	Black	Black	Grey	Black
Product Code	LS520D-EU	LS441DE-EU, LS441D-EU	LS421DE-EU	LS410D-EU / LS420D-EU

*Some included optional utilities are not supported.

	LinkStation™ 220	LinkStation™ 210	LinkStation™ Mini
Number of Drives	2	1	2
Capacities	0 TB, 2 TB, 4 TB, 6 TB, 8 TB	2 TB, 3 TB and 4 TB	1 TB and 2 TB
CPU	Marvell ARMADA 370, 800 MHz Dual Issue	Marvell ARMADA 370, 800 MHz Dual Issue	Marvell 88F6281 600 MHz ARM
RAM	256 MB DDR3	256 MB DDR3	128 MB DDR2
Data Transfer Rate	approx. 70 Mbps	approx. 70 Mbps	40 Mbps
USB Ports	1	1	1
LAN Ports	1	1	1
Supported RAID Levels	0, 1 and JBOD	x	0, 1 and JBOD
Active Directory	✓	✓	✓
HDD Controller	SATA	SATA	SATA II
WebAccess	✓	✓	✓
DSD Support	✓	✓	x
DLNA™ Media Server	✓	✓	✓
NovaBACKUP® Professional User Licenses	5	5	5
BitTorrent™	✓	✓	✓
Apple Time Machine®	✓	✓	✓
Apple Bonjour®	✓	✓	✓
iTunes® Integration	✓	✓	✓
Power Management System	✓	✓	✓
Operating System Support	Windows 8.1, Windows 8, Windows 7, Windows Vista, Windows XP, Windows Server 2012/2012 R2, Windows Server 2008/2008 R2, Mac OS 10.7 and later*		
Warranty Support	2 years	2 years	2 years
Chassis Colour	Black	Black	Black and White
Product Code	LS220D-EU	LS210D-EU	Black: LS-WSXL/R1EU White: LS-WSXL/R1WHE

*Some included optional utilities are not supported.

External Storage Solutions

BUFFALO™

DriveStation™ is a family of desktop external hard drives that offers high performance, easy-to-use storage. The DriveStation™ is available in single drive and multiple drive configurations mainly with industry standard USB 2.0 and technology leading USB 3.0.

	DriveStation™ DDR	"Panasonic" USB 3.0 Hard Drive	DriveStation™ Velocity
Product Range Code	HD-GDU3	HD-AVSU3	HD-LXU3
Transfer Rates	up to 400 Mbps	up to 170 Mbps	up to 130 Mbps
Special Features	additional 1 GB RAM, fastest 3.5" HDD worldwide	optimized for Panasonic	SuperSpeed USB 3.0
Interface(s)	1 x USB 3.0	1 x USB 3.0	1 x USB 3.0
Hardware Encryption	x	x	✓
Capacities	2 TB and 3 TB	1 TB and 2 TB	1 TB, 2 TB and 3 TB
Eco Manager	✓	✓	✓
Secure Lock Mobile	✓	✓	✓
Buffalo™ Tools	✓	✓*	✓
Operating System Support	Windows 8 (32/64 bit), Windows® 7 (32/64 bit), Windows Vista® (32/64 bit), Windows® XP, Mac OS® X 10.5 or later		Windows® 7 (32-bit/64-bit), Windows Vista® (32-bit/64-bit), Windows® XP, Mac OS® X 10.4 or later
Warranty Support	2 years		
Product Code	HD-GD2.0U3-EU HD-GD3.0U3-EU	HD-AVS1.0U3 HD-AVS2.0U3	HD-LX1.0TU3-EU HD-LX2.0TU3-EU HD-LX3.0TU3-EU

*download at www.buffalo-technology.com/en/support

USB 3.0 multi drive solutions

Buffalo's multi-drive USB 3.0 high performance, multimedia, external hard drives are perfect for the home or small office with small servers or users who need large amounts of redundant, external storage space on a computer. The fully equipped two-bay and four-bay units could use RAID 0 for maximum performance, JBOD or Raid 1, RAID 5 or 10 for redundant storage (the latter 2 only on the four-bay unit). It quickly provides additional storage to backup all your files.

