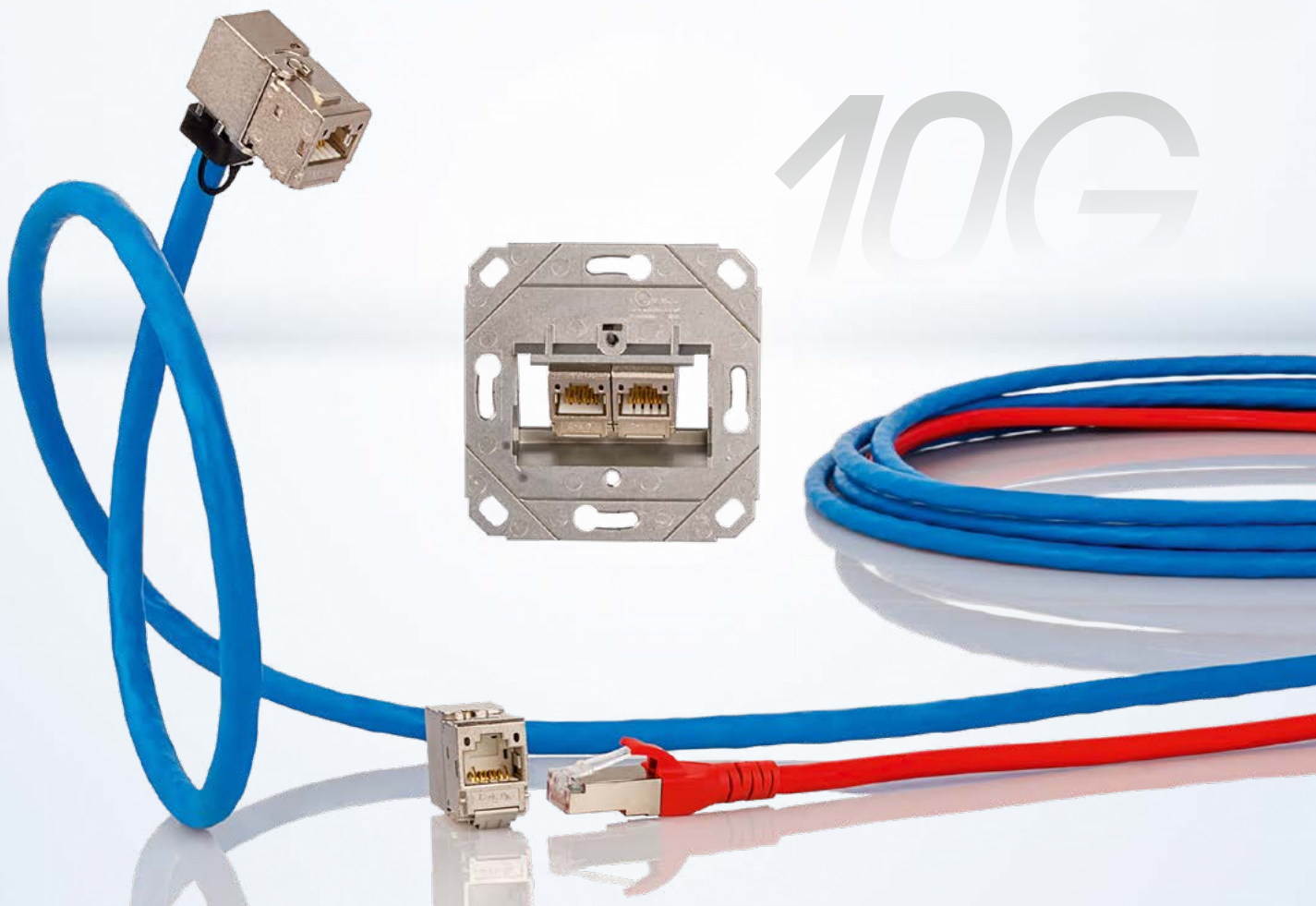# C6$_A$modul and C6$_A$modul Keystone – The connection system for a variety of applications

