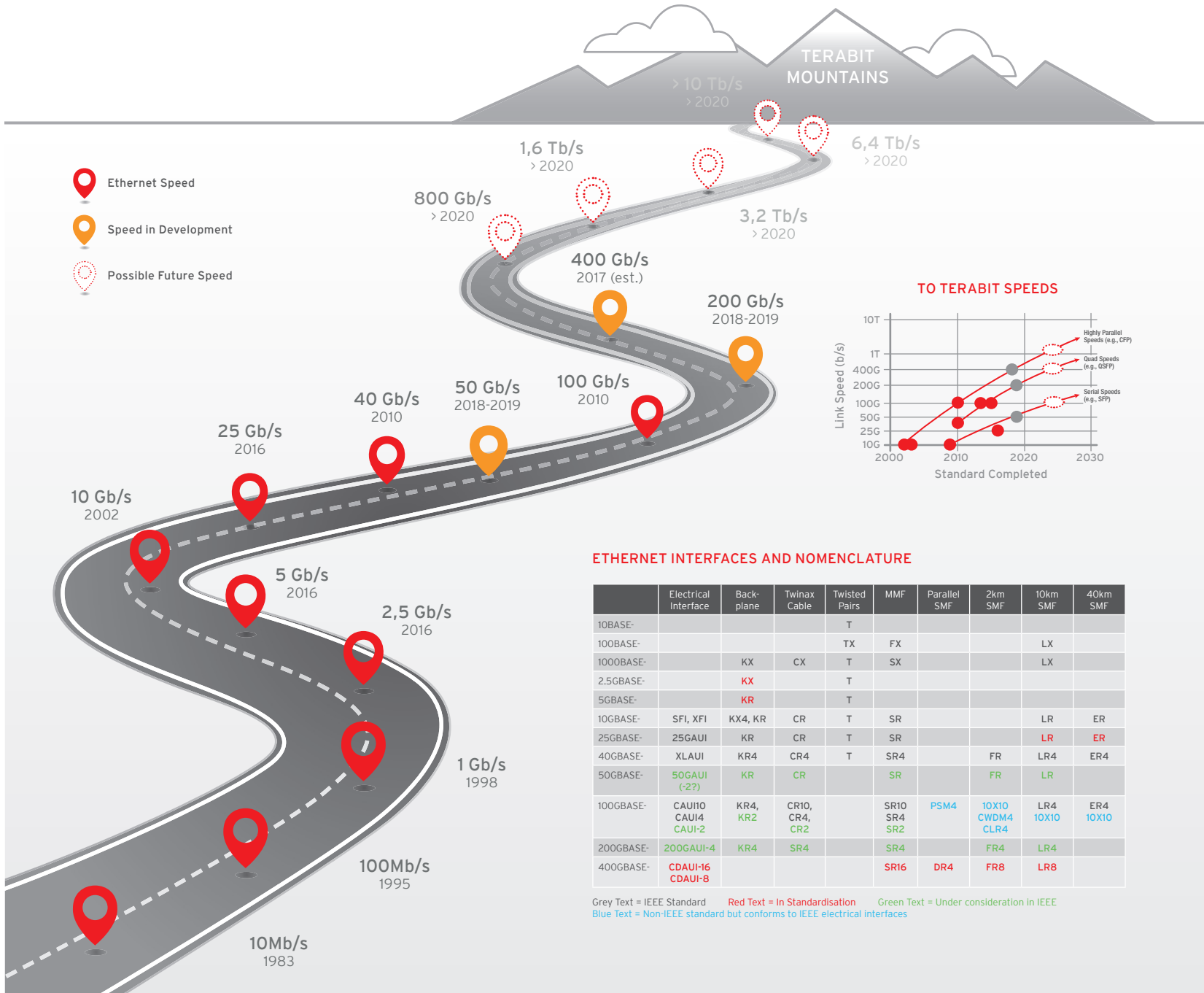
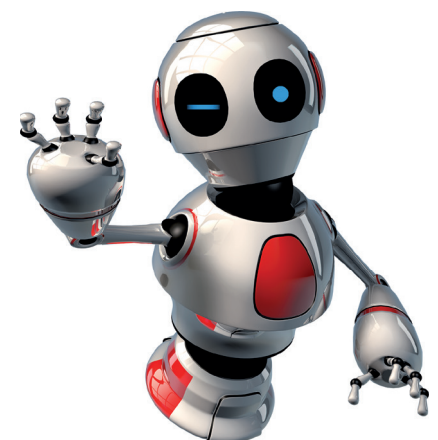




