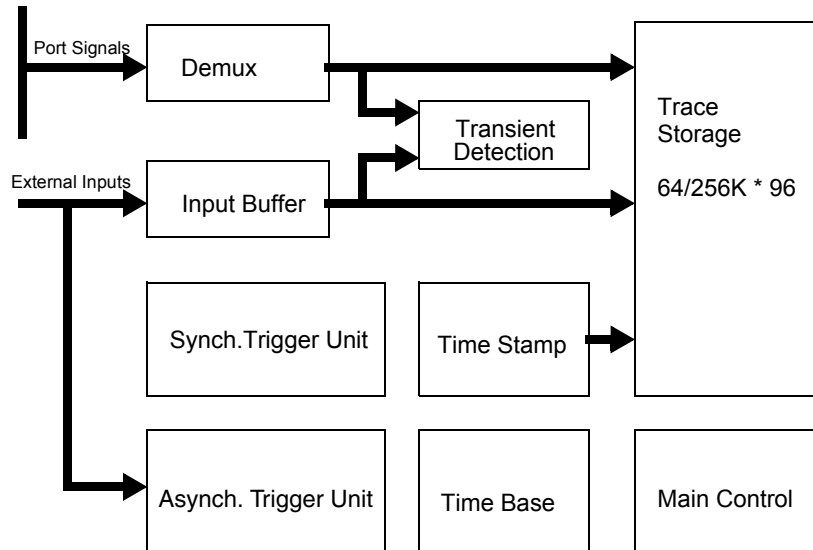


FIRE Portanalyzer

- 32 Channels Ports Selective
- Up to 1024 Ports in MUX Mode
- 32 Channels External
- 50/100 MHz Timing
- 100 MHz Cycle State
- 100 MHz Clock State
- 64K or 256K Trace Depth
- Slave Operation to State Analyzer
- Time Stamp
- List and Timing Display

The port analyzer is a special analyzer tool with 64 channels for sampling peripheral ports on the emulation chip. It can run in state mode together with the state analyzer (100 MHz) or separately with up to 50/100 MHz sampling rate as a timing analyzer system. By doing transient recording peripheral signals can be traced for a long time period.

Functional Units



Transient Recording over Required Time

Transient sensitivity can be activated independently for each group. That means, the sampling of the input lines is stored to the trace buffer by the change of the input level only.

The total record time depends on the occurrence of changes on the input signals. The minimum time for high speed signals is 0.6 ms.

Port Inputs

The trace on CPU ports can be in multiplexed or demultiplexed mode.

- Multiplexed Mode
In multiplexed mode up to 256 channels are sampled in parallel.

- Demultiplexed Mode
32 Channels out of 1024 are sampled.

External Inputs

The port analyzer has 32 external input pins for high-speed trace. 3 operation modes are possible on this lines:

- 50 MHz with 32 Channels

- 100 MHz with 16 Channels
- 50 MHz Latch Mode with 16 Channels

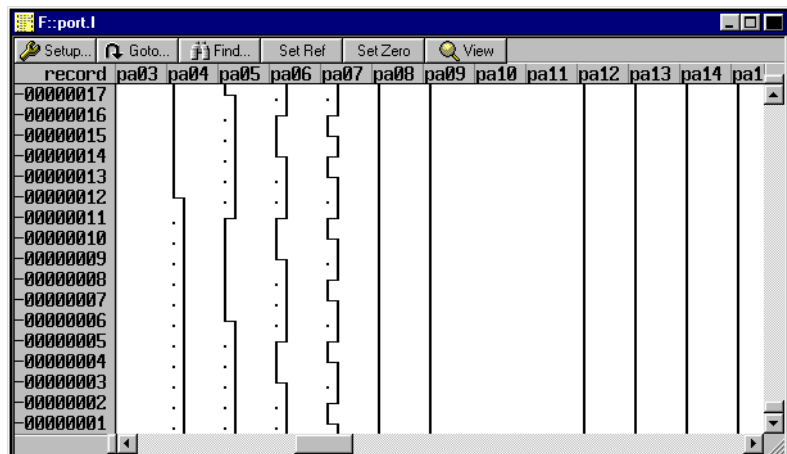
Trace

The port analyzer can sample 64 channels with 4 modes:

- Fixed Rate
 - 50 MHz
 - 25MHz
 - 10 MHz
 - 5 MHz
 - 2.5 MHz
 - 1 MHz
 - 0.5 MHz
 - 0.25 MHz
- Transient Mode
 - 50/100 MHz for external inputs
 - 50 MHz for port lines
 - 5h max sampling time
- Multiplexed Mode
 - 50/100 MHz for external inputs
 - 50 .. 3 MHz for up to 256 port lines.
- State Mode
 - Synchronous to CPU Clock or BUS Cycle
 - External Input with Latch Mode

Display

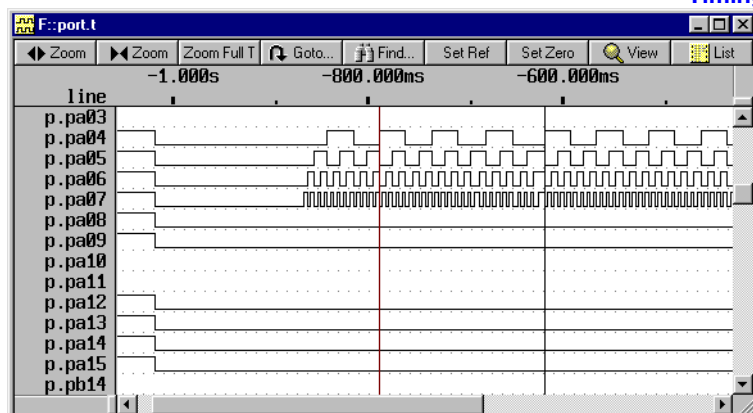
Trace data can be displayed in many formats.



State Display

C-T: -00000255 -623.877ms C-R: +00000063 168.685ms C-Z: 533.794s 1.311ms / dot

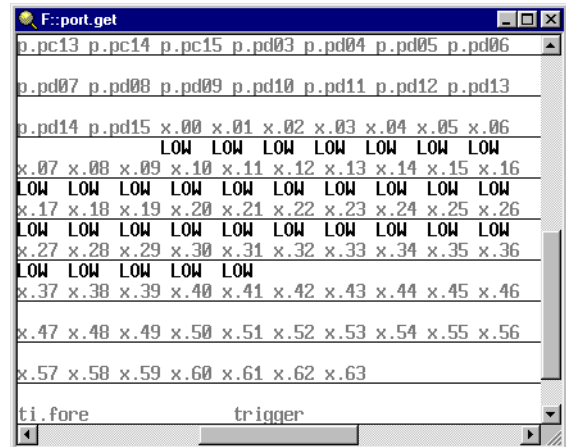
Cursor Info



Timing Display

Activity Display

Every port or external line level or pulse activity can be displayed.



Universal Counter

Every signal can be selected for the universal counter system on the Trace32 FIRE. Event count and pulse width measurement is possible as well

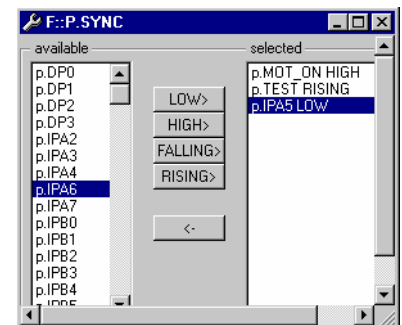
a frequency test on CPU signals. On external inputs up to 100 MHz for input clocks is possible (Frequency only).

Main Trigger System

Trigger Comparator

Every input can be used as high, low, rising or falling edge. More than one edge can be combined to generate a valid trigger event.

- Trigger Events
 - Don't care
 - Low
 - High
 - Rising
 - Falling



Other Trigger Inputs

- Intertrigger Bus
 - BUS A
 - BUS B
 - BUS C
 - BUS D
- Emulator Trigger

- Emulator Break
- Asynchronous Trigger

Trigger Filter

TSelect		TPreDelay	
<input type="checkbox"/> BusA	<input type="checkbox"/>	0%	
<input type="checkbox"/> BusB	<input type="checkbox"/>	TWidth	
<input type="checkbox"/> BusC	<input type="checkbox"/>	0.000	
<input checked="" type="checkbox"/> TSYNC	<input type="checkbox"/>	TCount	
<input type="checkbox"/> ASYNC	<input type="checkbox"/>	0.	
<input type="checkbox"/> Trigger	<input type="checkbox"/>	TDelay	
<input type="checkbox"/> Break	<input type="checkbox"/>	0.000	
TSYNC		0.000	
ASYNC		0.000	

The trigger filter can filter out glitches or runs on the lines. The trigger filter can be set from 0 to 300 ns.