10G

P | Cabling

Intelligent system solution for structured cabling

Today, the need for high data transfer rates is enormous. This applies to public buildings and office complexes, but also for real estate and private real estate. A forward-looking, intelligent building cabling for a wide variety of uses is similar important to residents as basic building control systems.
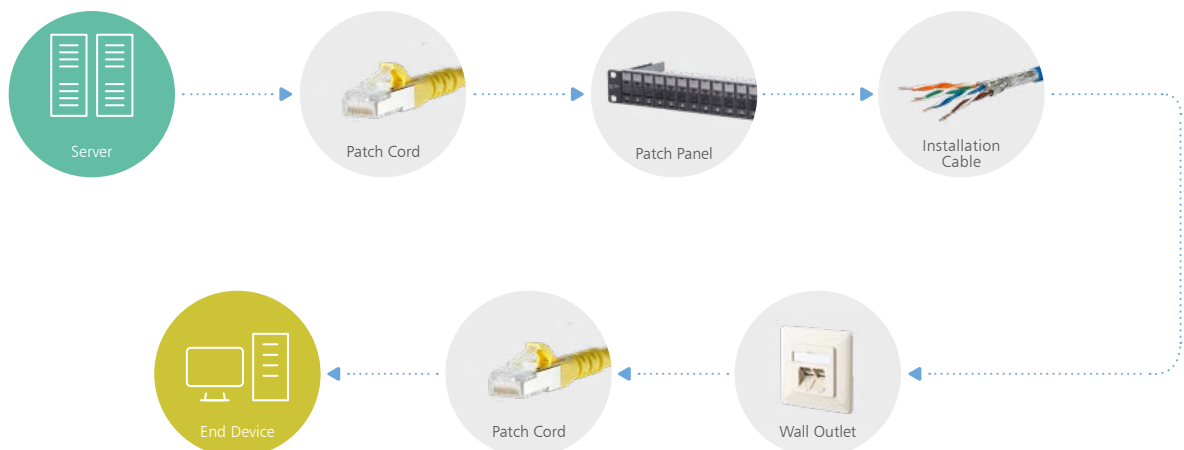
It helps owners to manage their investments over the years as well as to minimize installation and maintenance costs. As a guide for planning and implementation of cabling systems there are national and international standards, however they only represent a basis. Important for a sustainable, structured building cabling are continuous, internationally standardized and powerful network solutions. These needs are covered by our C6$_A$modul and C6$_A$modul Keystone connection systems with Cat.6$_A$. Because of their high system capability, the modules can be used in a wide variety of applications.

In addition to the C6$_A$modul, we also offer solutions in the P|Cabling product range for structured building, industrial cabling and data centers. These are highly specialized, internationally standardized and powerful connection components and systems in copper and fiber optic technology.

All these products offer a high level of installation friendliness, maximum quality and highest system capability across all relevant performance classes. With RJ45, we offer the 25G system with transmission rates up to 25 GBit/s. In the Fiber Optic from Singelmode OS2 up to the new Multimode OM5 products for transmission rates of 100 GBit/s and more.

The highest compatibility for efficient use

Our connection system is consistent and compatible - a requirement for transparent, efficient and individual use of future-oriented network and cabling systems.
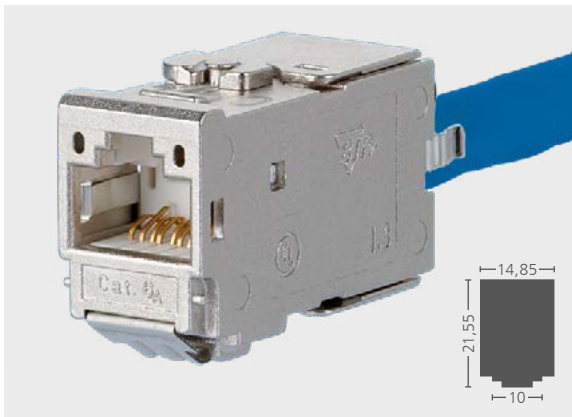
Server