Microtron Network Solutions



Reliability, service & support



Structured cabling for tertiary-sector buildings

Solid expertise

Microtron has accumulated wide-ranging experience over the years in cabling solutions for tertiary-sector buildings. As well as top-quality products, Microtron also offers total solutions.

Microtron expert areas:

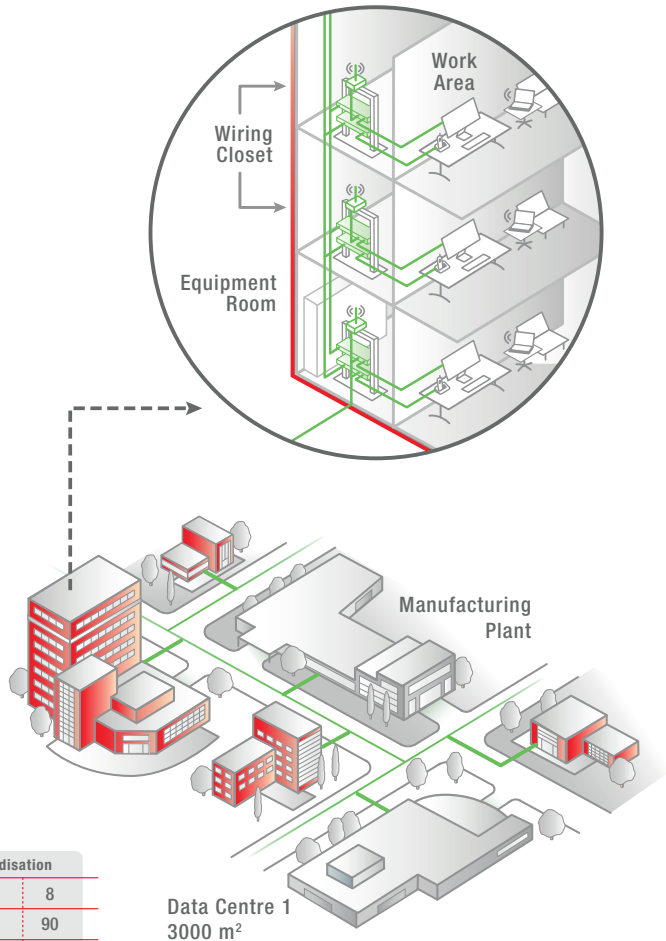
- Copper and fibre-optic solutions from Belden and Hubbell
- Specialised fibre-optic solutions from Fibrefab and Optronics
- 19-inch rack solutions from Triton



DATWYLER



TRITON



PoE Types and Classes	PoE+ – Type 2								
	PoE – Type 1				4-Pair PoE in Standardisation				
Class	0	1	2	3	4	5	6	7	8
PSE Power (W)	15.4	4	7	15.4	30	45	60	75	90
PD Power (W)	13	3.84	6.49	13	25.5	40	51	62	71

