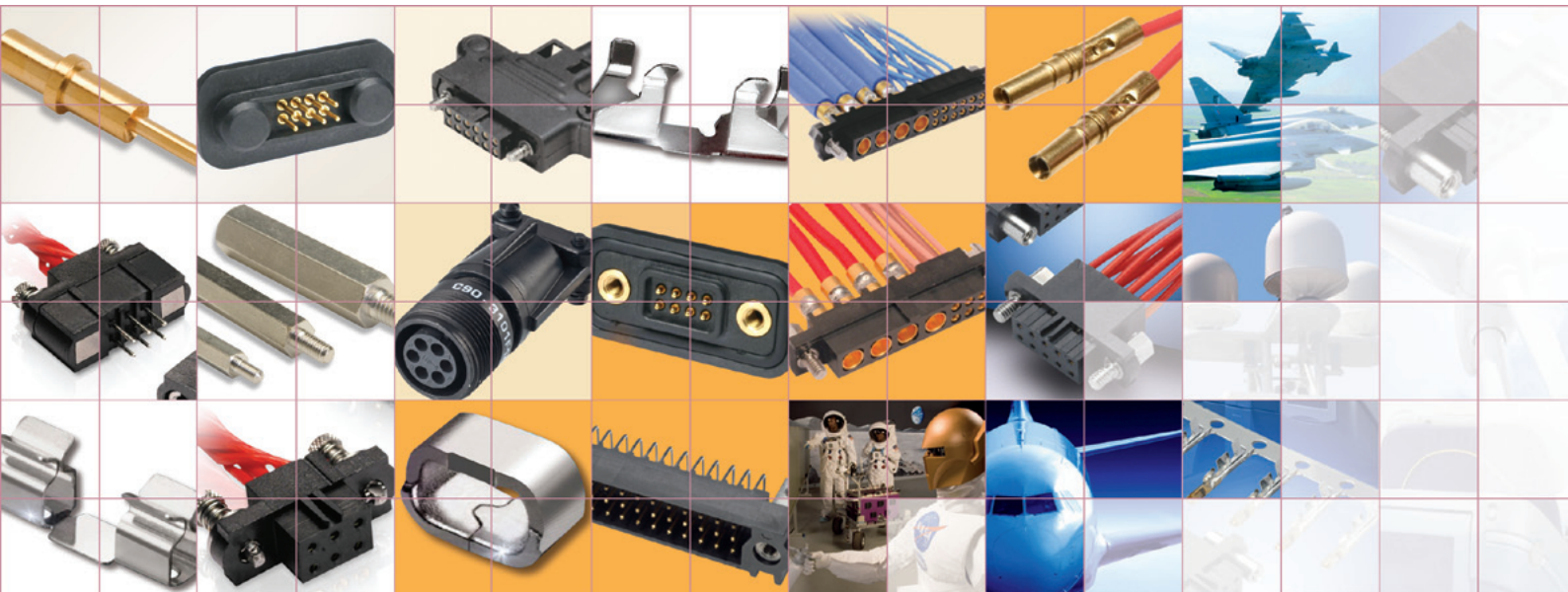


INTERCONNECT DESIGN & MANUFACTURING



EZ - BOARDWARE	3
DATAMATE	4
HOTSHOE CONNECTORS	6
ARCHER	6
COMMERCIAL MIL	7
PITCH CONNECTORS	7
SPACERS & PCB SOCKETS	7
OFFICES	8



INTRODUCTION

Design Excellence

Harwin has invested heavily in advanced CAD/CAM technology and can provide drawings, 3-D models and prototypes throughout the development process. Our specialist teams can be involved from the earliest stages of a project, complementing your own expertise to develop the optimum solution in terms of performance, quality, manufacturing efficiency and cost.

Quality

Harwin's commitment to quality extends to every area of the organization – from executive management right through to production – and is based on a well-established set of principles, aligned with the requirements of ISO9000-2008.

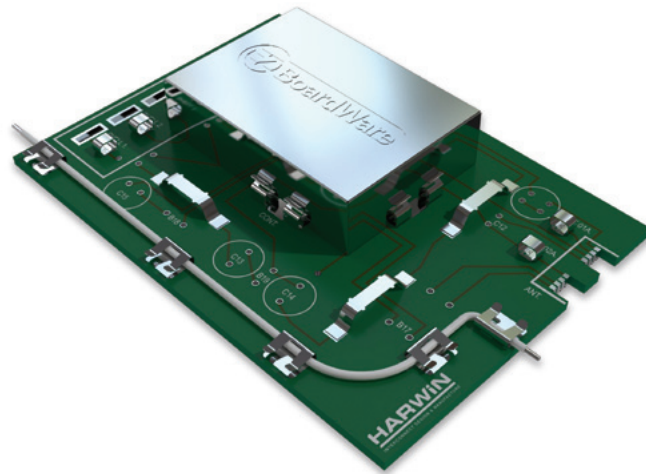
- » Integration of vision systems assures delivery quality.
- » Integration of statistical process control techniques (SPC) which monitor the production process, with a goal of sigma 6 (zero defects).
- » To support our SPC program, Harwin continues to commit to leading edge technologies as part of our continuous improvement initiatives.