Trigger Counter

The trigger count can be defined from 0 to 4 Mio. trigger events

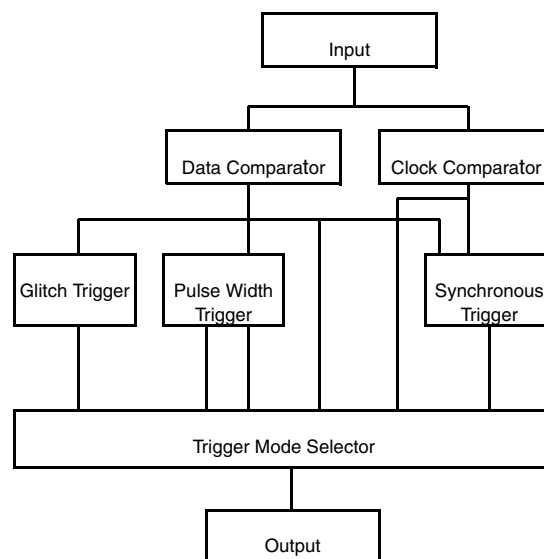
Pretrigger Delay

The pretrigger delay prevents from immediate triggering which generates an nearly empty trace storage. The value can be defined between 0 and 100% of the trace storage.

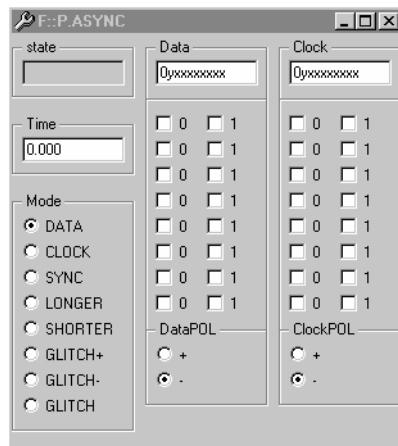
Trigger Delay

The trigger delay can be 0 to 100 s or 0 to 1000% of the trace storage.

Asynchronous Trigger System



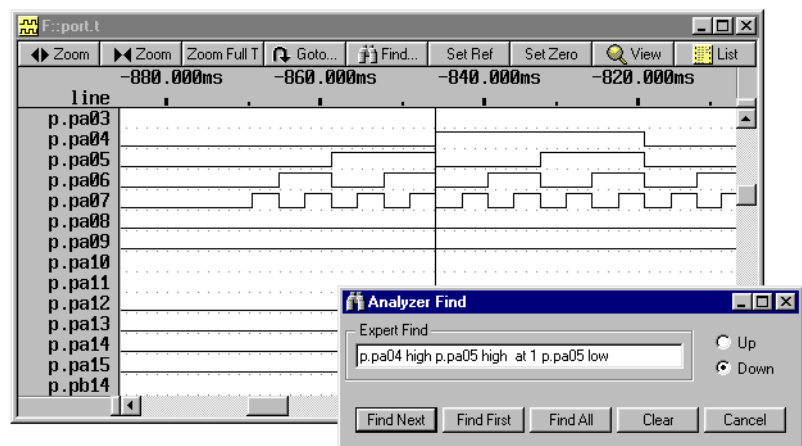
The asynchronous trigger system can be used to trigger on high-speed events, which are not synchronous to the CPU clock or bus cycle. The trigger reacts on events shorter than 3 ns.



The trigger output can be used to trigger the port analyzer, the emulator or switched to the frequency counter. Events up to 100 MHz can be measured.

