

Welcome at the product presentation of SFC ENERGY

LAPS-R and the LACS series



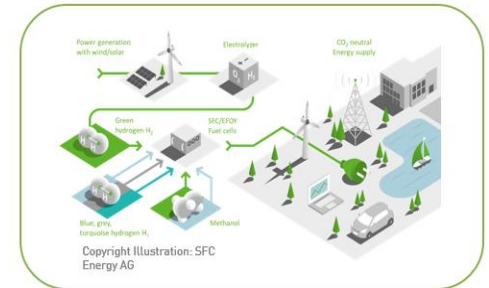
René Dingshoff

Technology manager

SFC Energy B.V.

is part of the

SFC Energy Group



Fuel cells systems



Coils & linear drives



Power supply solutions

- 🔌 Headquarters in Germany
- 🔌 Stock listed (F3C.DE)
- 🔌 Approx. 300 employees
- 🔌 5 locations:

- 🔌 Germany (HQ)
- 🔌 The Netherlands
- 🔌 US
- 🔌 Canada
- 🔌 Romania



New products: **LAPS-R** and LACS series

LAPS-R



🔌 **LA**ser **P**ower **S**upply

🔌 8 to 20kW Laser power supply

New product 1

LACS



🔌 **LA**ser **C**urrent Driver **S**ystem

🔌 Multi channel fast current driver system

New product 2

LAPS-R series

Power

- ⏻ 8 to 20kW in just 19" 3U
- ⏻ Voltage range from 9V to 180V
- ⏻ Currents up to 400A per unit
- ⏻ Liquid cooled

Flexible

- ⏻ 180Vac to 528Vac line-line, 50/60Hz, **no derating** at low line
- ⏻ Parallel and Serial operation
- ⏻ Modular and Scalable
- ⏻ 24V Auxiliary supply option

Safety Interlock PLe

- ⏻ Double **safety interlock**
- ⏻ Safety standard ISO 13849-1



Transient response

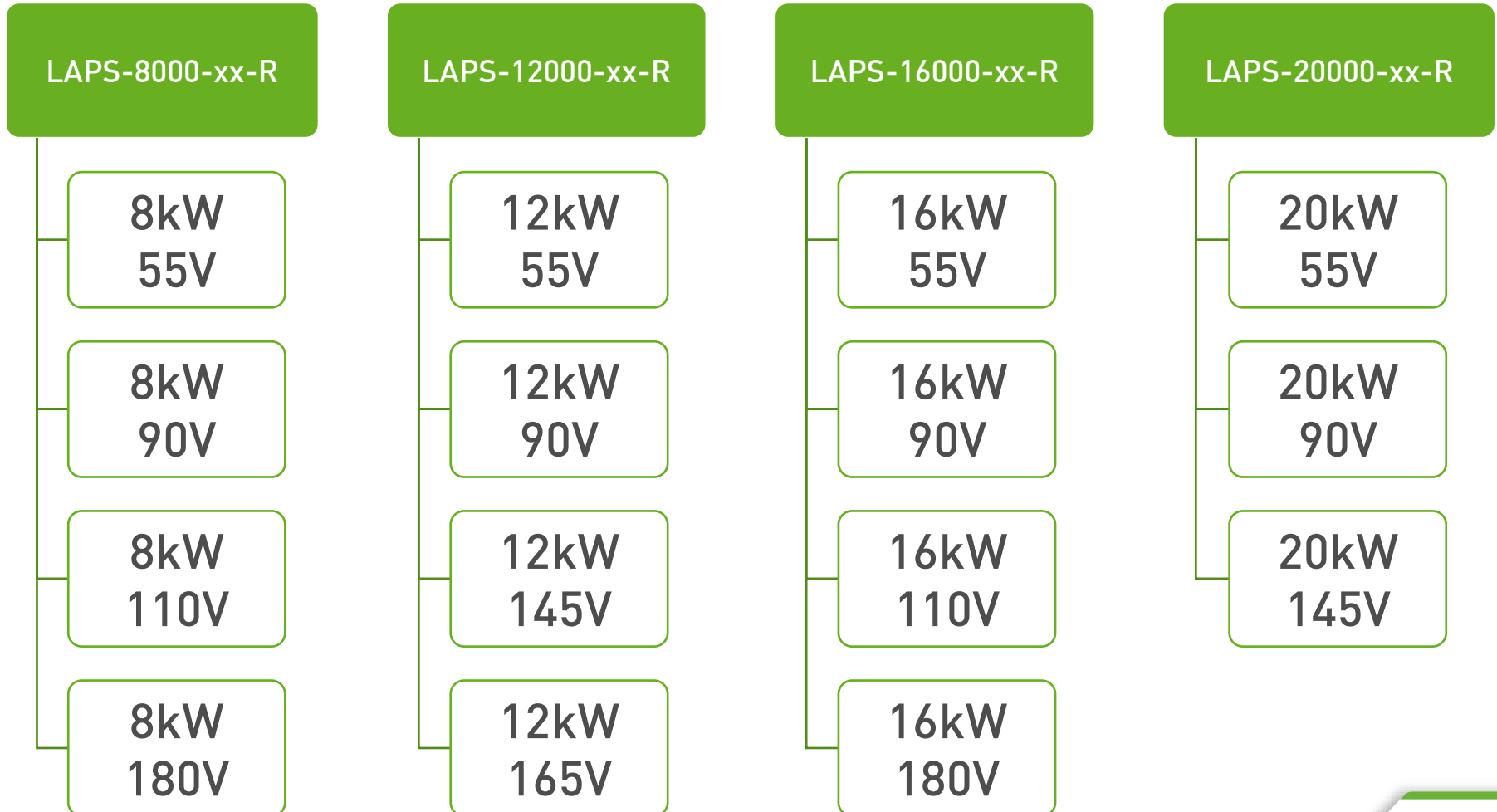
- ⏻ Improved **transient** response
- ⏻ 0-100% load: **<0.9% voltage dip**
- ⏻ Excellent **pulse load capability** at any frequency

Interface

- ⏻ Galvanic **isolated**
- ⏻ Digital and/or analog set-points
- ⏻ Control and monitoring

LAPS-R family

🔌 Possible system configurations LAPS-R series: 3U 19" unit



New products: LAPS-R and LACS series

LAPS-R



🔌 LAser Power Supply

🔌 8 to 20kW Laser power supply

New product 1

LACS



🔌 LAser Current Driver System

🔌 Multi channel fast current driver system

New product 2

LACS series

Power

- ⏻ **3.8 to 19kW** in just 19" 3U
- ⏻ Up to 8 fast current driver channels
- ⏻ Up to 65V, 35A, 2.3kW per channel
- ⏻ Liquid cooled