4 – Pair PoE-Type 3
4 – Pair PoE-Type 4

New LAN developments

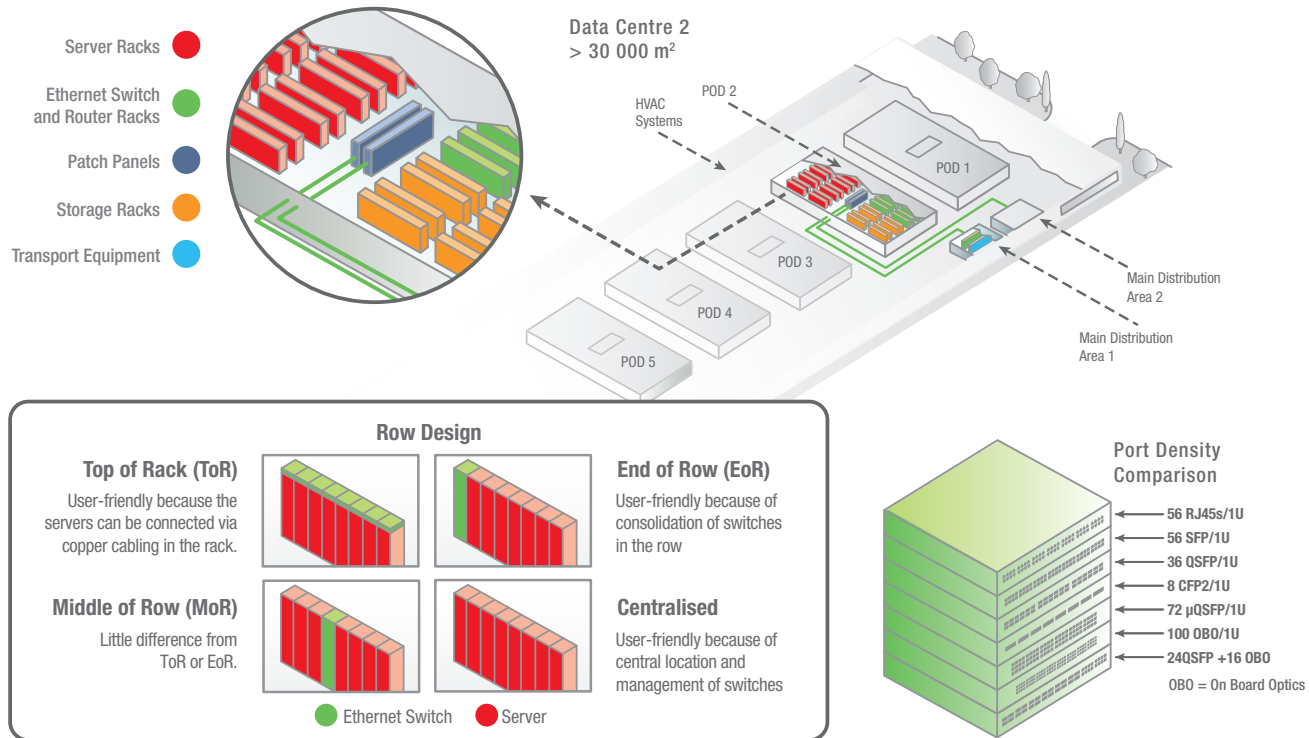
Tomorrow's networks will consist of much more than just computer terminals. They will be hybrid networks. They will be capable of transmitting all forms of wireless data traffic, telephony and high-resolution camera images.

Everything via a single network

Mobile devices and desktops will also be connected to them simultaneously. Microtron is an experienced guide to give you expert support in this area.



Ultra high density solutions for data centres



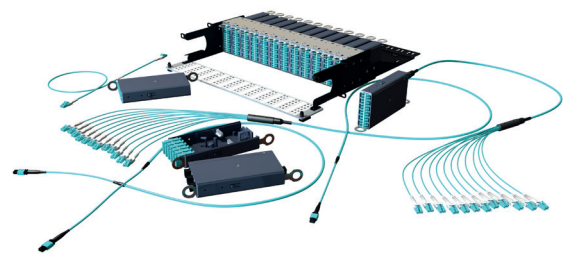
Microtron expert areas:

- Total data centre solutions from Belden
- Ultra high density fibre patching solutions from Fibrefab and Optronics
- NETcell from APRA NORM
- Total data centre rack solutions from Triton



Powerful and investment-friendly

Microtron supplies and installs patch panels with 144 LC connectors which ensure that the intensive internal traffic in your data centre can operate smoothly. As a result, your rack can last up to eight times longer without additional extensions. In terms of investment strategy, that can make a difference.



Industrial Ethernet

The Internet of Things

The Internet of Things introduces a lot of additional requirements for the new generation of industrial networks. Microtron knows this better than anyone.

From consultancy to completion

Microtron can therefore offer you support in your industrial network project from start to finish: from the basic design, budget calculation, and the actual development of your network including the sales engineering to ensure the selection of the right components, through to the provision of guidance and support with the construction and installation of the network.