- Data
 - Combines 8 Inputs to one trigger signal
 - High, Low, Don't Care for every bit
 - Positive and negative polarity for trigger output
- Clock
 - Same as Data, but 2nd comparator
- SYNC
 - Combination of Data and Trigger event
 - Positive and negative Clock edge
 - True and false data event
- LONGER
 - Pulse width trigger
 - 10ns .. 3 ms
 - Positive and negative pulse
- SHORTER
 - Pulse width trigger
 - 10ns .. 3 ms
 - Positive and negative pulse
- GLITCH+
 - Glitch trigger on positive pulse
 - 2..10ns detection
- GLITCH-
 - Glitch trigger on negative pulse
 - 2..10ns detection
- GLITCH
 - Glitch trigger on positive or negative pulse
 - 2..10ns detection

Signal Analysis



- LOAD and SAVE
- COMPARE
- FIND
- Tracking

Order Information

Module Description

Detailed Order Information

Contact

International Representative

Argentina

Anacom Eletronica Ltda.
Mr. Rafael Sorice
Rua Nazareth, 807, Barcelona
BR-09551-200 São Caetano do Sul, SP
Phone: +55 11 3422 4200
FAX: +55 11 3422 4242
EMAIL: rsorice@anacom.com.br

Australia

Embedded Logic Solutions P/L
Mr. Ramzi Kaffan
Suite 2, Level 3
144 Marsden Street
Parramatta NSW 2150
Phone: +61 2 9687 1880
FAX: +61 2 9687 1881
EMAIL: sales@emlogic.com.au

Austria

Lauterbach GmbH
Altlaufstr. 40
D-85635 Höhenkirchen-Siegersbrunn
Phone: +49 8102 9876 0
FAX: +49 8102 9876 999
EMAIL: info@lauterbach.com

Belgium

Tritec Benelux B.V.
Mr. Robbert de Voogt
Stationspark 550
NL-3364 DA Slidrecht
Phone: +31 184 41 41 31
FAX: +31 184 42 36 11
EMAIL: software@tritec.nl

Brazil

Anacom Eletronica Ltda.
Mr. Rafael Sorice
Rua Nazareth, 807, Barcelona
BR-09551-200 São Caetano do Sul, SP
Phone: +55 11 3422 4200
FAX: +55 11 3422 4242
EMAIL: rsorice@anacom.com.br

Canada

Lauterbach Inc.
Mr. Udo Zoettler
4 Mount Royal Ave.
USA-Marlborough, MA 01752
Phone: +1 508 303 6812
FAX: +1 508 303 6813
EMAIL: info_us@lauterbach.com

China Beijing

Lauterbach Technologies Co., Ltd
Mr. Linglin He
Beijing Office
A3, South Lishi Road, XiCheng District
Beijing 100037, P.R. China
Phone: +86 10 68023502
FAX: +86 10 68023523
EMAIL: linglin.he@lauterbach.com

China Shenzhen

Lauterbach Technologies Co., Ltd
1406/E Xihaimingzhu Building
No.1 Taoyuan Road, Nanshan District
Shenzhen 518052, P.R. China
Phone: +86 755 8621 0671
FAX: +86 755 8621 0675
EMAIL: emily.zhang@lauterbach.com

China Suzhou

Lauterbach Technologies Co., Ltd
Mr. Linglin He
Hengyu Square, Rm 709
No. 188, Xing Hai Street
Suzhou, 215021 P.R. of China
Phone: +86 512 6265 8030
FAX: +86 512 6265 8032
EMAIL: info_cn@lauterbach.com

Czech Republic

Lauterbach GmbH
Altlaufstr. 40
D-85635 Höhenkirchen-Siegersbrunn
Phone: +49 8102 9876 0
FAX: +49 8102 9876 999
EMAIL: info@lauterbach.com

Denmark

Nohau Danmark A/S
Mr. Flemming Jensen
Klausdalsbrovej 493
DK-2730 Herlev
Phone: +45 44 52 16 50
FAX: +45 44 52 26 55
EMAIL: info@nohau.dk

Egypt

Wantech Egypt
Mr. Wagih A. Nawara
5 Shafik Ghalie St., Suite 2
Off Pyramids Road, Giza
Cairo 12111
Phone: +20 100 1251955
FAX: +20 100 1250349
EMAIL: sales@wantech.net.com