Fast current drivers

- ⏻ Fast rise and fall times of **10μs** (programmable)
- ⏻ Overshoot compensation
- ⏻ Excellent pulse to pulse stability

Flexible

- ⏻ 3Phase, **180Vac to 528Vac** line-line, 50/60Hz, **no derating** at low line
- ⏻ Modular and Scalable
- ⏻ Drivers can be put in parallel
- ⏻ Systems can be put in parallel

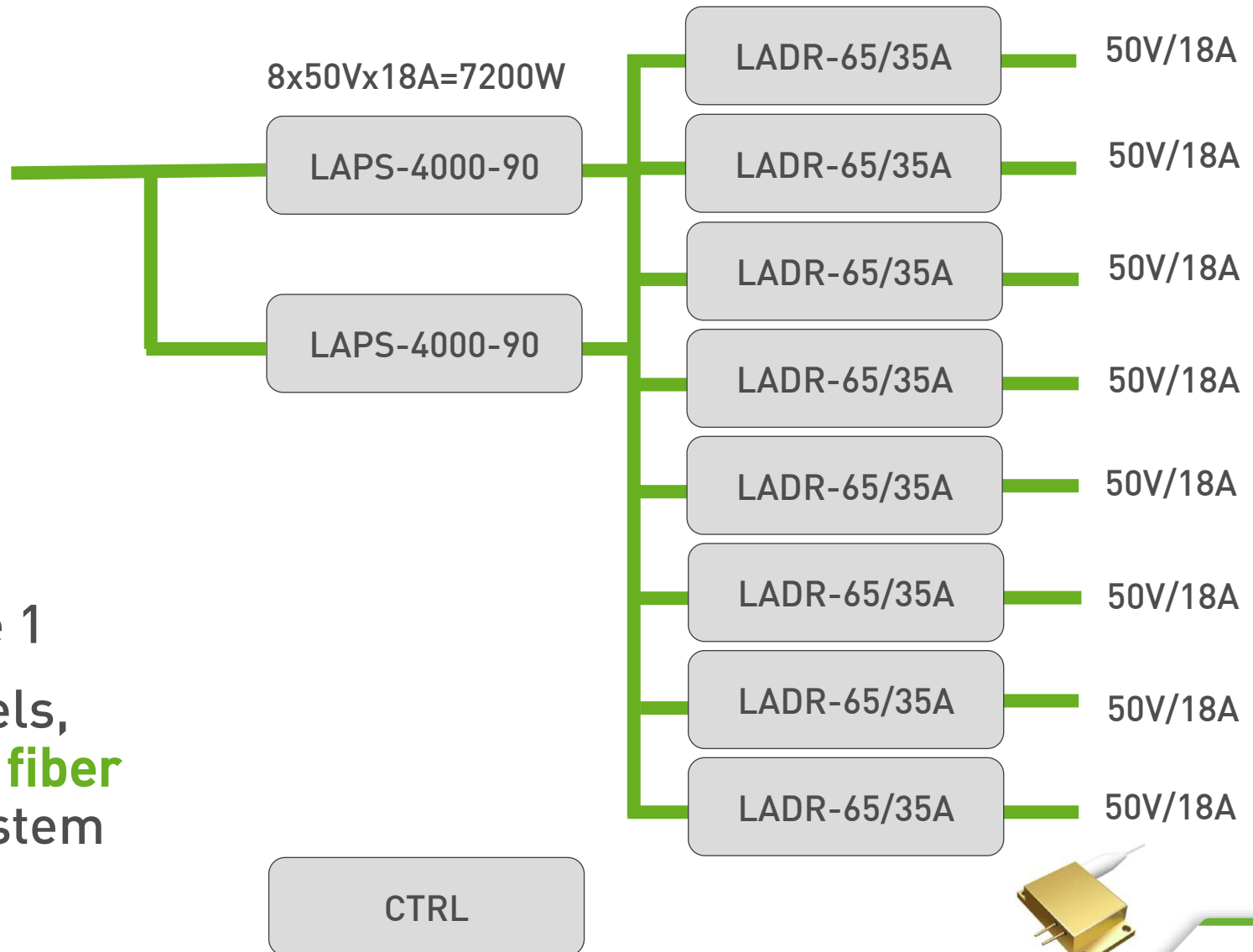
Safety Interlock PLe

- ⏻ Double **safety interlock**
- ⏻ Safety standard ISO 13849-1

Interface

- ⏻ Galvanic **isolated**
- ⏻ Multiple digital and/or analog set points per channel
- ⏻ Advanced trigger possibilities
- ⏻ Control and monitoring