Manufacturing Capabilities

With a policy of investing 10% of turnover year on year and replacing equipment on a five year cycle, Harwin operates high technology processes in a very modern environment.

That ethos goes right back to 1952 and the birth of the company – Harwin's founder Patrick de Laszlo believed that components should be engineered to the highest possible standards. That goal is still very relevant to us today.

Investment in the latest computer aided design and engineering facilities, in statistical process control, and many other leading edge disciplines are ensuring that for Harwin, the future is every bit as bright as its distinguished past.



EZ-BOARDWARE

The range of EZ-BoardWare products from Harwin are all designed to make production processes easier, and in some cases eliminate extra processes altogether. Surface mount designs, available in tape and reel for fully automated assembly, these products will increase design flexibility and decrease costs.

EZ-SHIELD CLIPS

Also referred to as RFI Shield Clips, these clips are a fast and convenient method of securing an RFI shield can to a PCB. This removes secondary soldering, and makes re-work and maintenance damage-free and easy.



EZ-CABLE CLIPS

Replace manual assembly of plastic cable clips by using these SMT Cable Clips. Capable of retaining cables up to 3mm, these clips will remove another operation from the production process.



EZ-LINKS

EZ-Links bridge PCB tracks and eliminate the need for PCB via holes, removing a process and reducing costs.



EZ-TEST POINTS

By soldering these SMT Test Points to a circuit board, test engineers have easy and convenient points on the PCB to take their readings.



EZ-SHIELD FINGERS

Placed during the main component lay-down RFI Shield Fingers are assembled to PCBs and used as grounding or shielding contacts.



EZ-FUSE CLIPS

Designed to accept Mini Blade fuse tails or blade tabs 2.8 x 0.8mm, the SMT Fuse Clip makes an easy connection with the fuse to an SMT circuit board.



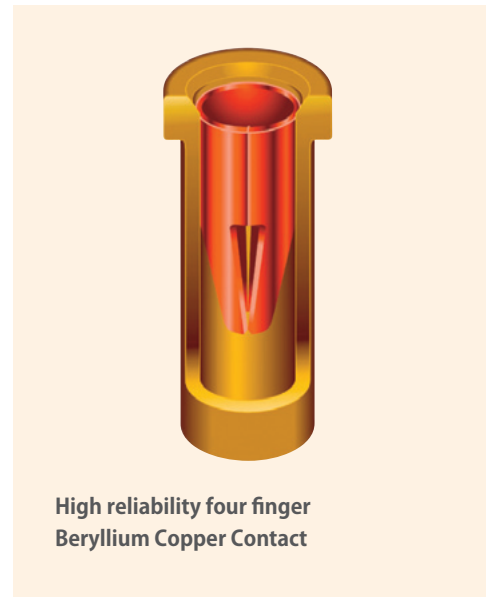
Datamate

PERFORMANCE WITHOUT COMPROMISE

Datamate is a 2mm pitch high reliability, high performance COTS connector system, which is approved to British Standard 9525-F0033 and has a proven track record under the most extreme conditions.

This approval is made possible by Harwin's high reliability, low frequency four finger Beryllium Copper contact technology (3A max). The contact features a four finger Beryllium Copper clip to ensure integrity of connection under the most severe conditions and makes Datamate ideally suited to applications that are subject to high loads of vibration and shock. Other contact options include high frequency (6GHz max) and high power (20A max).

The range benefits from mixed layout options (Mix-Tek) that afford the engineer complete flexibility of design, automated crimping versions (Trio-Tek) which reduces installed costs, and Datamate BS with 100% in-process testing for peace of mind in safety-critical applications. Secure termination is achieved by latches (L-Tek), jackscrews (J-Tek) or the new 101-Lok fast mate hardware, which speeds and simplifies the mating process.