	DriveStation™ Mini Thunderbolt™ SSD	DriveStation™ Duo USB 3.0	DriveStation™ Quad USB 3.0
Product Range Code	SSD-WAT	HD-WLU3	HD-QLU3
Interface(s)	2x Thunderbolt™	USB 3.0	USB 3.0
Transfer Rates	up to 700 Mbps	up to 150 Mbps	up to 170 Mbps
Number of Drives	2	2	4
Capacities	512 MB, 1 TB	4 TB, 6 TB and 8 TB	8, 12, 16, and 24 TB
Hardware RAID	✓	✓	✓
Supported RAID Levels	Controlled by host	0, 1, JBOD	0, 1, 5, 10, JBOD + Spanning
Eco v Manager	x	✓	x
Secure Lock Mobile	x	✓	x
Buffalo™ Tools	x	✓	x
Operating System Support	Mac OS X 10.6 or later, Windows 8 (64/32-bit), Windows® 7 (64/32-bit)	Windows 8.1, Windows 8, Windows 7, Windows Vista, Windows XP, Mac OS 10.4 - 10.9	
Warranty Support	2 years		
Product Code	SSD-WA512T-EU SSD-WA1.0T-EU	HD-WLUSR1-EB	HD-QLU3

Optical Storage

Optical Storage is a form of storage that reads data from a disk using a laser. Most optical disk drives can read or write data in one or more of the following formats: CD Audio, CD-ROM, CD-R, CD-RW, DVD, DVD-R, DVD-RW, Blu-ray™. Blu-ray™ is the ideal solution for users storing, editing or watching High Definition content or writing large or small amounts of data to an optical drive.

	16x External Blu-ray™ Drive	Portable Blu-ray™ Drive Writer (BDXL)	MediaStation DVD Writer
Product Range Code	BRXL-16U3	BRXL-PT6U2B	DVSM-PT58U2VB
Interface(s)	USB 3.0	USB 2.0	USB 2.0
Media	BR/DVD/CD	BR/DVD/CD	DVD/CD
Read/Write Speeds	■ BD-R XL 4 Layer (6x / 6x) ■ BD-R XL 3 Layer (6x / 6x) ■ BD-R Double Layer (12x / 8x) ■ BD-R Single Layer (16x* / 12x) ■ BD-R Single Layer LTH (6x / 6x) ■ BD-RE XL Triple Layer (2x / 4x) ■ BD-RE Double Layer (2x / 6x) ■ BD-RE Single Layer (2x / 8x) ■ BD-ROM Single Layer (- / 12x) ■ BD-ROM Double Layer (- / 8x) ■ DVD-ROM Single Layer (- / 16x) ■ DVD-ROM Double Layer (- / 12x) ■ DVD-R Single Layer (16x / 16x) ■ DVD-R Double Layer (8x / 12x) ■ DVD-RW (6x / 12x) ■ DVD+R Single Layer (16x / 16x) ■ DVD+R Double Layer (8x / 12x) ■ DVD+RW (8x / 12x) ■ DVD-RAM (5x / 5x) ■ CD-R (48x / 48x) ■ CD-RW (24x / 40x)	■ BD-R (4x/4x) ■ BD-R XL (6x/2x) ■ BD-RE (2x/2x) ■ BD-RE XL (6x/2x AACS) ■ BD-ROM (5x/5x) ■ DVD-RAM (8x SL/6x DL) ■ DVD-ROM (8x Read/Write SL) ■ DVD-R (6x/6x DL) ■ DVD-RW (6x/4x) ■ DVD+R (8x/8x SL) ■ DVD+RW (6x/6x DL) ■ CD-R (8x/8x SL) ■ CD-RW (24x/24x) ■ CD-ROM (24x/16x)	■ DVD-R Single Layer (8x/8x) ■ DVD-R Double Layer (6x/6x) ■ DVD+R Single Layer (8x/8x) ■ DVD+R Double Layer (6x/6x) ■ DVD-RW (8x/6x) ■ DVD+RW (8x/8x) ■ DVD-RAM (5x/5x) ■ DVD-ROM Single / Double Layer (8x Read) ■ CD-R (24x/24x) ■ CD-RW (24x/24x) ■ CD-ROM (24x Read) ■ Audio CD/Video CD (10x Read)
Included Software	CyberLink Media Suite		
Warranty Support	2 years		