LACS - new modular concept

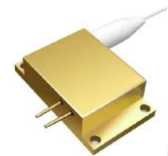
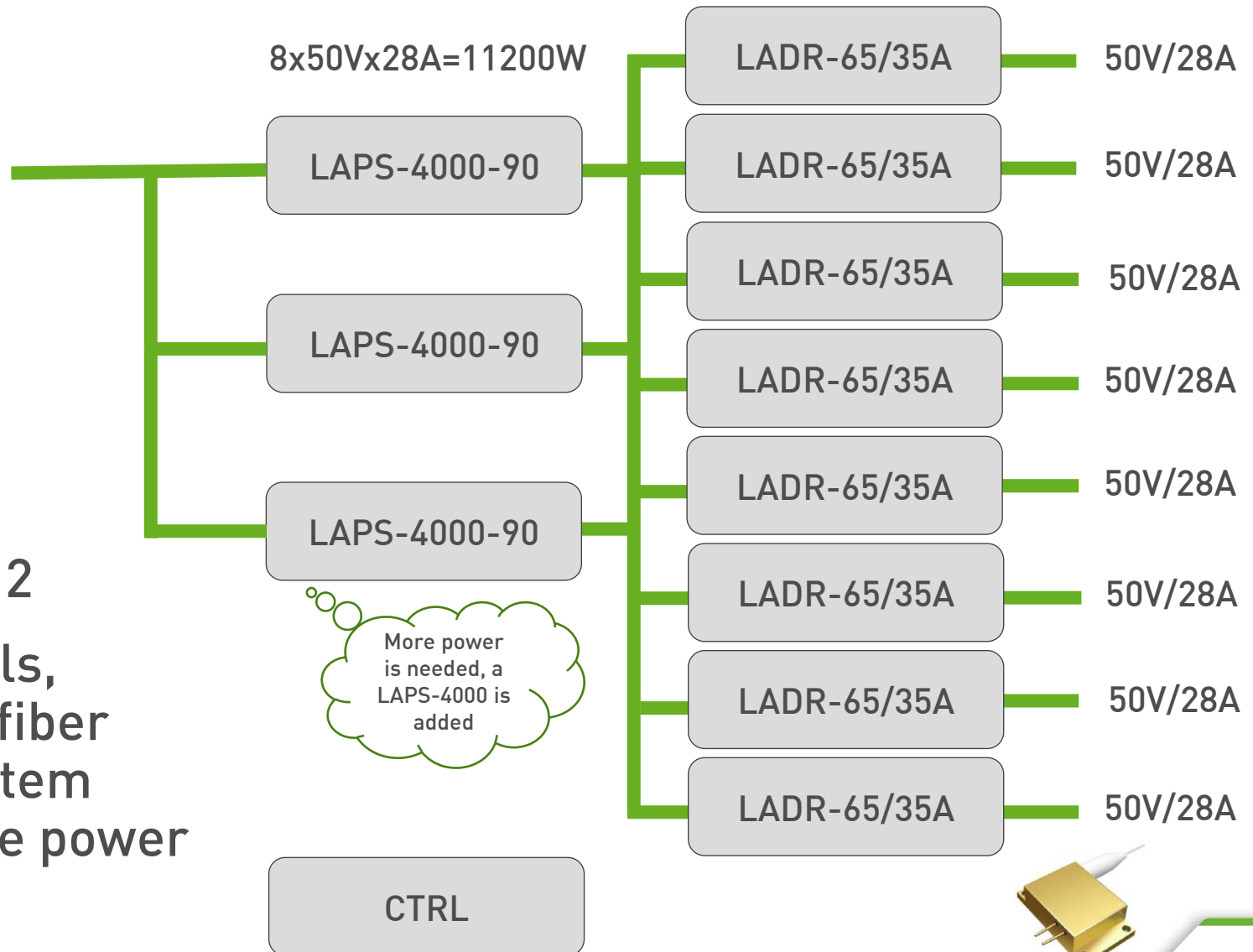