High reliability four finger Beryllium Copper Contact

FEATURES & BENEFITS

- > COTS (Commercial Off The Shelf) system
- > Miniature connector system with high performance contacts reduces space and weight
- > Four finger Beryllium Copper contact ensures integrity of signal connection
- > Professional connector system at commercial prices
- > Rugged connectors for use in harsh environments & safety critical applications when failure is not an option
- > Proven history in: aerospace, industrial, military, oil & gas etc.
- > Suited for use in harsh environments where high vibration, shock and extremes of temperature are a consideration
- > Approved to BS9525-F0033
- > Complies with CECC 75101-008
- > Live Help, 3D CAD models and free samples at www.harwin.com/datamate



Datamate Project involvement:

NASA robonaut
Boeing 757, 737 & 747
Eurofighter Typhoon
Watchkeeper UAV

Harwin operates an ongoing product development program, visit www.harwin.com for the latest additions to the Datamate range.

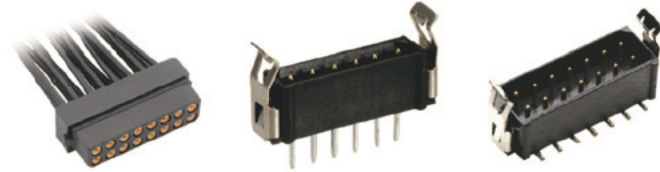
Picture courtesy of Hydroid

Datamate

RANGE OVERVIEW

DATAMATE L-TEK

Datamate low frequency connectors with three Flexible mating options: friction latch, locking latch and no latch.



DATAMATE J-TEK

Datamate low frequency connectors with optional jackscrews for increased security of connection. No special tooling required.



DATAMATE BS

Manufactured to British Standard 9525-F0033 for safety critical applications. Datamate BS assures total security in the knowledge that the product is of the highest calibre.



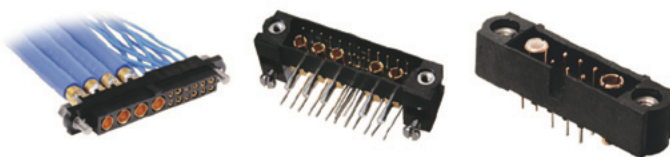
DATAMATE-PLUS

Datamate with 100% in-process (A & B) testing. Similar to Datamate BS in nature but applicable to the whole range of Datamate product.



DATAMATE MIX-TEK

3 connector styles in one. Includes low frequency signal, power (20 A) and coax (6Ghz) options. Modular manufacturing allows customer specified layouts in short lead times and at COTS prices.



DATAMATE LOK

101-Lok hardware reduces assembly time by simplifying the mating process. The fast mate hardware requires 101-degree turn to securely mate and requires no special tooling.



DATAMATE TRIO-TEK

Performing to the same high-reliability standards as conventional Datamate, the Trio-Tek open barrel crimp contact automates the crimp process to significantly save on assembly time and reduce process costs.



PRODUCT OVERVIEW

In addition to Harwin's EZ Boardware and Datamate product ranges, Harwin also design and manufacture 5 further world-class ranges of standard and specialist interconnect solutions. Avnet Abacus has a long trading history with Harwin and stock broad portfolio of Harwin products.

HOTSHOE CONNECTORS

Harwin's range of Hot Shoe connectors are constructed using spring loaded contacts maintaining a positive force against the mating connector. Rugged and robust, Harwin's range of HotShoe connectors withstand high numbers of mating cycles and are manufactured from durable mould materials.

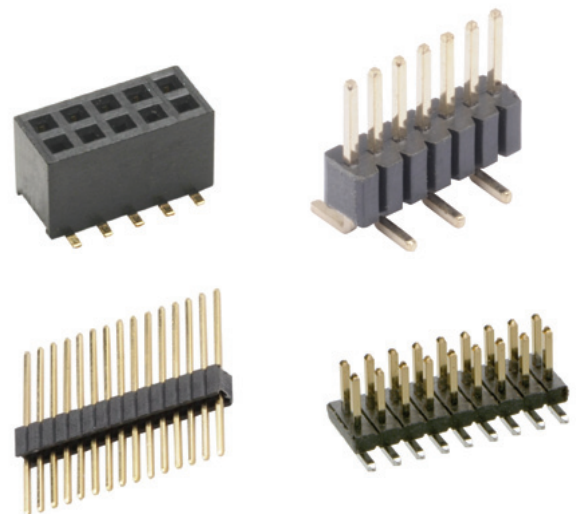
- » Low mating force with high mating cycles
- » Tolerates mating mis-alignment
- » Ideal for use in portable equipment where separate battery modules are used and for data docking stations
- » P20 spring loaded connectors for reduced footprint in mobile and other miniature applications
- » M90 HotShoe connectors for panel mounted and sealed applications



ARCHER

A versatile range of 1.27mm pitch board to board connectors for use in a wide variety of industries that require reliable miniature connectors. Harwin's range of M50 & M52 connectors carry 1Amp in a small space envelope.