Express Interface Cards

There are still PCs and notebooks around which have no high speed USB 3.0 connection. External hard drives with USB 3.0 interfaces are widely available, and they are on average three times faster than USB 2.0 drives. Still, even if external USB 3.0 hard drives are compatible and can be run with USB 2.0 host controllers, they always stay well below their full potential in terms of transfer speed. Buffalo™ offers solutions for PCs and notebooks that unlock this potential.

■ The solution for PCs is the Buffalo™ USB 3.0 PCI Express interface card, which can be inserted into a PCIe socket with one lane and also into longer PCIe sockets.

■ Almost all notebooks have an interface for a PC Express card slot in which they can run the Buffalo™ USB 3.0 Express interface card with two ports.

■ With the three upgrade options from Buffalo, you can use faster USB 3.0 drives with notebooks and PCs that do not have an integrated USB 3.0 host controller.

	2 Port USB 3.0 PCI Express Interface Card	Express Card Adapter
Product Code	IFC-PCIE2U3S2	IFC-EC2U3/UC2
Interface Type	PCI Express 2.0	Express Card 2.0
Standard Compliance	USB 3.0 / USB 2.0	USB 3.0 / USB 2.0
Connector Type	USB 3.0 Type A	USB 3.0 Type A
Number of Ports	2	2
Data Transfer Rate	Max. 5 Gbps (USB 3.0 mode) Max. 480 Mbps (USB 2.0 mode)	Max. 5 Gbps (USB 3.0 mode) Max. 480 Mbps (USB 2.0 mode)
Setup Utility OS Support	Windows 8 (32/64 bit), Windows® 7 (32/64 bit), Windows Vista® (32/64 bit), Windows® XP, Server 2008 R2** / 2008** (32/64 bit***)	Windows 8 (32/64 bit), Windows® 7 (32/64 bit), Windows Vista® (32/64 bit), Windows® XP
Dimensions (W x H x D)	59 x 65 mm	41 x 15 x 116 mm
Weight	39.4 g	30.1 g
Operating Environment	5-350C, 20-80 % (non-condensing)	5-350 °C, 20-80 % (non-condensing)
Warranty	3 years	

* 5 Gbps is the maximum interface rate derived from the specifications of the UniversalSerial Bus 3.0 and the ExpressCard. Actual transfer rate will vary depending upon environmental factors. Data rate, features and performance may vary based on the configuration of your system and other factors.

** Not all peripheral devices support Windows Server operating systems. Buffalo™ supports use in Server environments when using supported Buffalo™ products. If 4 GB of memory or more are installed on 32-bit versions of Windows Server operating systems, the card may not function properly.

*** Windows Server 2008 R2 only supports 64bit.

BUFFALO™

STORE

CARRY

DriveStation™

MiniStation™
DVD/Blu-Ray™

SHARE &
STORE

CONNECT

LinkStation™
TeraStation™

AirStation™

Portable Storage

The Buffalo™ MiniStation™ is a compact USB 3.0 hard drive family designed to be reliable and give a high performance. The ideal product for people who need a portable, stylish storage and back-up solution.