Example 1

8 channels,
50V/18A **fiber**
laser system

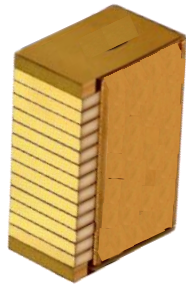
LACS - new modular concept

Example 2
8 channels,
50V/28A fiber
laser system
with more power



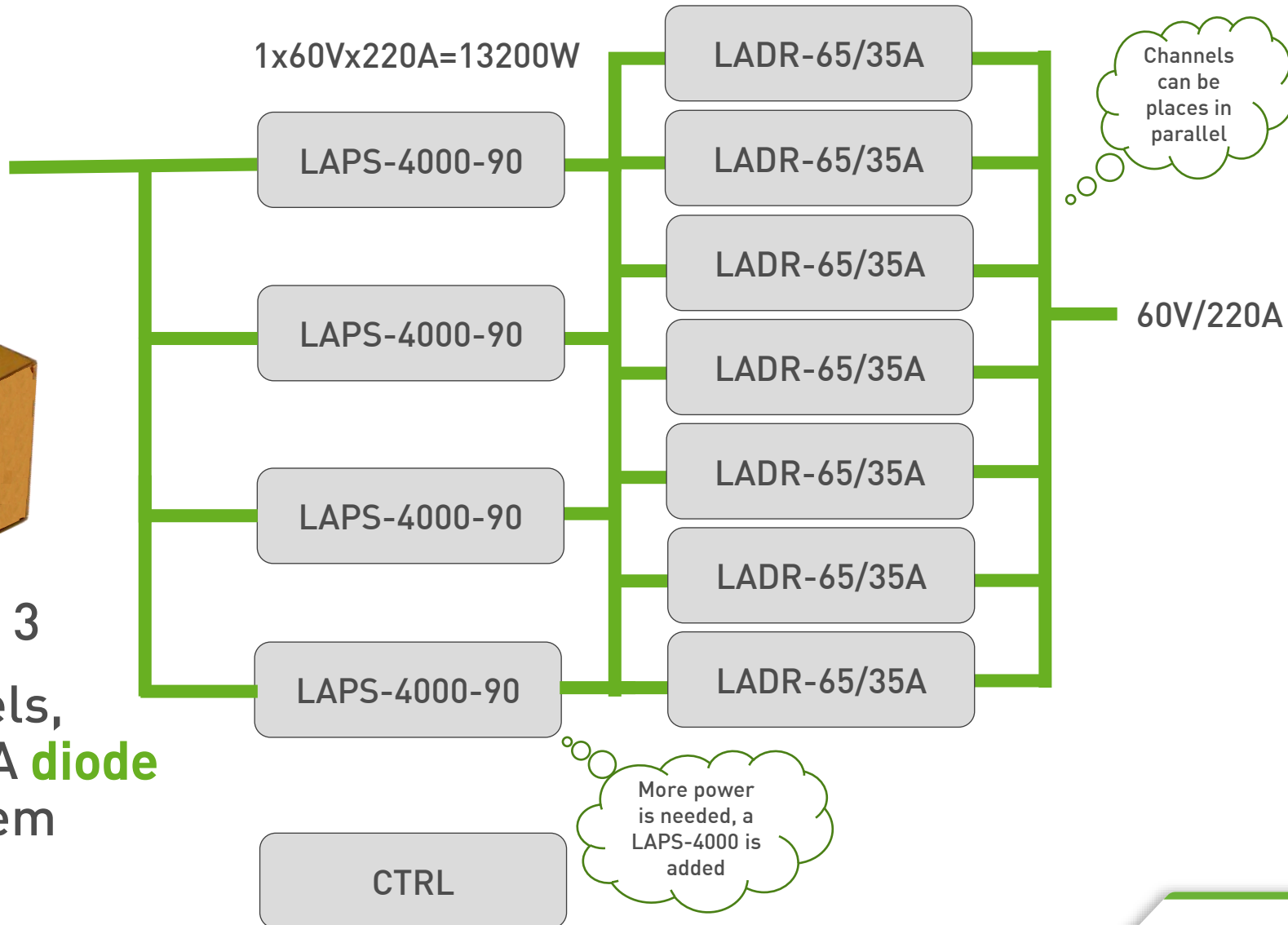
