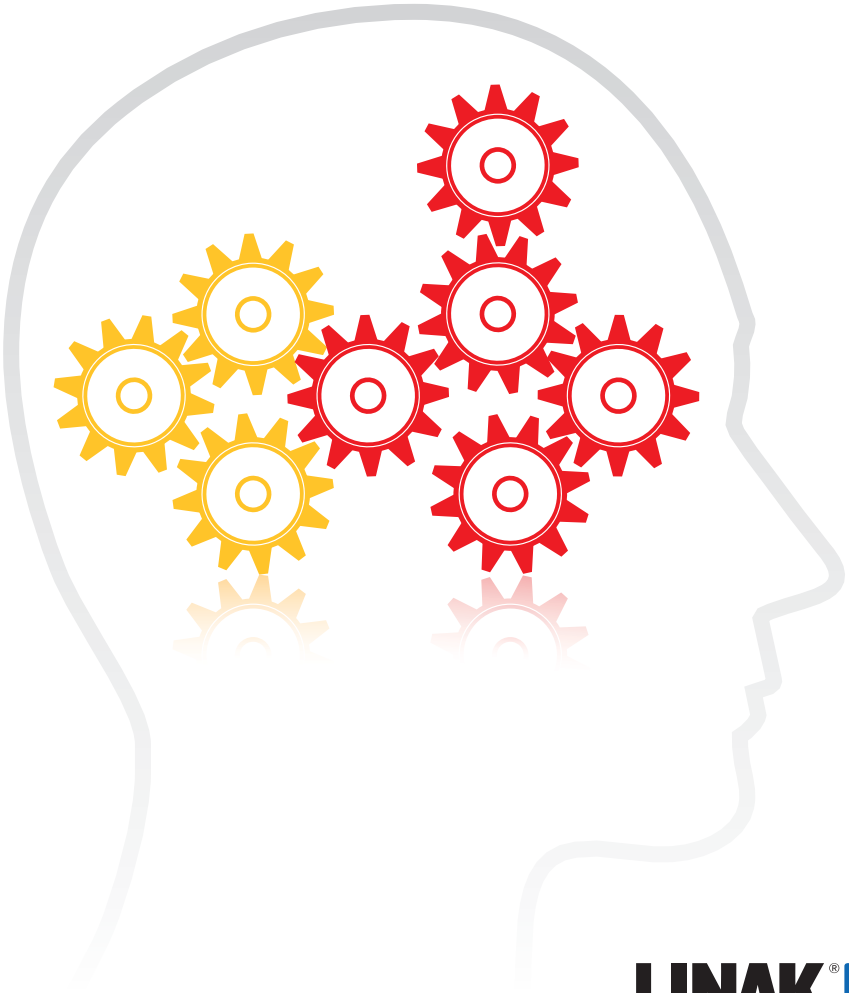
OpenBus™

OpenBus™

- Brings intelligence into your application



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OpenBus™ is LINAK's Platform for

- Control boxes
- Safety concept
- Clever movement
- Customised functionalities
- Value adding services (accessories)

Traditionally, a control box is based on relays and the functions are controlled via a wired handset. ("Wire-to-function principle")
Basically, OpenBus can fulfil the same basic needs. OpenBus is the technical platform in the control box that controls the movement of the actuators. In addition, OpenBus offers a lot of options that bring additional value into various applications for the customers and end-users.

The following pages will show you the great opportunities that the OpenBus concept can offer if you are ready to take a big step into the future.