Patch Cord

Patch Panel

Installation Cable

End Device

Patch Cord

Wall Outlet

Performance overview C6$_A$modul and C6$_A$modul Keystone

This flexible, modular core of the system manages to ensure a general cabling basis, non-regarding which communication application is transmitted.
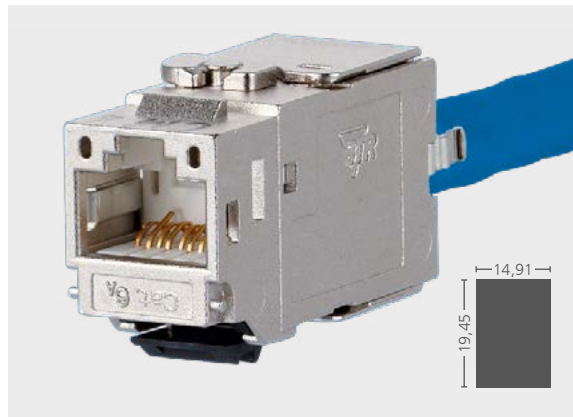
> GHMT Cat.6$_A$ re-embedded PVP certified
> Cat.6$_A$ component testing according to ISO/IEC 11801-1, EN 50173-1, GHMT certified
> Compliance with Class E$_A$ according to ISO/IEC 11801-1 and EN 50173-1
> Components tested up to 600 MHz, link tested up to 800 MHz
> 2 mounting version: module and Keystone
> 3 Variants of cable feeding: 90°, 180° and 270°
> Connection without special tools, short assembly and connection time

> Patch and installation cable can be connected in the sizes AWG 26/7–22/7 and AWG 24/1–22/1
> Suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus, UPoE and 4PPoE) and HDBaseT
> Robust and reusable zinc diecast module housing
> Intelligent cable management for heavily twisted cables
> Strain relief directly on the charging piece
> 360° shield connection
> A dust cover is optionally available

Variants C6$_A$modul
(Installation cut-out design module)

C6$_A$modul 180°

C6$_A$modul 90°

C6$_A$modul 270°

Variants C6$_A$modul K
(Installation cut-out design Keystone)

C6$_A$modul K 180°

C6$_A$modul K 90°

C6$_A$modul K 270°

Versatile and universal - system solutions from a single source

The challenge to a future-oriented connection system, which can be used universally and flexible, is enormous. The C6$_A$modul and C6$_A$modul Keystone connection systems meet these complex requirements: This enables a use in a wide variety of applications, including the already existing applications of the E-DAT module system as well as in the Keystone applications on the market. The three versions of cable feeds permit a use even in small spaces.

Further advantages are the simple and cost-effective assembly without special tools as well as the direct use of switch manufacturer-labeled covers. Our network components forms a continuous system - from server via patch cable, patch panel and wall outlet up to the end device we offer compatibility from one source. The advantages of our system solutions are increased safety and a simplification of assembly and installation.
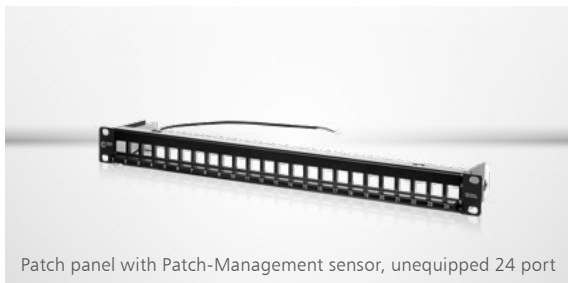
Applications for C6$_A$modul

Wall outlets

DIN rail housing REGplus

Wall outlet

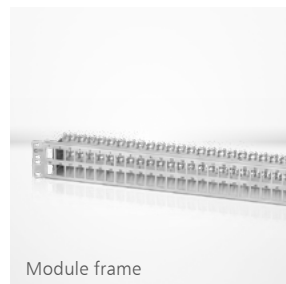Patch panel with Patch-Management sensor, unequipped 24 port

Underfloor GB2/GB3

Surface-mounted housing
3, 4, 6, 8, 12, 16 and 24 Port

Module frame

Module frame

Surface-mounted wall
outlets and face plates

High performance

The modules demonstrate high performance by meeting the Cat.6$_A$ component standard ISO/IEC 11801-1 for applications in the range up to 500 MHz bandwidth and 10 GBit Ethernet according to IEEE 802.3an. The C6$_A$modul is available as a component tested up to 600 MHz and in the link up to 800 MHz. The product quality is further enhanced by a robust zinc die-cast housing.