	MiniStation™ Extreme	MiniStation™ Air 2	MiniStation™ DDR	MiniStation™ Safe	MiniStation™ Air	MiniStation™ USB 3.0
Special features	Highly shock-resistant body, meeting military standards	Read / write files wirelessly (12 hours battery life)	World's fastest HDD – 1 GB DDR3 RAM	Shock-proof chassis and Lock-and-Go	Read / write files wirelessly (4 hours battery life)	Stylish and portable USB 3.0 storage
Product Range Code	HD-PZFU3	HDW-PDU3	HD-PGDU3	HD-PNFU3	HDW-PU3	HD-PCFU3
Capacities	1 TB, 2 TB	500 GB, 1 TB	500 GB, 1 TB	1 TB, 2 TB	500 GB	1 TB
Interface(s)	USB 3.0	WiFi, USB 3.0	WiFi, USB 3.0	USB 3.0	WiFi, USB 3.0	USB 3.0
Hardware Encryption	✓	x	x	x	x	x
Shock Protection	✓ (MIL-SPEC)	x	x	✓	x	x
Integrated Cable	✓	x	x	x	x	x
PC formatted	✓	✓	✓	✓	✓	✓
Colors	Black, Red, Silver	Silver	Black	Black, Red	Black	Black
Eco Manager	x	x	x	✓	x	✓
Secure Lock Manager Easy	x	x	x	✓	x	x
Secure Lock Mobile	x	x	x	✓	x	✓
Buffalo™ Tools	x	x	✓	✓	x	✓
Operating System Support	Windows 8, Windows 7, Windows Vista, Windows XP, Mac OS 10.4 - 10.9					
Warranty Support	2 years	3 years	2 years		3 years	2 years
Product Code	HD-PZF1.0U3B-EU HD-PZF1.0U3R-EU HD-PZF1.0U3S-EU HD-PZF2.0U3B-EU	HDW-PD500U3-EU HDW-PD1.0U3-EU	HD-PGD500U3-EU HD-PGD1.0U3-EU	HD-PNF1.0U3BB-EU HD-PNF1.0U3BR-EU HD-PNF2.0U3GB-EU	HDW-P500U3-EU	HD-PCF1.0U3BB-EU

Thunderbolt™ Storage

Buffalo Technology's MiniStation Thunderbolt™ Portable HDD/SSD offers amazing speed with an extremely fast Thunderbolt™ connection and Solid State Drive. The MiniStation Thunderbolt™ HDD/SSD also has a dual interface allowing it to connect via Thunderbolt™ or USB 3.0 – backward compatible for USB 2.0 – and can be formatted to support both PC and Mac® ensuring you can connect to most computers and devices. Native compatibility with Mac OS® X Time Machine also makes it an ideal solution for backup.

	MiniStation Thunderbolt™ HDD	MiniStation Thunderbolt™ SSD
Special features	Dual-interface Thunderbolt™ and USB3.0	Ultimate speed with a fast Solid State Drive
Product Range Code	HD-PATU3	HD-PATU3S
Capacities	1 TB, 2 TB	128 GB, 256 GB
Interface(s)	Thunderbolt, USB 3.0	Thunderbolt, USB 3.0
Hardware Encryption	x	x
Mac formatted	✓	✓
Eco Manager	x	x
Secure Lock Manager Easy	x	x
Secure Lock Mobile	x	x
Buffalo™ Tools	x	x
Operating System Support	Thunderbolt - Mac OS X 10.6 or later, USB - Mac OS X 10.5 or later, Windows 7 (64-bit/32-bit) / Vista (64-bit/32-bit) / XP(32-bit)	
Warranty Support	3 years	
Product Code	HD-PA1.0TU3-EU HD-PA2.0TU3-EU	HD-PA128TU3S-EU HD-PA256TU3S-EU

Keep your TV or Desktop clutter free

Buffalo Technology brings its first mount kit for portable 2.5" HDD's on a TV. This TV bracket with a simple yet efficient design fits all TVs that have VESA mount. Put your portable HDD nicely hidden behind your TV. It's perfect for play back multimedia files or even recording TV directly. The TV bracket works with most 2.5" portable hard drives in the market and of course is 100% compatible with our Buffalo's MiniStations thanks to the transform function. The tool-free design means that you can mount this kit within seconds. The adjustable docking depth makes it possible to turn the TV Bracket into a double-decker, for up to 2 MiniStations.