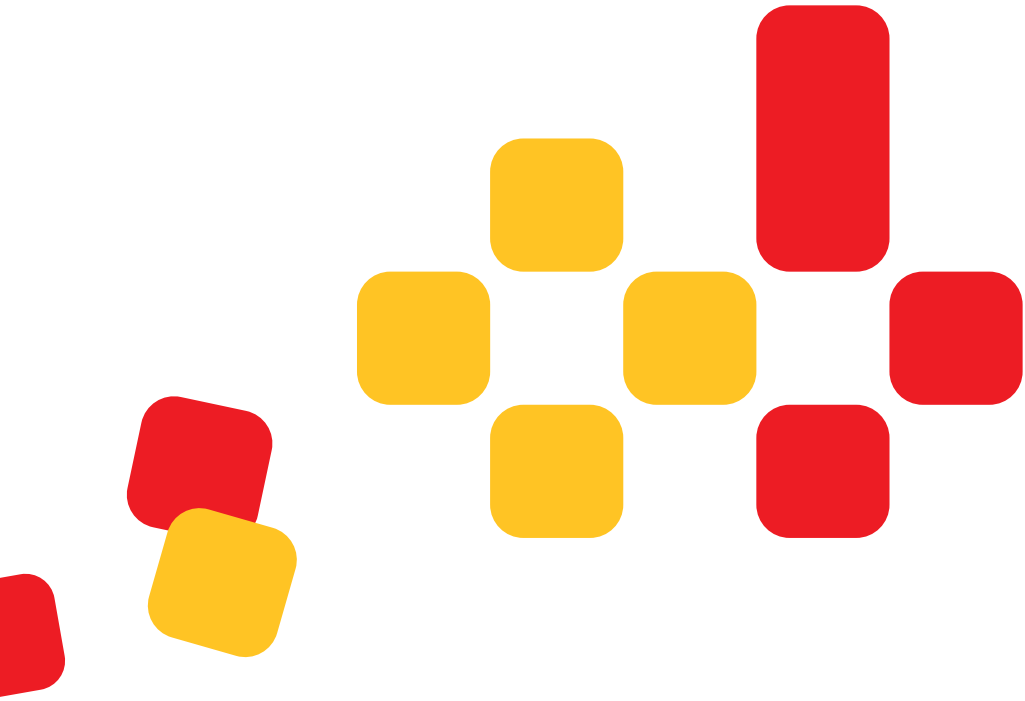
Trends and Possibilities

OEM:

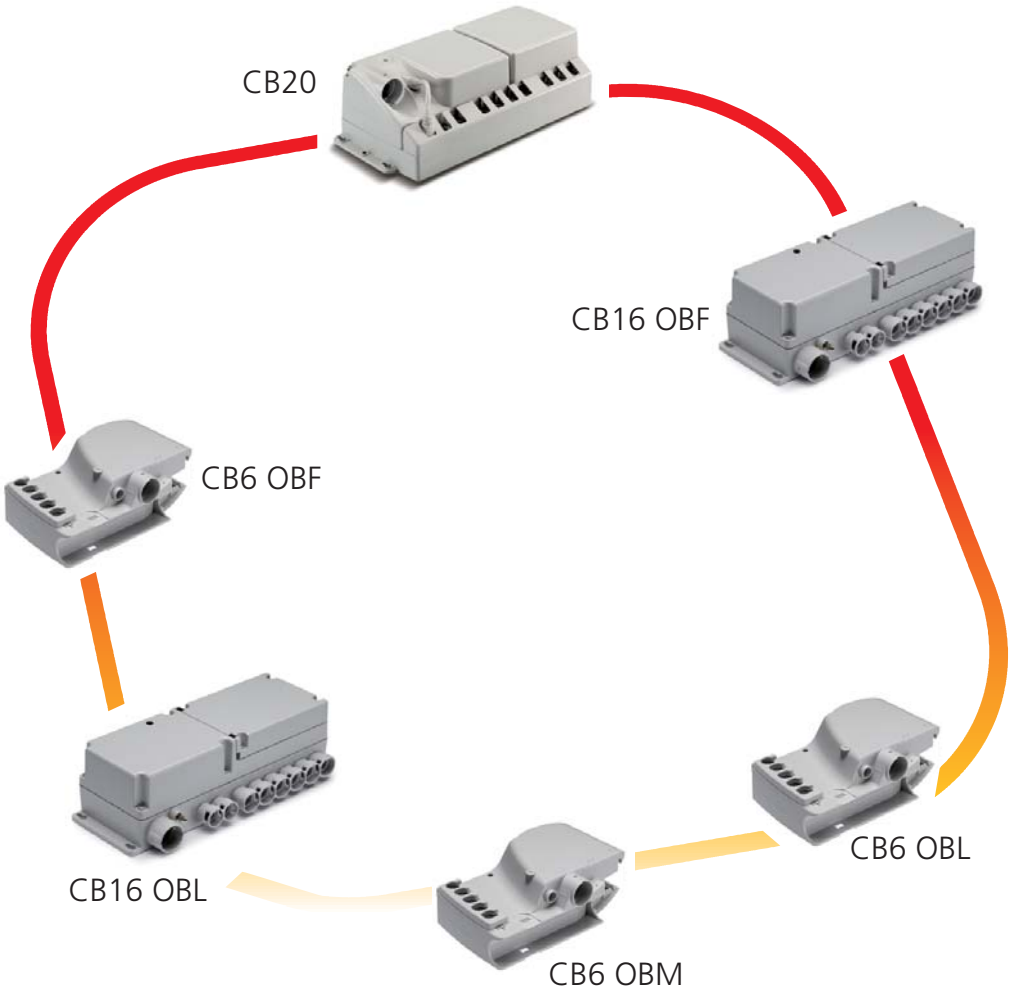
- Strong competition in the market
- Shorter product life cycles
- Need for differentiation
- Focus on quality and safety
- Focus on system solutions
- Focus on IT
- Focus on flexibility and logistics
- More requirements from end-users

