

*Special Edition*

**CLPA Global Activity Report**

# Making a Global Breakthrough with CC-Link & CC-Link IE



## **Special Interview**

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With more than 50 years of experience in sensors, Balluff GmbH is one of the world's leading sensor specialists in all areas of automation. For some years now the company has increasingly been developing from a pure sensor and components manufacturer into an automation and systems supplier. Since 2008 Balluff has been a member of the CLPA and is now entering the Managing Board of the organisation as the eighth company worldwide. In an interview, Jürgen Gutekunst, Vice President, Business Unit Networking and Business Unit Systems at Balluff, gives an overview of the company, explains the reasons for the increased commitment to CC Link and describes his vision for the future of the CLPA.

**Mr Gutekunst, Balluff can look back over more than 90 years of history and has developed from a mechanical repair workshop for bicycles, motor cycles and sewing machines into an international sensor specialist. This sounds like a real success story!**

It certainly is! The family company was founded in 1921 by Gebhard Balluff and is now in its fourth generation. Balluff is a world market leader in the area of inductive sensors. As well as sensors, for some time now our focus has been increasingly on automation technology. We are now represented in more than 50 countries worldwide and have eight production locations, including one in Chengdu in China. Development is mainly taking place at our head office in Neuhausen near Stuttgart, but also in Hungary and to some extent in Switzerland and the USA. The company is divided into the six business divisions Object Recognition, Path Measurement, Identification – this also includes our RFID



CC-Link IP67/ IP65 Protected Machine mount I/O blocks

products –, Accessories, and for some years now, Networking and Systems.

**What are the essential features which characterise Balluff products?**

We always try to react to our customer's requirements with added value, which necessarily leads to innovative products with outstanding characteristics. For us 1 + 1 = 3! This does not mean that innovations and product improvements necessarily have to be complex – often they are minor things that are worked out in dialogue with our customers. For example the two-hole mounting of our network and RFID modules. Customers had not asked as such for this additional benefit. However, it was taken up with enthusiasm. Now only two holes have to be drilled instead of four, two screws used instead of four and so on. Extrapolate this over several hundred devices, such as were recently made in a plant in the USA. The time saving is enormous, assembly is greatly simplified and so the costs are markedly reduced. Another nice feature and unique characteristic of our modules is the integrated display. The CC Link module was the first we fitted with the illuminated, easily readable display instead of the traditional rotary switch. This means that it is not only convenient for setting the address, but the hardware and software status can also be read out easily. It sounds like a minor thing, but it makes operation so much easier!

**The Networking business division is comparatively young. So, how did a sensor manufacturer get onto the subject of network technology?**

In 2005 Management decided to support the core sensors business by targeted involvement in the area of connectivity. This investment was a first step in the direction of factory automation. The argument was relatively simple at that time: we wanted to supplement our core portfolio and offer the customer something more. If we want to increase our involvement in Asia, for example, it is not enough solely to offer sensor products. We now also carry the associated network solutions, starting with the corresponding CC Link modules – IO modules and RFID systems – through to the necessary plug connectors and network devices. This far-sighted decision has paid off: in the meantime the division is growing into the high double figures. This makes it clear that we are being very well accepted in the market as far as this subject is concerned.

**Balluff has been a CLPA member since January 2008. How did this decision come about?**

The decisive reason was our objective of entering the rapidly growing Asian market not only with our sensors, but also with our automation technology. The support of the CLPA was necessary for this. Today Balluff's CC Link family has six BNI (Balluff Networking Interface) I/O network modules and the BIS-V (Balluff Identification System) RFID controller. The products are manufactured from a high quality die-cast zinc housing and fulfil the most demanding requirements from the field. The new BIS-V generation is an evaluation unit with four connections for write – read heads, which supports all current protocols. With an additional IO Link V1.1 port, a future oriented interface for the field, serial communication can be developed into an intelligent device. For example, an input hub for sensors can be connected to the port. This turns the RFID unit into a multifunctional node in the CC Link Network.