	Portable HDD Mounting Kit
Dimensions	103 x 140 x 58 mm
Weight	160 g (+ 40 g for extended adapter)
Include	USB 2.0 80 cm cable, USB 3.0 80 cm cable
Product Code	OP-HDP-TVK2

What is Wireless?

Wireless Local Area Network (WLAN) is a Wireless alternative to a computer Local Area Network (LAN) that uses radio instead of wires to transmit data back and forth between computers in a small area such as a home or office. The Wi-Fi Alliance defines Wi-Fi as any wireless local area network (WLAN) products that are based on the (IEEE) 802.11 standards. A device can use Wi-Fi (such as a personal computer, Notebook, video game console, smartphone, tablet, or digital audio player) can connect to a network resource such as LAN (Local Area Network) or the Internet via a wireless Gateway.

WLAN's are governed by a set of communication standards, implemented by the Institute of Electrical and Electronics Engineers' (IEEE) Standards Committee. The Wi-Fi Alliance defines Wi-Fi as any wireless local area network (WLAN) products that are based on the (IEEE) 802.11 standards.

802.11 was the first WLAN standard and supported bandwidth of 2 Mbps, too slow for today's applications. The three important wireless standards are 802.11ac, 802.11n and 802.11g.

- 802.11ac or Wireless-ac, is the latest standard for WLAN products and is backward compatible with Wireless-n products. Wireless-ac offers a better range and supports data rates of up to 1,300 Mbps PHY rate.
  - 802.11n or Wireless-n supports a bandwidth of up to 600 Mbps and uses the 2.4 GHz frequency for a greater Wireless range
  - 802.11g or Wireless-g supports a bandwidth of up to 54 Mbps and uses the 2.4 GHz frequency for a greater Wireless range.
  - 802.11a or Wireless-a supports a bandwidth of up to 54 Mbps and transmits radio signals in the frequency range above 5 GHz.

Most Buffalo™ wireless routers use the Wireless-AC and Wireless-N and offer users optimal performance:

- Dual Band – 802.11ac and 802.11n with 5 GHz and 2.4 GHz dual band
- N-Technology – 802.11n with 1x1 antenna: not compliant with the IEEE standard, because a single antenna does not permit MIMO (Multiple Input / Multiple Output) as required by the standard. At 150 Mbit/s, the technology is still far faster than the predecessor, Wireless-G, and is enough for the demands of "normal" users, especially in combination with the High Power technology

Our Future Today:
The latest new standard, 802.11ac

Buffalo™ Technology develops the latest wireless connectivity devices for the future by using the Wireless -11ac technology (802.11ac). With Airstation™1750, Buffalo™ Technology was the first to launch this latest wireless technology worldwide.

Router

A router is a way for you to share an internet connection with multiple devices. It connects two networks using the same protocol and has additional functions like DHCP server and firewall. A router can be seen as a personal network manager.

	AirStation™			
	Wireless N900 Gigabit Dual Band Router	Wireless N600 Gigabit Dual Band Router	Wireless Router 11N	Wireless N300 Travel Router
Product Code	WZR-900DHP-EU	WZR-600DHP2-EU	WHR-600D-EU	WMR-300-EU
Max Speed	450 Mbps	300 Mbps	30 Mbps	300 Mbps
Dual Band	✓	✓	✓	x
HighPower	✓	✓	x	x
Wireless Bridge	✓	✓	WDS	x
ECO	✓	✓	✓	x
PPTP	✓	✓	✓	x
USB	✓(USB 2.0)	✓(USB 3.0)	x	x
USB over IP	✓	✓	x	x
DD-WRT	x	x	x	x
Gigabit LAN	✓	✓	✓	x
Antennas TXxRX	3x3	2x2	2x2	2x2
Warranty Support	3 years			