End-user:

- Lack of resources
- Lack of time
- Lack of sufficient tools & features
- Focus on "LEAN"
- Focus on IT
- Focus on quality
- Focus on individualism
- Care efficiency



These are the Members of our OpenBus™ Family today



WHAT is OpenBus? – From a technical point of view

Bus Technology

In IT architecture, a bus (bidirectional universal switch) is a subsystem that transfers data or power between IT components inside a computer or a control box or between several components, and typically a bus is controlled by device driver software. Unlike a point-to-point connection, a bus can connect several peripherals (Handsets, Attendant Controls) over the same set of wires.

OpenBus is a communication concept for electronic devices, invented by LINAK

OpenBus has been developed for LINAK Control Boxes, in order to ensure higher flexibility and logistical advantages in LINAK's actuator systems. It is a LINAK proprietary standard; it is a cost-effective, serial communication system for LINAK system solutions.

The nature of OpenBus makes it possible to attach external devices to the LINAK system via the digital Control Box. This means that it is prepared to "speak the same language" as other external devices via the standardised protocols. This improves the utilisation options of LINAK systems, when attaching external devices such as:

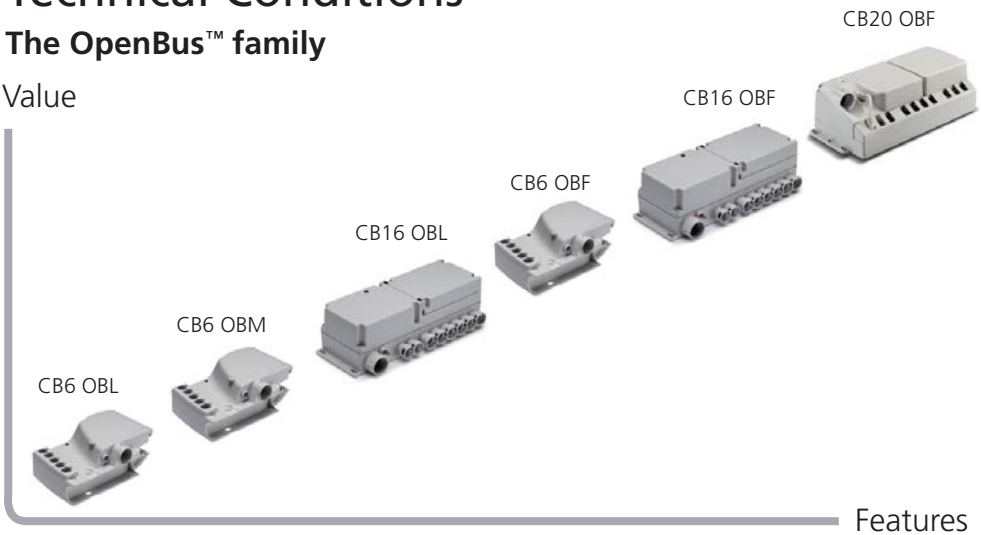
- Service Data Tool (For service and maintenance read-out)
- Under Bed Light
- Clean Me (Time to clean the bed)
- Check Me (Perform service on the bed)
- Wireless handsets
- Scale
- USB Power Supply
- Watch Me (Out of Bed Detection)
- Gateway
- Bedside Light