LACS - new modular concept

$$1 \times 60V \times 220A = 13200W$$

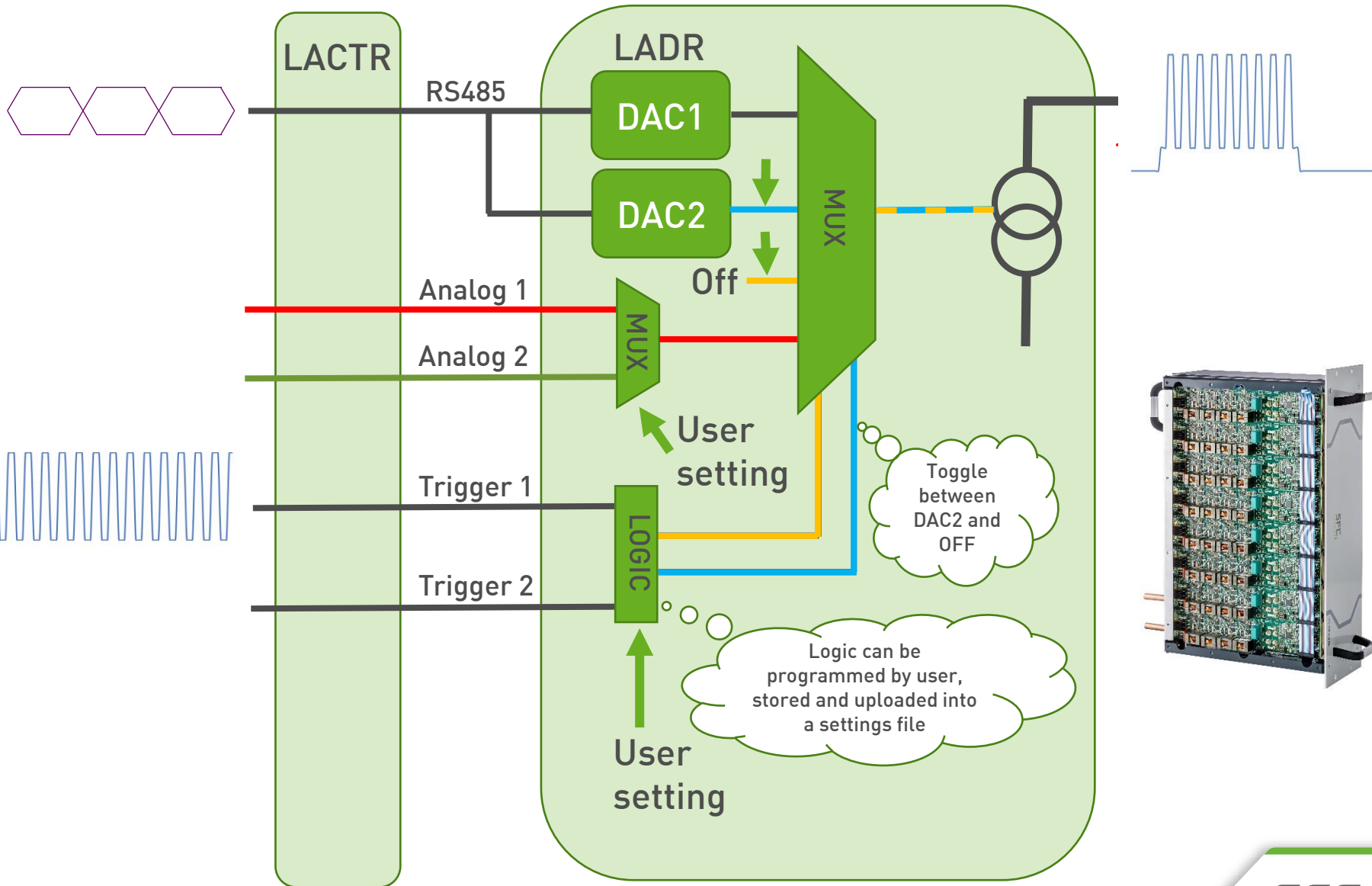


Example 3

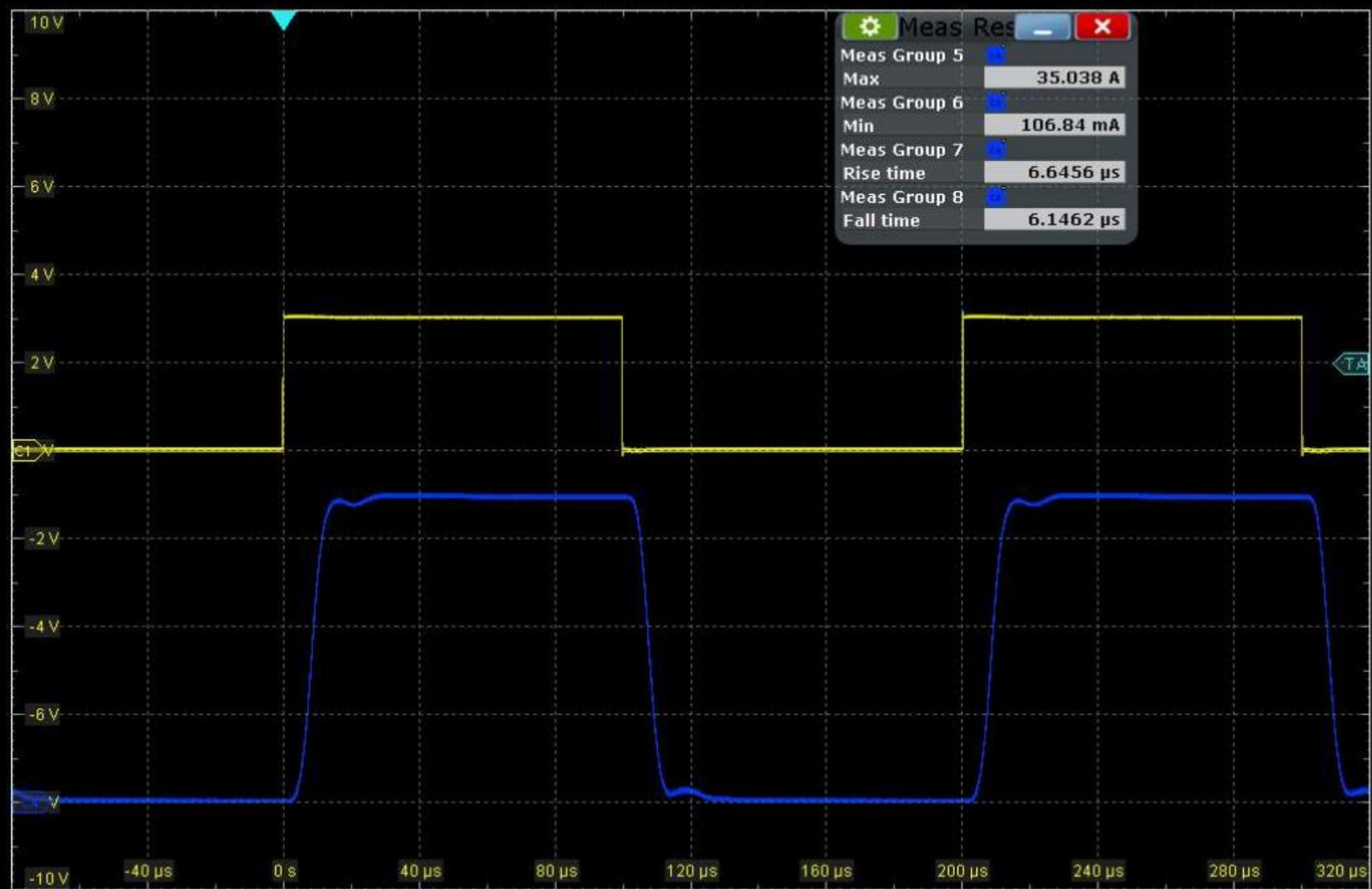
1 channels,
60V/220A **diode**
bar system