Modem Router

A modem router connects two networks using a different protocol. You can easily create a wireless network and share a broadband Internet connection, files and peripheral devices

	AirStation™
	HighPower Gigabit Broadband ADSL2+ Modem Router
Product Code	WBMR-HP-G300H-EU
Max Speed	300 Mbps
Modem-Standard	Annex A (-EU)
HighPower	✓
WDS	✓
ECO	✓
PPTP	✓
USB	✓
USB over IP with PC- and Mac-Client-Application	✓
DD-WRT	x
Gigabit LAN	✓
Antennas TXxRX	2x2, removable
Warranty Support	3 years

Next Generation Router

AirStation™ 1750 Gigabit Dual Band Wireless Router
AirStation™ 1750 Gigabit Dual Band Wireless Router is a versatile dual band solution, ideal for high speed data streaming. With two wireless radios for extreme performance and backward compatibility, AirStation™ 1750 Gigabit Dual Band Wireless Router supports 802.11ac and 802.11n, offering simultaneous transfer speeds up to 1.3 Gbps in the 5GHz spectrum and 450Mbps on the 2.4GHz band. Buffalo™ also provides the matching bridge to support 802.11ac, the AirStation™ 1300 Gigabit Dual Band Media Bridge.

	AirStation™		
	AirStation™ 1166 Gigabit Dual Band 11ac Wireless Router	AirStation™ 1166 Gigabit Dual Band Router Parental Control QoS	AirStation™ 1750 Gigabit Dual Band Router Parental Control QoS
Product Code	WHR-1166D-EU	WZR-1166DHP-EU	WZR-1750DHP-EU
Max Speed	1166 Mbps*	1166 Mbps*	1750 Mbps*
Dual-Band	✓	✓	✓
High Power	x	x	✓
Wireless Bridge	✓	✓	✓
ECO	✓	✓	✓
PPTP	✓	✓	✓
USB	x	✓	✓
USB over IP	x	x	x
DD-WRT	x	x	x
Gigabit LAN	10/100	✓	✓
Antennas TXxRX	2x2, internal	2x2, internal	3x3, internal
Warranty Support	3 years		

802.11ac technology
With the implementation of new technologies in the wireless standard the first time Gigabit speed in WLAN is within reach. The minimum channel bandwidth is 80 MHz instead of 40 MHz as it is in the 802.11n standard. Multi-MIMO ensures that more clients can be connected with a higher speed (more than 1Gb/s) and better signal quality. These features, along with others, result in a PHY rate of more than 1Gb/s.

Prepared for now and the future
Along with greatly enhanced speeds, 802.11ac features improved reliability and range, and is backward compatible with 802.11n to support your most recent wireless devices. Whether you're streaming media from movie portals or gaming online with your Xbox® or PS3™, you'll experience faster, uninterrupted playback.

	AirStation™ Wireless Dual Band USB Adapter
Product Code	WI-U2-866D-EU
Max Speed	866 Mbps
HighPower	x
Interface	USB 2.0
Dual-Band	✓
Antennas TXxRX	2x2, internal
Warranty Support	3 years

* Combined speed of two concurrent bands, 2.4 GHz / 5 GHz

Wireless Adapter

Buffalo™ Wireless accessory devices and add-ons help to improve your Wireless experience.

	N-Technology	Nfiniti™ Dual Band
	USB 2.0-Client with 150Mbit/s	AirStation™ Wireless Dual Band USB Adapter
Product Code	WLI-UC-GNM-EU	WI-U2-300D-EU
Max Speed	150 Mbps	300 Mbps
HighPower	x	x
Interface	USB 2.0	USB 2.0
Dual-Band	x	✓
Antennas TXxRX	1x1	
Warranty Support	3 years	

Wireless Access Points

Buffalo's AirStation™ Dual Band PoE Wireless Access Points deliver 802.11n speeds and coverage with simultaneous operation on 2.4 and 5.0 GHz bands (WAPS-APG600H-EU), on 2.4 or 5.0 GHz bands (WAPS-AG300H-EU) respectively, thus enabling maximum performance and compatibility while providing interference-free connectivity.