**Recently Balluff became a member of the Managing Board of the CLPA and therefore**

**the first company based in Europe to be invited onto the Managing Board**

An opportunity like that doesn't present itself every day! CLPA's invitation to become a member of the Managing Board was put to us by Mitsubishi Electric. We did not hesitate for long, because in this position we can help actively to shape the future in the CLPA. If you want to be a global player, you also have to make your products available for the big three - Europe, America and Asia. We are underlining this statement again now as a member of the Managing Board. The Asian market is catching up at a rapid pace in the area of automation technologies. We best learn how a market functions if we work closely with an organisation such as the CLPA. Conversely, we can bring in a lot of experience from the "old" markets and set the direction together with the CLPA, to make new technologies such as IO Link and its use comprehensible for customers in Asia. The decentralisation of automation, which we have already experienced in Europe and North America, is and will remain an important topic in Asia, which we would like actively to push forward and direct a little, because it's true to say that you can best predict the future if you shape it.

**The trend towards decentralisation in factory automation began in Germany in the 1990s, and in Asia it's just starting. There's still a long way to go here ...**

That's true! A fundamental change needs time. You have to consider that not everything from the Western world can be transferred to Asia on a one-to-one basis. We have to adjust the arguments for our technologies locally in discussions with customers. In a foreign cultural area such as Asia we first have to learn and accept specific features of that region. One example is that the time efficiency which our highly developed technologies bring is not necessarily the clinching sales argument in low-wage Asian countries. Wage costs alone do not make it absolutely necessary to introduce slick solutions in installation and maintenance. Conversely, China in particular has now advanced to become an export nation, in which Western standards and special customer requirements have to be fulfilled more and

more frequently. Western solutions will now also be listened to at this point.

**What is your opinion of the future of the CLPA? And what role does Balluff want to play in it?**

I think that technologies such as CC Link, Profibus or Ethernet/IP will no longer continue to be regionally limited in the coming years. In the USA, for example, we are equipping a large plant with CC Link and IO Link. The task arising from this for the CLPA is immense, because the spread of CC Link will not be limited to Asia. Balluff is already supporting the CLPA campaign "Gateway to China" (G2C), which make it easier for device manufacturers to enter the market in China. The CLPA will also have to establish itself in Europe and North America as ambassadors for CC Link and CC Link IE Field. Balluff is able to provide support in these regions and wants to do so, because not only are our core markets located there, but there is also a great potential for automation. The needs and problems of customers such as price pressure, productivity increases or unit cost reduction have been the same for years and in all regions. What have changed are the technologies by which the problems are approached. The success of the CC Link campaigns will chiefly depend on how well the technologies respond to the demands mentioned. Balluff can contribute to reaching the market in a targeted way in the most varied segments of industry.

**Are concrete projects pending with the CLPA?**

At Balluff we are already tackling the next challenge: the integration of the Ethernet based network CC Link IE Field with a transfer speed of one gigabit. Here we are working closely with Mitsubishi Electric, which uses the standard network CC Link and the Ethernet version CC Link IE Field in its control systems. This development project not only includes network modules, but also RFID controllers. As a member of the Managing Board, we intend to work together with the CLPA on the market acceptance of this new generation of decentralised automation modules.

**One more question to finish: everyone is**



**Jürgen Gutekunst**  
Vice President,  
Business Unit Networking and Business Unit Systems

**talking about "Industry 4.0". What role does this play at Balluff?**

Balluff is on the way from being a successful components supplier to becoming a no less successful solution supplier. The fact that we are also prepared to take the next step is shown by the founding of the Systems Business Unit two years ago, which means we are already right in the middle of things: we want to be involved in determining the future and obtaining new impetus for innovations from the discussions in connection with Industry 4.0. We are working on realising the concept mainly across the business divisions Identification, Networking and Systems. We have the necessary sensor systems, Ethernet based network technology – soon also CC Link IE Field – and the RFID technology for controlling and identification of process stages. The last module is the intelligent IT supported combination system, where the manufacturing and logistics sequences are not determined by one central control system, but the product controls itself as a function of its characteristics. This ensures maximum flexibility – and also a re-think! An initial project concerns e-kanban systems for individually packaged goods management. With the assistance of RFID and a specially developed logic, the kanban system becomes intelligent. An initial piece of the jigsaw in the context of Industry 4.0, in which the kanban containers control themselves in the end.

**Thank you for the interview!**



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