Finland

Nohau Solutions Finland
Mr. Martti Viljainen
Teknobulevardi 3-5
FI-01531 Vantaa
Phone: +358 40 546 1469
FAX: +358 9 2517 8101
EMAIL: sales@nohau.fi

France

Lauterbach S.A.R.L.
Mr. Jean-Pierre Paradiso
Europarc - Le Hameau B
135 Chemin Des Bassins
F-94035 Créteil Cedex
Phone: +33 1 49 56 20 30
FAX: +33 1 49 56 20 39
EMAIL: info_fr@lauterbach.com

Germany

Lauterbach GmbH
Altlaufstr. 40
D-85635 Höhenkirchen-Siegersbrunn
Phone: +49 8102 9876 0
FAX: +49 8102 9876 999
EMAIL: info@lauterbach.com

Germany North

Lauterbach GmbH
Mr. Klaus Hommann
Leonhardring 5
D-31319 Sehnde
Phone: +49 8102 9876 174
FAX: +49 5138 6185 3
EMAIL: klaus.hommann@lauterbach.com

Germany South

Lauterbach GmbH
 Andreas Grimm
 Altlaufstr. 40
 D-85635 Höhenkirchen-Siegertsbrunn
 Phone: +49 8102 9876 190
 FAX: +49 8102 9876 187
 EMAIL: andreas.grimm@lauterbach.com

Greece

Lauterbach GmbH
 Altlaufstr. 40
 D-85635 Höhenkirchen-Siegertsbrunn
 Phone: +49 8102 9876 0
 FAX: +49 8102 9876 999
 EMAIL: info@lauterbach.com

Hungary

Lauterbach GmbH
 Altlaufstr. 40
 D-85635 Höhenkirchen-Siegertsbrunn
 Phone: +49 8102 9876 0
 FAX: +49 8102 9876 999
 EMAIL: info@lauterbach.com

India-Bangalore

Electro Systems Associates Pvt. Ltd.
 Mr. G. V. Gurunatham
 S-606, World Trade Center
 Malleswaram West, No.26/1, Dr. Rajkumar
 Road
 India - Bangalore 560055
 Phone: +91 80 67648888
 FAX: +91 80 23475615
 EMAIL: Trace32sales@esaindia.com

India-Chennai

Electro Systems Associates Pvt. Ltd.
 Mr. D. Kannan
 No.109/59A, Ground Floor
 IV Avenue, Ashok Nagar
 India - Chennai - 600 083 Tamilnadu
 Phone: +91 044-24715750
 FAX: +91 44 24715750
 EMAIL: chennai@esaindia.com

India-Delhi

Electro Systems Associates Pvt. Ltd.
 Mr. R.K. Bhandari
 No. 705, 7th Floor, Laxmi Deep
 Shivajinagar
 India - Delhi - 110 092
 Phone: +91 11-22549351
 FAX:
 EMAIL: delhi@esaindia.com

India-Hyderabad

Electro Systems Associates Pvt. Ltd.
 Mr. C.V.M. Sri Ram Murthy
 Shop No. 14, "Global Enclave"
 Bhagyannagar Colony, Kukat pally
 India - Hyderabad 500 072
 Phone: +91 40-23063346
 FAX: +91 40-23063346
 EMAIL: hyderabad@esaindia.com

India-Pune

Electro Systems Associates Pvt. Ltd.
 Mr. R K Bhandari
 Shriram Complex, 1126/1, Model Colony
 Shivajinagar
 India - Pune - 411 016
 Phone: +91 20 - 30462035 / 25663
 FAX: +91 20-25677202
 EMAIL: pune@esaindia.com

Ireland

Lauterbach Ltd.
 Mr. Barry Lock
 11 Basepoint Enterprise Centre
 Stroudley Road
 Basingstoke, Hants RG24 8UP
 Phone: +44-1256-333-690
 FAX: +44-1256-336-661
 EMAIL: info_uk@lauterbach.com

Israel

Itec Ltd.
 Mr. Mauri Gottlieb
 P.O. Box 10002
 IL-Tel Aviv 61100
 Phone: +972 3 6491202
 FAX: +972 3 6497661
 EMAIL: general@itec.co.il