The added benefit of Power over Ethernet (PoE) facilitates installation and flexible placement anywhere, and specifically, where power is not available. High ceilings and walls are no problem for Buffalo's new wireless access points and they can even be installed above, or on, drop-ceiling tiles.

	AirStation™
	Concurrent Dual Band PoE Wireless Access Point
Product Code	WAPS-APG600H-EU
Wireless Standard	IEEE802.11n, IEEE802.11a, IEEE802.11g, IEEE802.11b
Frequency Range	Concurrent dual band 2.4 GHz/5 GHz Support
Wired Standard	IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, IEEE802.3x-Flow Control, IEEE802.1Q-VLAN-Tagging
Speed and Flow Control	10/100/1000 Mbps
Number of LAN Ports	2 × RJ-45 (1 port PoE, supports 802.3af)
USB Standard	USB 2.0
Connector Type	Type A
Number of Ports	2
Data Transfer Rate	max. 480 Mbps
Warranty Support	3 years
Supported OS	Windows 8 (32/64 bit), Windows® 7 (32/64 bit), Windows Vista® (32/64 bit), Windows® XP, Mac OS®

Environmental Position

BUFFALO™

Buffalo™ Technology recognises that maintaining a healthy environment is vital for a healthy life and sustainable growth for future generations. Buffalo™ Technology is committed to complying with environmental standards and is proactive in dealing with concerns for the environment. These goals are being achieved by combining technological innovation with sound environmental business decisions at every step of a product's life cycle. Efforts will focus on reducing environmental damage by complying with all applicable regulations.

Buffalo™ Technology is compliant with the following EU directives:

RoHS Directive (2002/95/EC)
The RoHS Directive refers to the restriction of the use of certain hazardous substances in electrical and electronic equipment. This Directive bans the placing on the EU market of new electrical and electronic equipment containing these materials. All products shipped from Buffalo™ European distribution centres are compliant with the European RoHS Directive as of July 1, 2006.

WEEE Directive (2002/96/EC)
The Waste Electrical and Electronic Equipment Directive (WEEE) applies to companies that manufacture, sell, distribute, recycle or treat electrical or electronic equipment (EEE), and to consumers within the European Union. The objective of the directive is to prevent waste of electrical and electronic equipment (WEEE) and to promote the reuse, recycling and recovery of such wastes. Buffalo™ Technology is committed to working with suppliers, distributors, partners and customers to ensure compliance with the WEEE Directive.

REACH Directive (EC 1907/2006)
REACH is a European Union regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals. REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. REACH places greater responsibility on industry to manage these risks. A full list of REACH compliant products is available on our website.

Packaging and Packaging Waste Directive (94/62/EC)
The Packaging and Packaging Waste Directive aims to harmonise national measures in order to prevent or reduce the impact of packaging and packaging waste on the environment. It contains provisions on the prevention of packaging waste, on the re-use of packaging and on the recovery and recycling of packaging waste. Buffalo™ Technology has joined the Green Dot program, which was established to organise the collection, sorting, and recycling of used sales packaging. Green Dot is currently the standard takeback program in 21 European countries.

For more information on our environmental position, please visit:
http://www.buffalo-technology.com/en/environmental-position.html

Technical Support

Country	Number
Austria	08101 0251 552
Belgium	0787 99 917
Denmark	07015 0919
Finland	0108 02812
France	0811 650220
Germany	0180 6000024
Ireland	1890 719901
Italy	848 782113
Netherlands	0900 0401256
Norway	810 00050
Russia	8800 555 0128
Spain	9018 10750
Sweden	077 1404105
Switzerland	0848 560374
Turkey	00800448820877
UK	0845 3511005
UAE	8000 441 6074
For all other regions please contact	+353 61 44 7617

For the opening times by country, please visit
www.buffalo-technology.com/contact

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