Dedicated experts

For areas such as IT configuration, Microtron works with dedicated experts from Hirschmann itself. This enables us to guarantee that your industrial network will be optimally configured and do all you expect it to do.

An up-to-lifetime warranty

As a certified system integrator (CSV), Microtron joins Belden and Hirschmann in offering a 25-year - and in some cases lifetime - system warranty.

Microtron expert areas:

- Identifying points in need of attention depending on your industrial network
- Focusing on reliable and secure systems
- Selecting the right components for a powerful network
- Building scalable networks that can grow with your business



Emergency telephony



Suitable for the toughest conditions

GAI-Tronics phones are designed to continue working flawlessly in the most extreme conditions. They can withstand the most extreme temperatures, lightning strikes, explosions and electromagnetic radiation.

Standards and approvals

All phones comply with European standards and meet the strict approval conditions set by national rail authorities, highways and traffic agencies, airports, police forces, municipalities and the petrochemical industry.

The technology of your choice

You can choose which technology to use: VoIP, GSM and GSM/R, analogue or SMART analogue.



Free Space Optics

Infrared connection which behaves like a fixed connection

Alternative to expensive fibre-optics

If physically separate networks, such as two individual buildings, cannot be connected by fibre-optic cable, Trimble offers a solution using Free Space Optics.

Ultra-powerful microwave link

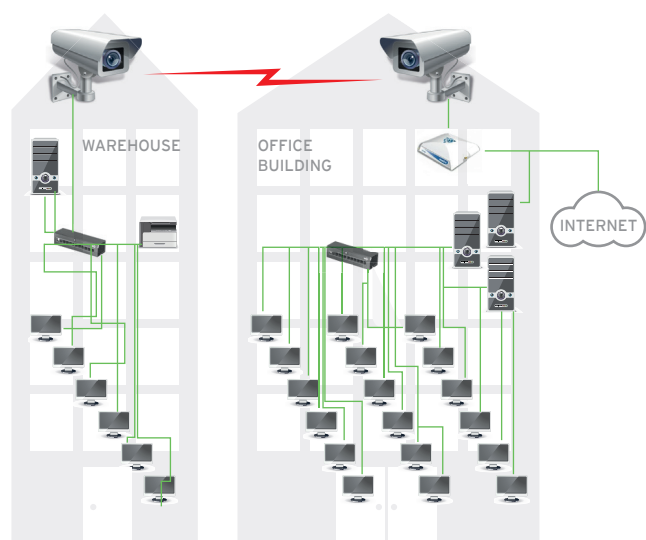
By means of two devices, one on the roof of each building, an ultra-powerful microwave link (infrared) can be created.

Up to 3 Gb per second

In this way, up to 3 Gigabytes per second can be sent and received. A budget-friendly alternative.

Trimble

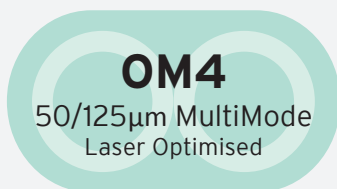
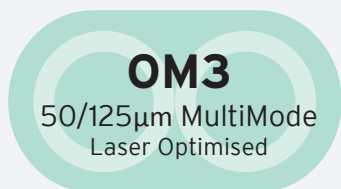
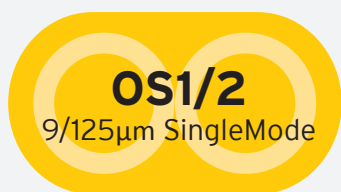
Using the Free Space Optics solutions from Trimble, wireless data traffic can be redefined.



Connectors and adapters

Connectors	Adapters	
		SC/PC Connectors & Adapters, available in Simplex & Duplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
		SC/APC Connectors & Adapters, available in Simplex, Duplex and Quad design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
		LC/PC & LC/APC Connectors & Adapters, available in Simplex & Duplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
		FC/PC Connectors & Adapters, exclusively available in Simplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
		FC/APC Connectors & Adapters, exclusively available in Simplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
		ST/PC Connectors & Adapters, exclusively available in Simplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
		MTRJ Connectors & Adapters, exclusively available in Duplex design 900µm fibre-optic cable connection 2mm jack for connection cables
	 only available as assembled components	E2000/PC & E2000/APC Connectors & Adapters, exclusively available in Simplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables
	 only available as assembled components	MPO / MTP Connectors & Adapters, available in Simplex & Duplex design 900µm fibre-optic cable connection 2mm jack for connection cables
	 only available as assembled components	MU/PC Connectors & Adapters, exclusively available in Simplex design 900µm fibre-optic cable connection 2mm/3mm jack for connection cables