Italy

Lauterbach Srl
 Mr. Maurizio Menegotto
 Via Enzo Ferrieri 12
 I-20153 Milano
 Phone: +39 02 45490282
 FAX: +39 02 45490428
 EMAIL: info_it@lauterbach.com

Japan

Lauterbach Japan, Ltd.
 Mr. Kenji Furukawa
 3-8-8 Shinyokohama
 Kouhoku-ku, Nisso 16th Building
 Yokohama-shi, Japan 222-0033
 Phone: +81 45 477 4511
 FAX: +81 45 477 4519
 EMAIL: info@lauterbach.co.jp

Luxembourg

Tritec Benelux B.V.
 Mr. Robbert de Voogt
 Stationspark 550
 NL-3364 DA Sliedrecht
 Phone: +31 184 41 41 31
 FAX: +31 184 42 36 11
 EMAIL: software@tritec.nl

Malaysia

Flash Technology
 Mr. Teo Kian Hock
 No 61, # 04-15 Kaki Bukit Av 1
 Shun Li Industrial Park
 SGP-Singapore 417943
 Phone: +65 6749 6168
 FAX: +65 6749 6138
 EMAIL: teokh@flashtech.com.sg

Mexico

Lauterbach Inc.
 Mr. Udo Zoettler
 4 Mount Royal Ave.
 USA-Marlborough, MA 01752
 Phone: +1 508 303 6812
 FAX: +1 508 303 6813
 EMAIL: info_us@lauterbach.com

Netherlands

Tritec Benelux B.V.
 Mr. Robbert de Voogt
 Stationspark 550
 NL-3364 DA Sliedrecht
 Phone: +31 184 41 41 31
 FAX: +31 184 42 36 11
 EMAIL: software@tritec.nl

New Zealand

Embedded Logic Solutions P/L
 Mr. Ramzi Kattan
 Suite 2, Level 3
 144 Marsden Street
 Parramatta NSW 2150
 Phone: +61 2 9687 1880
 FAX: +61 2 9687 1881
 EMAIL: sales@emlogi.com.au

Norway

Nohau Solutions AB
 Mr. Jörgen Nilsson
 Derbyvägen 4
 SE-21235 Malmö
 Phone: +46 40 592 206
 FAX: +46 40 592 229
 EMAIL: sales@nohau.se

Poland

QUANTUM Sp. z o.o.
 Mr. Aleksander Bil
 ul. Jeleniogorska 6
 54-056 Wrocław
 Phone: +48 71 362 6356
 FAX: +48 71 362 6357
 EMAIL: info@quantum.com.pl

Portugal

Captura Electronica, SCCL
Mr. Juan Martinez
c/Duero, 40
E-08031 Barcelona
Phone: +34 93 429 5730
FAX: +34 93 407 0778
EMAIL: info@captura-el.com

Romania

Lauterbach GmbH
Altlaufstr. 40
D-85635 Höhenkirchen-Siegersbrunn
Phone: +49 8102 9876 0
FAX: +49 8102 9876 999
EMAIL: info@lauterbach.com

Russia

RTSoft
Mr. Alexey Isaev
Nikitinskaya 3
RUS-105037 Moscow
Phone: +7 495 742 6828
FAX: +7 495 742 6829
EMAIL: sales@rtsoft.msk.ru

Singapore

Flash Technology
Mr. Teo Kian Hock
No 61, # 04-15 Kaki Bukit Av 1
Shun Li Industrial Park
SGP-Singapore 417943
Phone: +65 6749 6168
FAX: +65 6749 6138
EMAIL: teokh@flashtech.com.sg

South Korea, Pangyo

MDS Technology Co., Ltd.
Mr. Sangheon Lee
3FL, Hancom Tower
49, Daewangpangyo-ro 644, Bundang-gu
Seongnam-si, Gyeonggi-do, 463-400, ROK
Phone: +82-31-627-3000
FAX: +82-31-627-3100
EMAIL: trace32@mdstec.com

Spain

Captura Electronica, SCCL
Mr. Juan Martinez
c/Duero, 40
E-08031 Barcelona
Phone: +34 93 429 5730
FAX: +34 93 407 0778
EMAIL: info@captura-el.com

Sweden

Nohau Solutions AB
Mr. Jörgen Nilsson
Derbyvägen 4
SE-21235 Malmö
Phone: +46 40 592 206
FAX: +46 40 592 229
EMAIL: sales@nohau.se