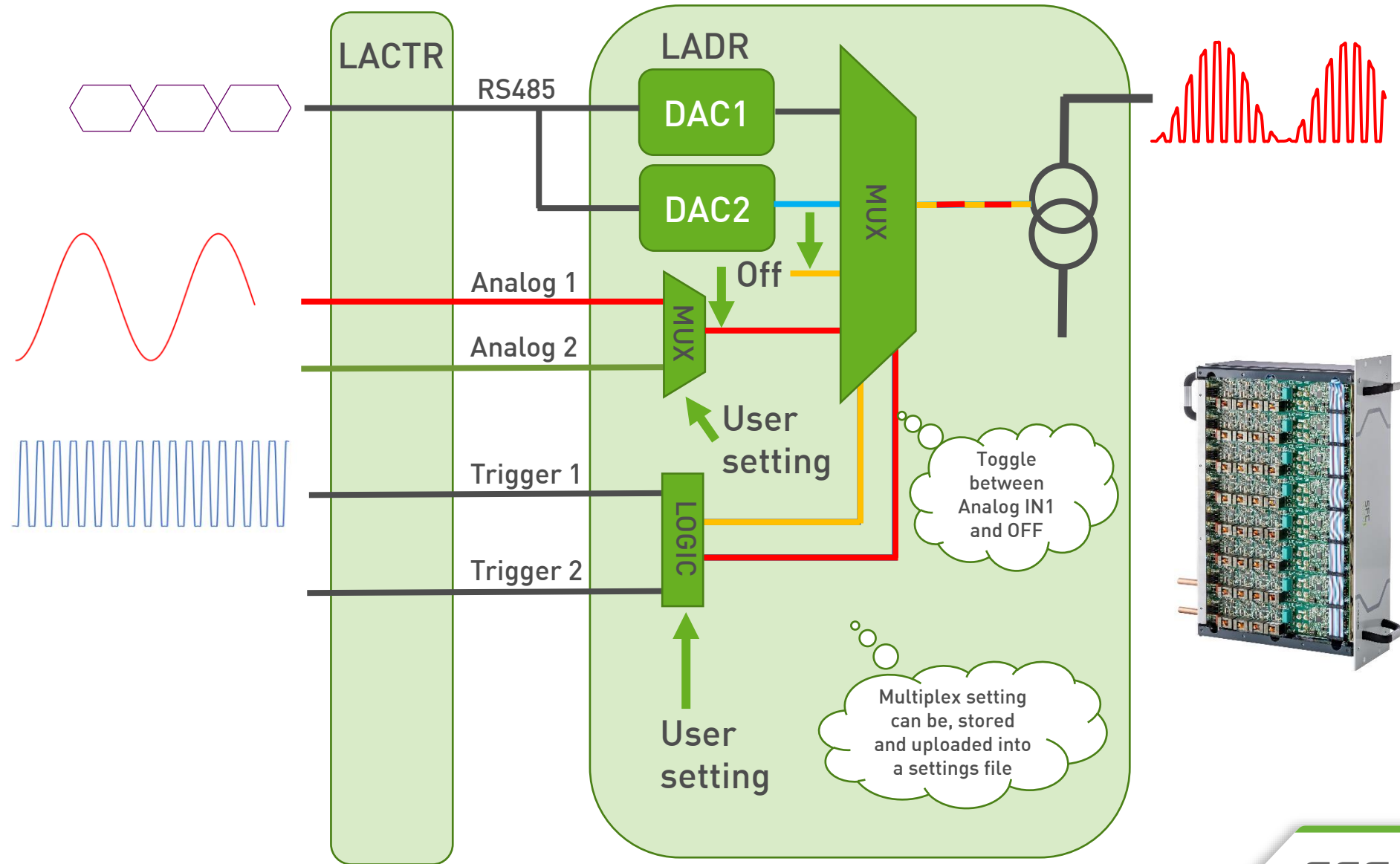
LACS - flexible in use - signal routing



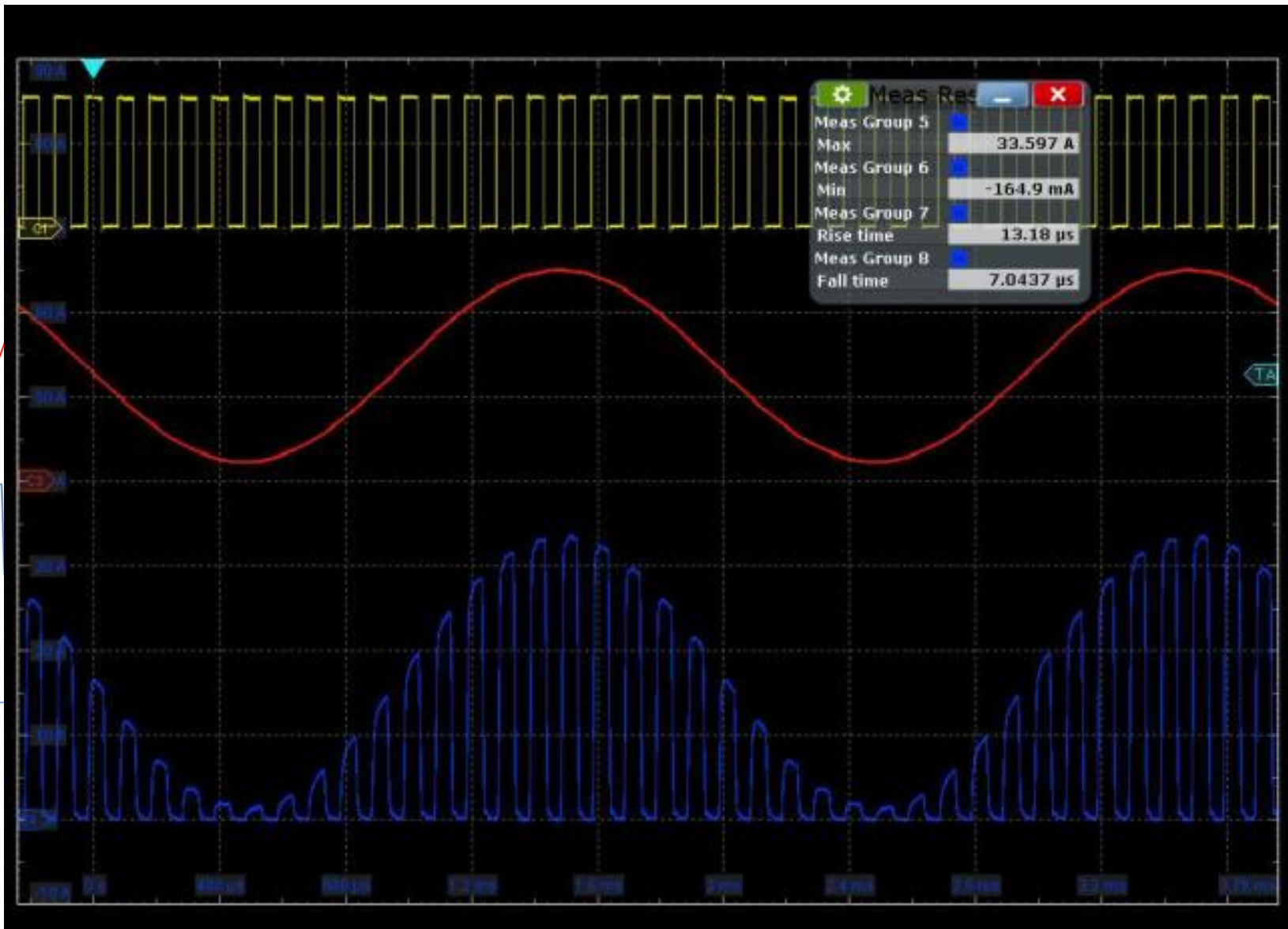
LACS - flexible in use - signal rooting



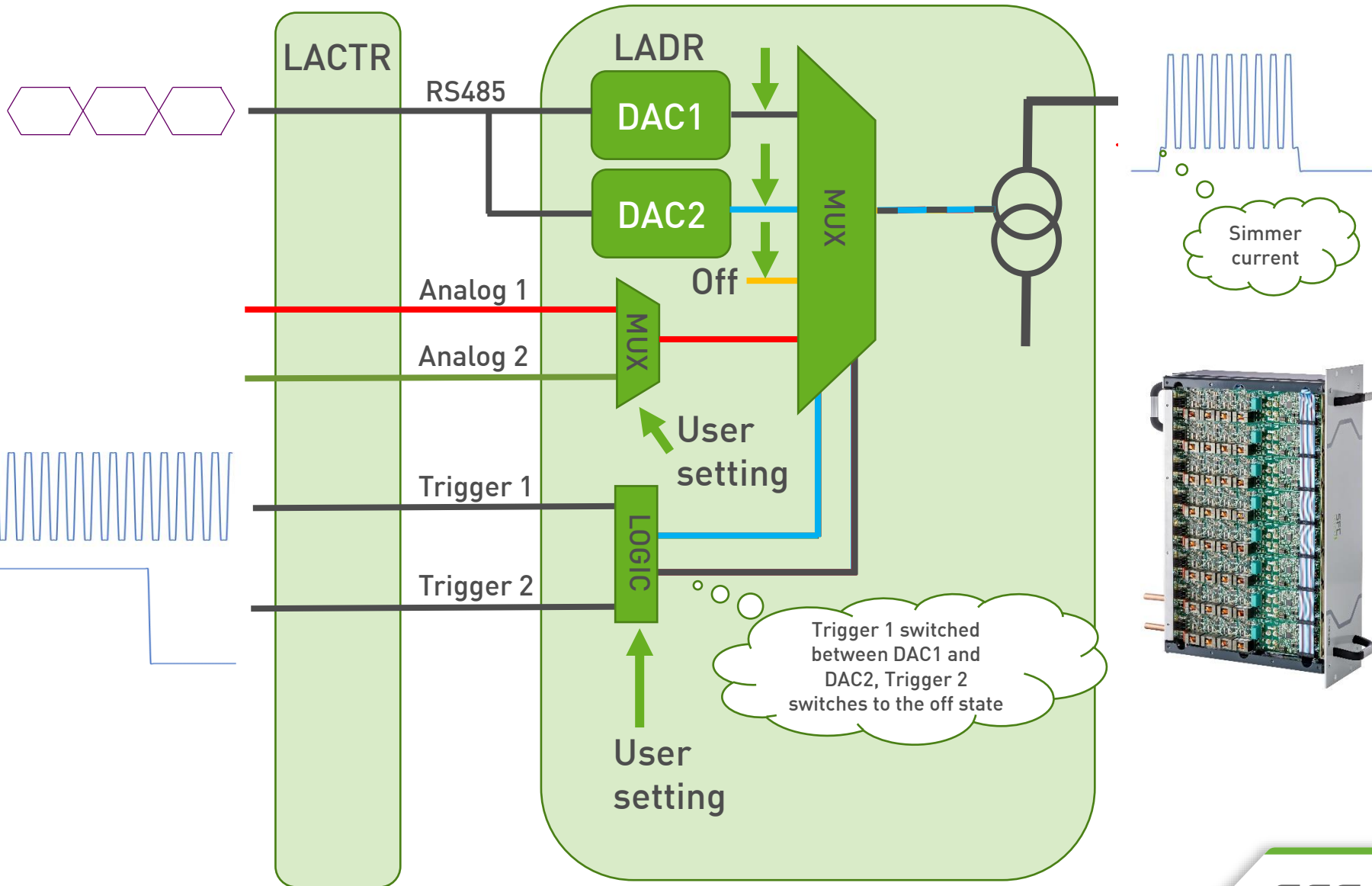
LACS - flexible in use - signal routing