- » Compact footprint
- » Polarised and shrouded variations
- » Pin Header variants for total flexibility of design
- » PC Tail (through-board) and SMT; Vertical, Horizontal and Extended



COMMERCIAL MIL-DTL-5015 (MIL-C-5015)

A range of high-reliability, rugged, RoHS compliant Circular connectors manufactured to the high standards of MIL-DTL-5015, yet priced to be cost effective for commercial and industrial applications.

Designed for use in harsh and demanding environments, the high specification, cadmium and hexavalent chromium free range features free plug, panel mount and cable connector orientations in a number of popular shell and layout options.

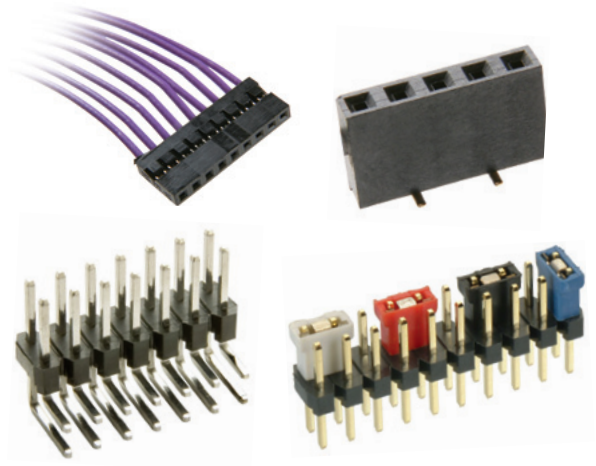
- » Intermateable with MIL-DTL-5015
- » Low cost highly durable rugged connector system
- » Zinc & Black Chromate-plated shells



2mm & 2.54mm PITCH CONNECTORS

A comprehensive range of header and socket connectors, covering board-to-board and cable-to-board configurations. Harwin's M20 (2.54mm pitch) and M22 ranges (2.00mm pitch) are available in a choice of finishes and provide a quality selection in an industry standard style.

- » Options include Vertical, Horizontal and Extended connectors, with SMT, PC Tail (through-board) and cable termination options
- » Jumper sockets available for both sizes
- » Pin header variants for total flexibility of design
- » RoHS compliant connectors using high-temperature plastics



METRIC SPACERS & PCB SOCKETS

To compliment the connector portfolio, Harwin offer Metric Spacers (standoffs) in a variety of styles and body lengths and PCB Sockets for single contact mating requirements.

PCB Sockets:

- » Utilising the same contact technology behind the successful Datamate range, giving a high-reliability connection system in a single contact
- » Available to mate with Ø0.5mm, Ø0.8mm, Ø1mm or Ø2mm pins
- » Choice of finishes and body styles

Metric Spacers:

- » Female/Female, Male/Female, Male/Male and Clearance spacers available in various thread sizes and body lengths
- » Brass material with a durable Nickel finish (other materials also available)



AVNET ABACUS OFFICES

Austria

Schönbrunner Str. 297-307
A-1120 Vienna
+43 1 86642-0
+43 1 86642 250
wien@avnet-abacus.eu

Belgium

Eagle Building
Kouterveldstraat 20
B-1831 Diegem
+32 (0)2 7099 002
+32 (0)2 7099 801
diegem@avnet-abacus.eu

Belarus

c/o Avnet Abacus Russia
Office 26, Building 2
10 Korovinskoye Shoussee,
127486 Moscow
+7 495 937 2167
+7 495 937 1263
belarus@avnet-abacus.eu

Bulgaria

c/o Avnet Abacus Slovenia
Dunajska Cesta 159
1000 Ljubljana
+386 (0)1 560 97 54
+386 (0)1 560 98 78
bulgaria@avnet-abacus.eu

Croatia

c/o Avnet Abacus Slovenia
Dunajska Cesta 159
1000 Ljubljana
+386 (0)1 560 97 54
+386 (0)1 560 98 78
croatia@avnet-abacus.eu

Czech Republic

c/o Avnet Abacus Austria
Schönbrunner Str. 297-307
A-1120 Vienna
+43 1 86642-0
+43 1 86642 250
praha@avnet-abacus.eu

Denmark

Knudlundvej 24
DK-8653 Them
+45 86 84 84 84
+45 86 84 82 44
them@avnet-abacus.eu

Denmark

Ellekaer 9, DK-2730 Herlev
+45 43 22 80 40
+45 43 22 80 41
herlev@avnet-abacus.eu