Switzerland

JDT Jberg DatenTechnik
Mr. Andreas Jberg
Zimmereistrasse 2
CH-5734 Reinach AG
Phone: +41 62 7710 886
FAX:
EMAIL: Andreas.Jberg@jdt.ch

Taiwan

Superlink Technology Corp.
Mr. Sulin Huang
3F-8, No. 77, Sec. 1, Xintaiwu Rd., Xizhi District,
New Taipei City 22101, Taiwan, R.O.C.
Phone: +886 2 26983456
FAX: +886 2 26983535
EMAIL: info.stc@superlink.com.tw

Tunisia

Lauterbach Consulting S.A.R.L.
Mr. Khaled Jmal
Route El Ain Km 3.5
TN-3062 Sfax
Phone: +216-74611730
FAX: +216-74611723
EMAIL: info_tn@lauterbach.com

Turkey-1

Tektronik Muh. ve Tic. A.S.
Mr. Hakan Yavuz
CyberPlaza B-Blok, 702B
Bilkent
06800 Ankara
Phone: +90 312 437 3000
FAX: +90 312 437 1616
EMAIL: info@tektronik.com.tr

Turkey-2

G3TEK Embedded Technologies Ltd.
Mr. Celal Aygun
Ilkyerlesim Mah. 445.
Sok. No: 48
06370 Batikent/Ankara
Phone: +90 312 3324769
FAX: +90 312 3324769
EMAIL: info@g3tek.com

UK

Lauterbach Ltd.
Mr. Barry Lock
11 Basepoint Enterprise Centre
Stroudley Rd
Basingstoke, Hants RG24 8UP
Phone: +44 1256 333 690
FAX: +44 1256 350 301
EMAIL: info_uk@lauterbach.com

USA East

Lauterbach Inc.
Mr. Udo Zoettler
4 Mount Royal Ave.
USA-Marlborough, MA 01752
Phone: +1 508 303 6812
FAX: +1 508 303 6813
EMAIL: info_us@lauterbach.com

USA West

Lauterbach Inc.
Mr. Bob Kupyń
1111 Main Street, Suite 620
USA-Vancouver, WA, 98660
Phone: +1 503 524 2222
FAX: +1 503 524 2223
EMAIL: bob.kupyń@lauterbach.com

Additional Information

<http://www.lauterbach.com>

Lauterbach GmbH

Altlaufstr. 40
D-85635 Höhenkirchen-Siegertsbrunn
Tel. ++49 8102 9876-0 FAX -999
info@lauterbach.com
http://www.lauterbach.de

Lauterbach Inc.

4 Mount Royal Ave.
Marlboro MA 01752
Phone (508) 303 6812 FAX (508) 303 6813
info_us@lauterbach.com
http://www.us.lauterbach.com

Lauterbach Ltd.

11 Basepoint Enterprise Ctre Stroudley Road
Basingstoke, Hants RG24 8UP
Phone ++44-1256-333-690 FAX -661
info_uk@lauterbach.com
http://www.lauterbach.co.uk

Lauterbach S.A.R.L.

135 Chemin Des Bassins
F-94035 Créteil Cedex
Phone ++33-149-562-030
FAX ++33-149-562-039
info_fr@lauterbach.com
http://www.lauterbach.fr

Lauterbach Japan, Ltd.

3-9-5 Shinyokohama Kouhoku-ku
Yokohama-shi Japan 222-0033
Phone ++81-45-477-4511 FAX -4519
info_j@lauterbach.com
http://www.lauterbach.co.jp

Lauterbach s.r.l.

Lauterbach s.r.l.
Via Enzo Ferrieri 12
I-20153 Milano
Phone ++39 02 45490282
FAX ++39 02 45490428
info_it@lauterbach.it
http://www.lauterbach.it

Suzhou Lauterbach Consulting Co.,Ltd.

Room 1605, Xing Hai International Square
No.200, Xing Hai Street
Suzhou, 215021 PR of China
Phone: 0086-512 6265 8030
FAX: 0086-512 6265 8032
info_cn@lauterbach.cn
http://www.lauterbach.cn

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