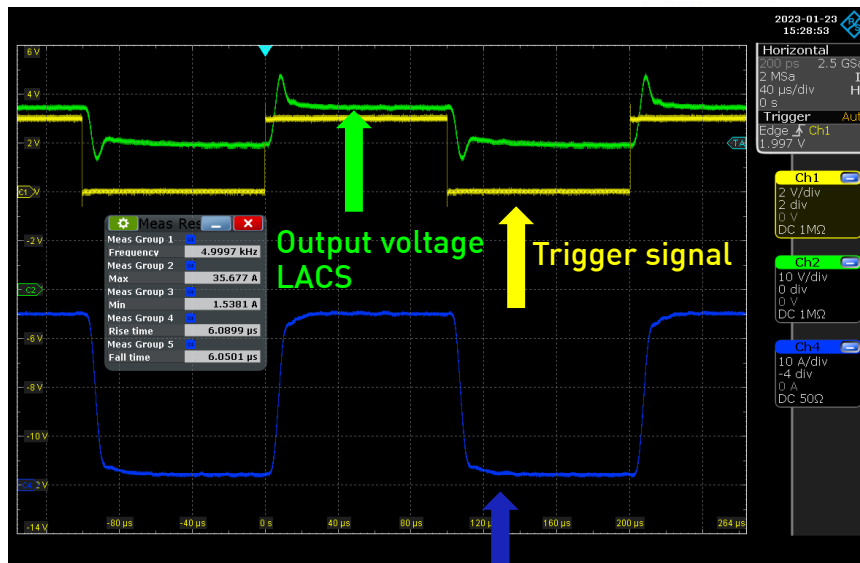
LACS - flexible in use - signal rooting



LACS - flexible in use - signal routing



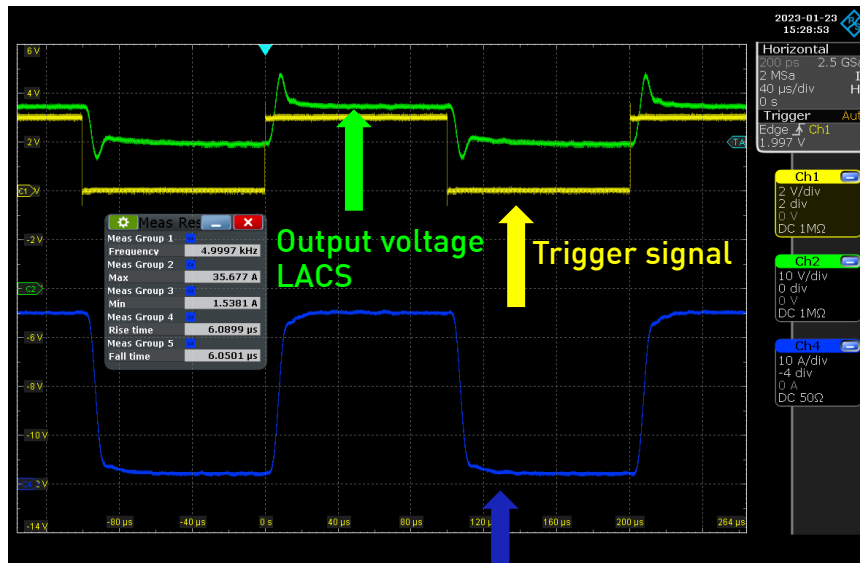
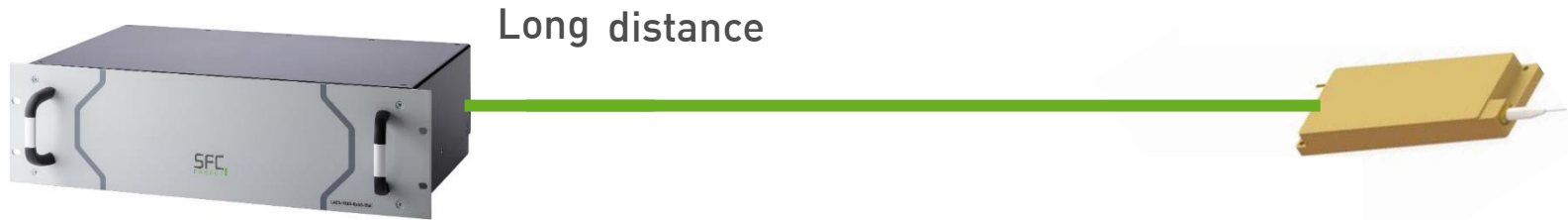
LACS - overshoot compensation