Independent certification

The connection system meets the requirements of the Cat.6$_A$ standards and is certified by an independent accredited test laboratory according to ISO/IEC 11801-1, TIA/EIA-568, IEC 60603-7-51 and EN 50173-1 tested and certified. By participating in the continuous and independent GHMT Premium Verification Program (PVP) and the resulting certification, you can be sure that you will always have a high-quality product.

According to the above standard, the requirements of Class E$_A$ are also met in the permanent- and channel-link.

Cat.6A, Cat.6$_A$?

There is some confusion on the market about the names and the specifications of the Cat.6$_A$ standard, because there are two valid standards for this. The specifications according to TIA/EIA (American standard) are less strict and do not differentiate between cabling route and component. Here everything is referred as category (Cat.).

Compared to the ISO/IEC (international standard) which differs between cabling routes (class/class) and components (Category/Cat.), also the specifications are higher. Another difference between the two standards is the notation Cat.6A (TIA/EIA) and Cat.6$_A$ or Class E$_A$ (ISO/IEC). The performance of a Cat.6A channel link to EIA/TIA does not match the performance of a class E$_A$ Channel-Link compared to ISO/IEC!

If you would like to ensure, that you have an optimal cabling according to class E$_A$, you need to choose your components to the Cat.6$_A$ specification according to ISO/IEC.

Suitability of the components compared to the standards ISO/IEC and TIA/EIA

	TIA/EIA Cat.6A Channel	TIA/EIA Cat.6A Permanent Link	TIA/EIA Cat.6A Components	ISO/IEC Class E$_A$ Channel	ISO/IEC Class E$_A$ Permanent Link	ISO/IEC Cat.6$_A$ Components
TIA/EIA Cat.6A Components	✓	✓	✓	2 Conn. nearly 4 Conn. No	2 Conn. nearly 3 Conn. No	✗
ISO/IEC Cat.6$_A$ Components	✓	✓	✓	2 and 4 Conn. ✓	2 and 3 Conn. ✓	✓

✓ Einhaltung der Spezifikationen   ✗ keine Einhaltung der Spezifikationen

Conclusion: Components that comply with the specifications of ISO/IEC Cat.6$_A$, such as our C6$_A$ module connection system, can be used worldwide, because here applies the "stricter" limit values.

No system without installation and patch cables

10 GBit high-speed data transmission requires the performance of all components. In addition to the connection components, we offer appropriate installation cable and patch cord for a complete and comprehensive solution from the server up to the end device

GC1300 pro22 Cat.7$_A$ S/FTP LSHF-FR Simplex/Duplex

> 25/10 GBit installation cable
> Pair shielded installation cable
  Cat.7$_A$ AWG 22 S/FTP
> Simplex 4 pairs (PiMF) or Duplex 2 x 4 pairs (PiMF)
> Overall shield: Cu tinned braid,
  coupling loss $\geq$ 85 dB
> Applicable standards: EN 50173-1; ISO/IEC 11801-1;
  EN 50288-9-1 and IEC 61156-5
> Flame retardancy: IEC 60332-1; IEC 60332-3-24;
  IEC 60754-2 and IEC 61034

> Standard length:
  Simplex = 1000 m/Duplex = 500 m
  on a drum
> Cable sheath: LSHF-FR (LSOH-FR) - Low Smoke,
  Halogen-Free, Flame Retardant
> Reaction to fire: Class D$_{ca}$ s2d2a1 according to
  EN 50399 (classification according to EN 13501-6)

P/N	DESCRIPTION	EAN
1308427B34142	SIMPLEX 1000 m on a drum	4251394603995
1308427B34143	Duplex 500 m on a drum	4251394604008

Patch cord Cat.6$_A$ 10G AWG 26

> especially suitable for unshielded and shielded
  Class E$_A$ systems
> fully shielded Cat.6$_A$ patch cord AWG 26/7
> two shielded RJ45 plugs, wiring 1 - 1
> Cable type: S/FTP 4 x 2 x AWG 26/7 PIMF
> Cat.6$_A$ component testing according to
  ISO/IEC 11801-1 and IEC 61935, GHMT certified
> Cable sheath LSHF(LSOH), Halogen Free