Optical fibre identification



Network classifications and categories

Classes	link/channel	Cable/ connectors	Ethernet Speed	shielded / unshielded	connector type	Distance
Class A	100 kHz	Category 1				
Class B	1 MHz	Category 2				
Class C	16 MHz	Category 3	telephony & 10 mbps	UTP	RJ11/12/45	
N.A.	25 MHz	Category 5	10/100 mbps	UTP/FTP	RJ45 (2 pairs)	100m (90+10)
Class D	100 MHz	Category 5e	10/100/1000 mbps	UTP/FTP	RJ45 (2 pairs)	100m (90+10)
Class E	250 MHz	Category 6	10/100/1000 mbps	U-F-S/U-F-STP	RJ45 (4 pairs)	100m (90+10)
N.A.	250-625 MHz	Category 6	10 gbps	U-F-S/U-F-STP	RJ45 (4 pairs)	min. 37m - max. 50m
Class EA	500 MHz	Category 6A	10 gbps	U-F-S/U-F-STP	RJ45 (4 pairs)	100m (90+10)
Class F	600 MHz	Category 7	10 gbps	S/FTP	GG45/TERRA	100m (90+10)
Class FA	700 MHz	Category 7A	10 gbps	S/FTP	GG45/TERRA	100m (90+10)
Class I	1600-2000 MHz	Category 8.1	40 gbps	U/FTP or F/ UTP	RJ45 (4 pairs)	30m
Class II	1600- 2000MHz	Category 8.2	40 gbps	F/FTP or S/ FTP	RJ45 (4 pairs)	30m

Indicative link lengths

Bandwidth		850nm				
Data speed		100Mb/s	1Gb/s	10Gb/s	40Gb/s	10Gb/s
Source		LED	Laser	Laser	Laser - 4 pairs	Laser - 10 pairs
Distance	OM1	550m	275m	33m	n/a	n/a
	OM2	550m	550m	82m	n/a	n/a
	OM3	550m	1km	300m	100m	100m
	OM4	550m	1,1km	400m	150m	150m
Bandwidth		1300nm - OM1, OM2, OM3, OM4			1310nm - OS1, OS2	
Data speed		100Mb/s	1Gb/s	10Gb/s	40Gb/s	10Gb/s
Source		LED	Laser	Laser	Laser - CWDM	Laser - WDM
Distance	OM1	2km	550m*	300m	n/a	n/a
	OM2	2km	550m*	300m	n/a	n/a
	OM3	2km	550m	300m	n/a	n/a
	OM4	2km	550m	300m	n/a	1n/a
	OS1/2	10km	5km	10km	10/30km	10/30km

* Use of mode conditioning patch cord. Distances from IEEE 802.3 standards.
We also offer ITU-T G.657 reduced bend sensitivity optical fibres and ITU-T G.655 NZDS optical fibres.

Planning a structured cabling project in a tertiary-sector building or data centre, for industrial Ethernet or an emergency telephony solution? Microtron develops, calculates, delivers and supports.

Why choose Microtron?

- Leader in innovative networking technologies and applications
- Very wide range
- Unbeatable value for money
- Robust and flexible
- Watertight guarantees
- Independent advice from top experts on your purchase and installation process
- Deliveries directly on site
- Support and training
- Certification of installers and their personnel

Our markets



Tertiary market:
offices, healthcare, schools



Data centres, server spaces



Energy and industry



Government

Microtron Belgium

Generaal De Wittelaan 7
2800 Mechelen

+32 (0) 15 29 29 29 | info@microtron.be



Our partners



These industrial installation engineers and integrators are already working with Microtron network solutions:



Microtron Luxembourg

11A Boulevard Joseph II
1840 Luxembourg

+352 (0) 621 23 66 62 | info@microtron.lu