OpenBus Benefits:

- Self-synchronisation mechanism means no quartz oscillator (real-time) required
- No license fee
- Offers flexibility in the use of LINAK's range of actuator systems
- Open for various Add-on Features
- First failure safe (unintended movement is simply impossible)
- Customised software

Technical Conditions

The OpenBus™ family



Today, OpenBus has 6 family members. CB6 come in a Light, Medium and Full version and CB16 come in a Light and Full version. The basic differences between the variants are:

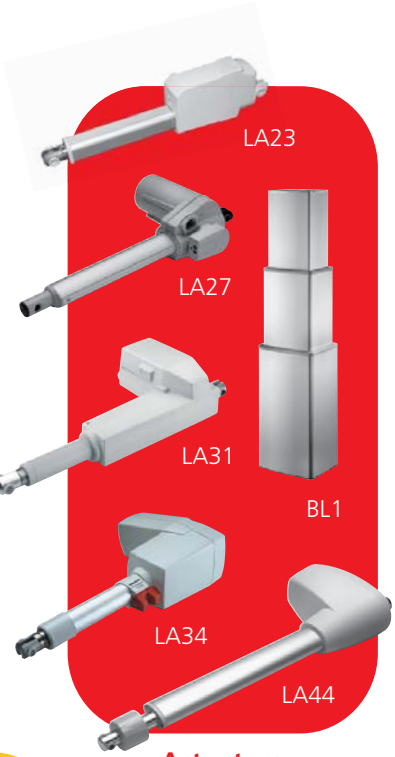
OBL (OpenBus Light)
- Relay based (has EAS protection)
- IPX4 (IPX6 optional)
- 4-5 CH: LAxx with end-stop / signal switch
- Predefined SW – functionality determined by fixed handset layout
- No feedback – simultaneous operation
- No Service Data Tool
- No support of charging indicator (CB6) (not approved with battery backup)
- Max. current 8A total / 5A per channel (No Electronic Overload Protection)
- OpenBus accessories limited: Max. 25 mA (CB6: 3-5 accessories can be added)
- Battery backup

OBM (OpenBus Medium)
- Relay Based (EAS protection)
- IPX6
- 4 channels (CB6 OBM)
- Predefined SW
- Semi-parallel operation (Feedback possible)
- Supports SDT
- No Charging indicator (CB6 OBM)
- Max current 8A total / 5A per ch. (EOP supported)
- OpenBus accessories limited: 200 mA (10+ accessories supported)

OBF (OpenBus Full)
- FET based
- IPX4 (IPx6 optional)
- 4-5 channels: LAxx with end-stop/signal switch (CB20 up to 6 channels)
- SW - to be defined similar to CB20
- Supports feedback = parallel operation
- Supports Service Data Tool
- Supports charging indicator
- Max. current 8 total / 5A per ch (EOP)
- OpenBus accessories limited: Max. 200 mA (10+ accessories can be added)
- Battery backup

System Compatibility

OpenBus offers flexibility by combining the products shown on this page to fit your specific need. Please contact your LINAK partner for designing the right system according to your application.