> Class E$_A$ link up to 500 MHz according to
  ISO/IEC 11801-1, EN 50173-1
> suitable for 10 GBit Ethernet (IEEE 802.3an), Remote
  Powering (PoE, PoE plus and UPoE) and HDBaseT
> Anti-kink sleeve sprayed, with integrated locking
  lever protection

P/N (xx = length)	DESCRIPTION	P/N (xx = length)	DESCRIPTION
130845xx00-E	black	130845xx44-E	blue
130845xx01-E	orange, black bend protection	130845xx55-E	green
130845xx02-E	magenta, black bend protection	130845xx66-E	red
130845xx09-E	violet, black bend protection	130845xx77-E	yellow
130845xx33-E	grey	130845xx88-E	white

Order matrix

C6$_A$modul — DESIGN MODULE

C6$_A$modul package		Individual module package C6$_A$modul 130B11-E		12 unit module package C6$_A$modul 130B11-Z
19 inch module frame unequipped*	1HE, alu/light grey 130920-00-E	1HE, stainless steel 130921-00-E	19 inch module support 1.5HE 48 port, stainless steel 130924-00-E	1HE, black 130920-BK-E / PM System 13PP11B-E
Module module frame unequipped				3HE, 7TE 6 port stainless steel 130B10E2E-E
DCCS2 component unequipped				4 Ports 130D2CBU4-E
Wall outlet unequipped*	**AP** 1 Port 130B10D10002-E 2 Port 130B10D20002-E 3 Port 130B10D30002-E	**UP** 1 Port 1309141002-E 2 Port 1309151002-E 3 Port 1309161002-E	**UPk** 1 Port 1309141102-E 2 Port 1309151102-E 3 Port 1309161102-E	**UP0** 1 Port 1309141200-E 2 Port 1309151200-E 3 Port 1309141200-E
DIN rail installation REGplus unequipped*				Module REGplus IP20 1309427103-E
Wall-mount housing unequipped	3 Port 130861-0302-E 4 Port 130861-0402-E	6 Port 130861-0602-E 8 Port 130861-0802-E	12 Port 130861-1202-E 16 Port 130861-1602-E	24 Port 130861-2402-E
Underfloor installation unequipped X = Port number	Subway underfloor unit GB2 3, 6, 9 port 1309350X01-E		Subway underfloor unit GB3, 03, 06, 09, 12 port 130936XX01-E	

*19 inch panels available with 180° modules available, wall outlets and REGplus equipped with 180° or 270° modules available

C6$_A$modul K — DESIGN KEYSTONE

C6$_A$modul K package		Individual module package C6$_A$modul K 130B21-E		12 unit module package C6$_A$modul K 130B21-Z
19 inch Keystone module frame 1HE, unequipped	Alu/light grey 130920-00KE	Light grey 130926-0003KE 130926A0003KE	Stainless steel 130A21-00-E	black 130920-BKKE 130926-0029KE 130926A0029KE
Keystone module frame unequipped				3HE, 7TE, 6 port stainless steel 130B20E2E-E
DCCS2 component unequipped				4 Ports Keystone 130D2CKU4-E
Wall outlets Keystone unequipped	**AP** 1 Port 130B20D10002KE 2 Port 130B20D20002KE 3 Port 130B30D30002KE	**UP** 1 Port 130B20D11002KE 2 Port 130B20D21002KE 3 Port 130B20D31002KE	**UPk** 1 Port 130B20D11102KE 2 Port 130B20D21102KE 3 Port 130B20D31102KE	**UP0** 1Port 130B20D11200KE 2Port 130B20D21200KE 3Port 130B20D31200KE
DIN rail installation REGplus unequipped				REGplus IP20 1309428103-E
Wall-mount housing unequipped	3 Port 130861-0302KE 4 Port 130861-0402KE	6 Port 130861-0602KE 8 Port 130861-0802KE	12 Port 130861-1202KE 16 Port 130861-1602KE	24 Port 130861-2402KE
Underfloor installation Keystone unequipped X = port number	Subway Keystone Underfloor unit GB2 3, 6, 9 Port 130B20S50X01-E		Subway Keystone Underfloor unit GB3 03, 06, 09, 12 Port 130B20S6XX01-E	

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