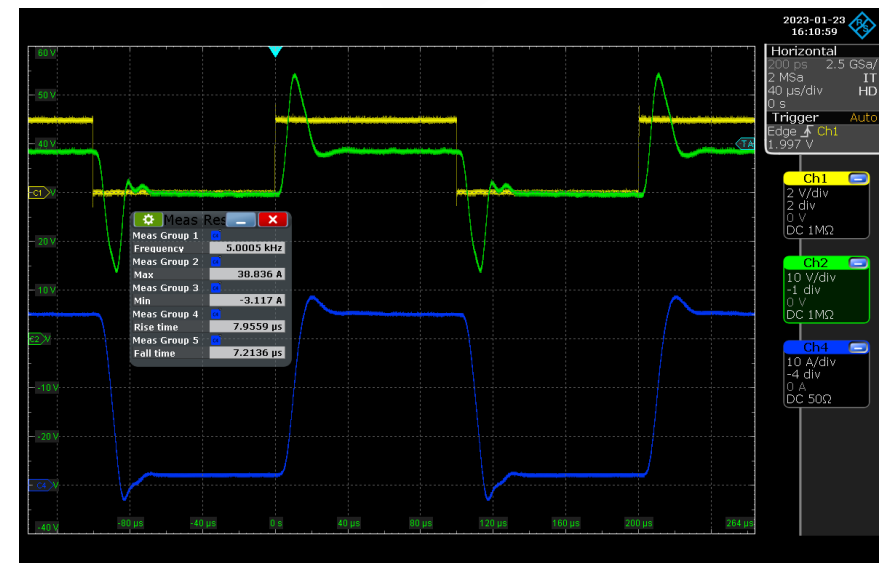
Short distance

Laser diode current

LACS - overshoot compensation

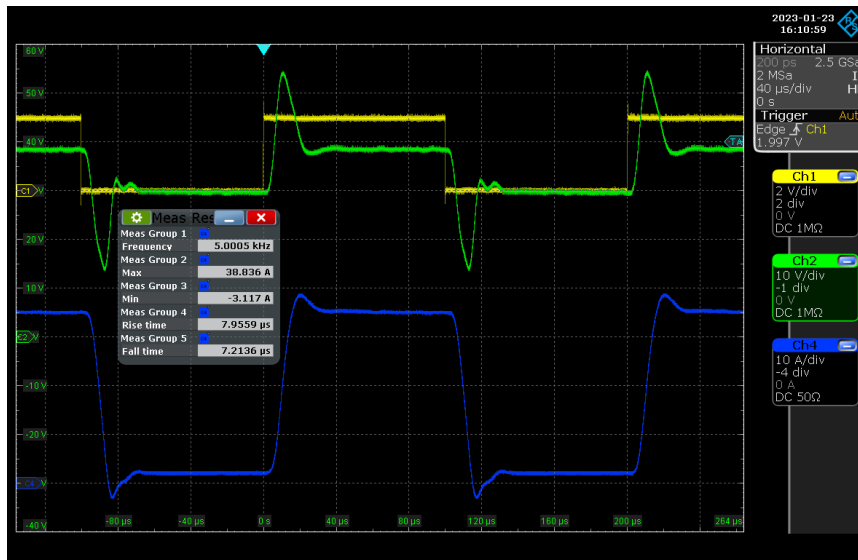
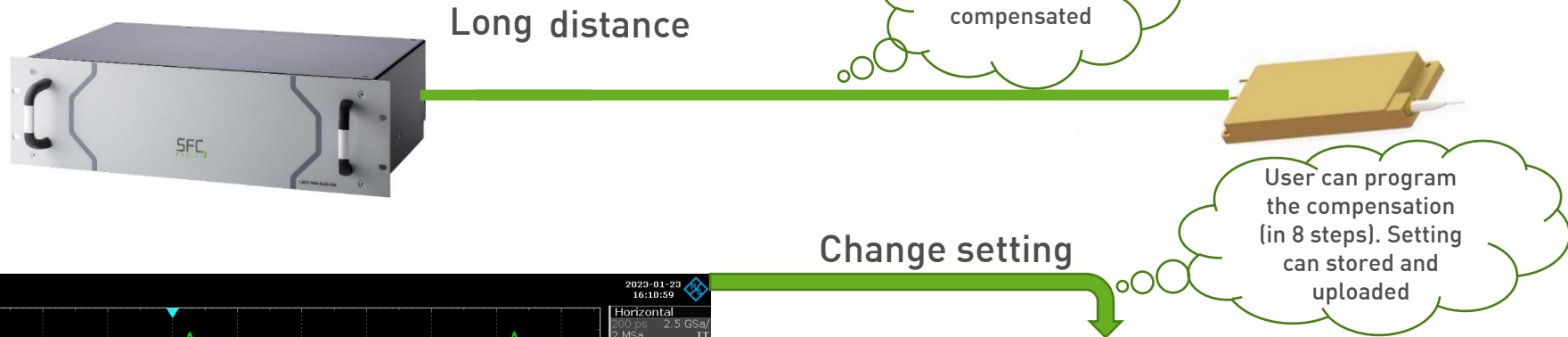


Short distance

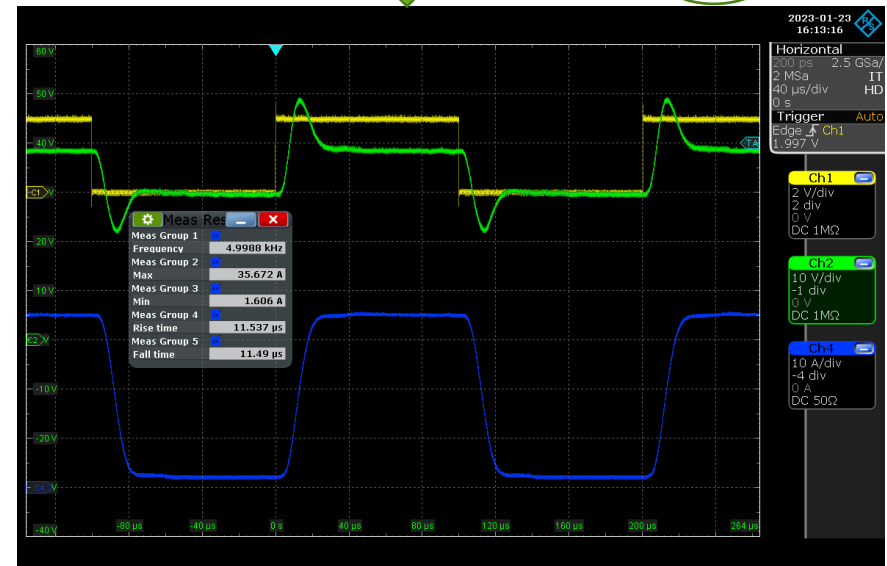


Long distance, current overshoot due to inductance cable

LACS - overshoot compensation



Long distance, current overshoot due to inductance cable



Overshoot compensated

Visit our website
www.sfc-power.com



LACS series



LAPS-R series



LAPS-4000 series



Our Team:

René Dingshoff
Technology Manager
Power Supply Solutions

Cell phone: +31 6 3003 4902
E-mail: rene.dingshoff@sfc.com

Michael Sauer
Business Development
Power Supply Solutions

Cell phone: +49 151 62420470
E-mail: michael.sauer@sfc.com

Onno van Apeldoorn
Business Development
EU-APEC
Power Supply Solutions

Cell phone: +34 6 7747 2056
E-mail: onno.vanapeldoorn@sfc.com

Kevin Bakhshpour
Business Development
North America
Power Supply Solutions

Cell phone: +1 408 781 5156
E-mail: kevin.bakhshpour@sfc.com

Exhibitions:

LASER World of **PHOTONICS**
SEMICON® WEST

June, 27-30, 2023 Munich, DE

July, 11-13, 2023 CA, USA