Actuators

Controls, handsets & accessories

ACC (Attendant Control Compact)

Scale (- and many other accessories)

ACO (Attendant Control OpenBus)

MJB (Modular Junction Box)

HB80 (Handset)

CB20

CB16 OBL and OBF

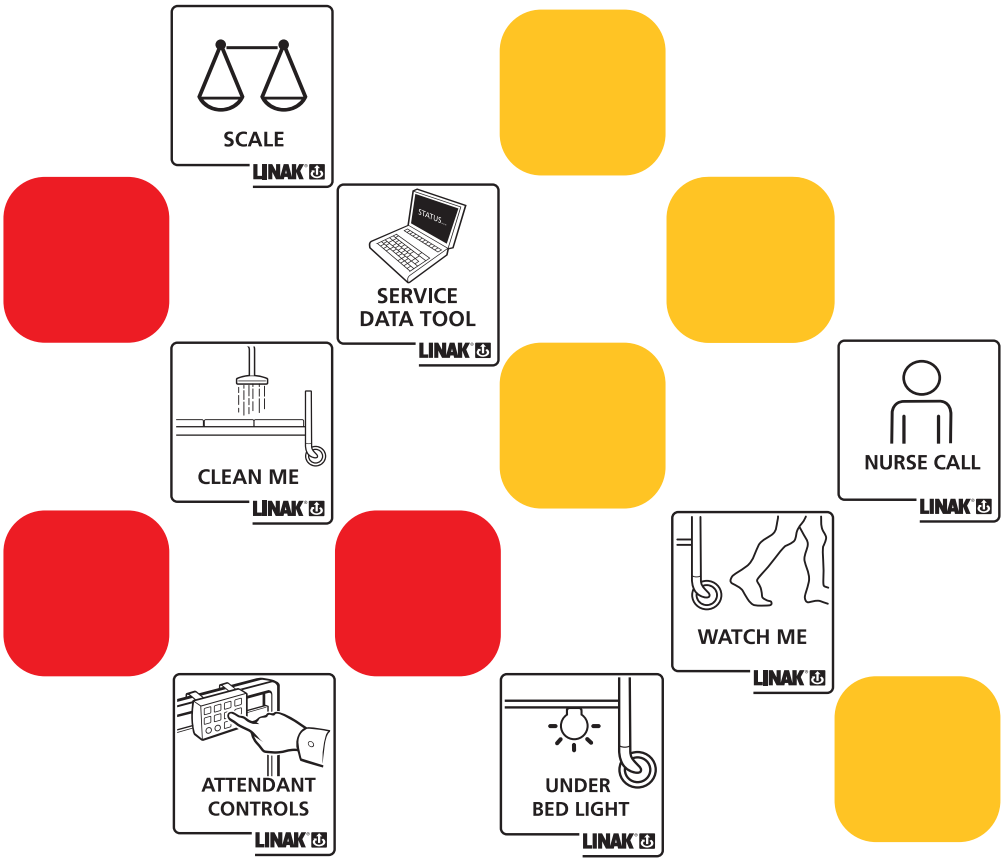
CB6 OBL, OBM and OBF

Control boxes

Software Programming

OpenBus™ makes it possible to customise your solution. The software inside can be configured by LINAK or it can be made in the customer's production facility according to his needs and preferences. LINAK offers standard packages that can be implemented fast and easy or the customer can choose a special software that corresponds to more specific needs. Together with a LINAK salesman, the customer can actually design his own software – thanks to the intelligent and flexible OpenBus technology.

OpenBus Accessories



OpenBus™ Provides: Flexibility, Accessories and Safety

R&D Manager: "OpenBus has added a new dimension to our development. Now we can add extra features to the basic application offering added value to the customers.

Sales Manager: "OpenBus gives my sales staff so many features and extra value to talk about, meeting the exact demand of our customers"

Managing Director: "My company has increased its turnover and market share thanks to our ability to offer customised solutions based on OpenBus".

Purchase Manager: "We have decreased our stock remarkably because the OpenBus platform gives us the opportunity to optimise the logistical setup".

Creating visions.....

Nurse:
"OpenBus makes the patients more independent, saving me time for care and nursing".

Hospital Director:
"My hospital has become more efficient, and at the same time we have saved resourses thanks to OpenBus technology".

Service Technician:
"Suddenly I can make structured preventive maintenance on our equipment, fast and easy by using Service Data Tool with OpenBus".

Patient:
"I reduced my hospitalisation time, thanks to intelligent aid equipment and a resourceful and happy hospital staff".

If you would like further information on how you can benefit from OpenBus, please contact your closest LINAK subsidiary.

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