Egypt

c/o Avnet Abacus Turkey
Bayar Cad, Gülbahar Sok,
No:17 Perdemsac Plaza
D:132 TR-34742 Kozyatagi
/ Istanbul
+90 216 372 59 54
+90 216 372 61 39
egypt@avnet-abacus.eu

Estonia

c/o Avnet Abacus Finland
Pihatormä 1 B
FI-02240 Espoo
+358 (0) 207 499 220
+358 (0) 207 499 240
espoo@avnet-abacus.eu

Finland

Pihatormä 1 B
FI-02240 Espoo
+358 (0) 207 499 220
+358 (0) 207 499 240
espoo@avnet-abacus.eu

France

6/8 rue Ambroise Croizat
ZAE Les Glaises, F-91127
Palaiseau Cedex, Paris
+33 (0) 1 6447 2929
+33 (0) 1 6447 9150
paris@avnet-abacus.eu

France

Parc de la Plaine
35 Avenue Marcel Dassault
F-31506 Toulouse
+33 (0) 5 6247 4787
+33 (0) 5 6247 4789
toulouse@avnet-abacus.eu

France

Technoparc
Bât E, 4 avenue des
Peupliers
F-35510 Cesson Sevigne,
Rennes
+33 (0) 2 9983 7720
+33 (0) 2 9983 4829
rennes@avnet-abacus.eu

France

Parc Club du Moulin à Vent
Bât 40, 33 rue du Dr. G Lévy
F-69693 Vénissieux Cedex,
Lyon
+33 (0) 4 7877 1370
+33 (0) 4 7877 1391
lyon@avnet-abacus.eu

Germany

Gutenbergstr. 15
D-10587 Berlin
+49 (0) 30 790 997 0
+49 (0) 30 790 997 51
berlin@avnet-abacus.eu

Germany

Werner-von-Siemens-
Straße 2-6
Gebäude 5137
D-76646 Bruchsal
+49 (0) 7251 917 90
+49 (0) 7251 917 92 25
bruchsal@avnet-abacus.eu

Germany

Wilhelmstr. 1
D-59439 Holzwickede /
Dortmund
+49 (0) 2301 2959 27
+49 (0) 2301 2959 29
dortmund@avnet-abacus.eu

Germany

Hans-Böckler-Strasse 10 a
D-37079 Göttingen
+49 (0) 551 305 430
+49 (0) 551 305 4329
goettingen@avnet-abacus.eu

Germany

Rathausallee 70
D-22846 Norderstedt
bei Hamburg
+49 (0) 40 608 23 59 0
+49 (0) 40 608 23 59-20
hamburg@avnet-abacus.eu

Germany

Gruber Str. 60c
D-85586 Poing / Munich
+49 (0) 8121 777 03
+49 (0) 8121 777 531
muenchen@avnet-abacus.eu

Germany

Lina-Ammon-Str. 19 b
D-90471 Nürnberg
+49 (0) 911 244 250
+49 (0) 911 244 25 25
nuernberg@avnet-abacus.eu

Germany

Gutenbergstr. 15
D-70771 Leinfelden-
Echterdingen / Stuttgart
+49 (0) 711 78260 02
+49 (0) 711 78260 333
stuttgart@avnet-abacus.eu

Greece

c/o Abacus Avnet Austria
Schönbrunner Str. 297-307
A-1120 Vienna
+43 1 86642-0
+43 1 86642 250
greece@avnet-abacus.eu

Hungary

c/o Avnet Abacus Austria
Schönbrunner Str. 297-307
A-1120 Vienna
+43 1 86642-0
+43 1 86642 250
budapest@avnet-abacus.eu

Italy

Via Manzoni 44
I-20095 Cusano Milanino
(Milano)
+39 02 660 921
+39 02 66092 332
milano@avnet-abacus.eu

Italy

Viale dell'industria 23
I-35129 Padova
+39 049 7800 381
+39 049 7730 36
padova@avnet-abacus.eu

Italy

Via Zoe Fontana 220
I-00131 Roma
+39 06 4131 498
+39 06 4192 618
roma@avnet-abacus.eu

Italy

Via Scaglia Est 144
I-41100 Modena
+39 059 351 300
+39 059 344 993
modena@avnet-abacus.eu

Italy

Via Panciatici 40/11
I-50127 Firenze
+39 055 436 1928
+39 055 428 8810
firenze@avnet-abacus.eu

Latvia

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wroclaw
+48 71 34 205 99
+48 71 34 229 10
latvia@avnet-abacus.eu

Lithuania

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wroclaw
+48 71 34 205 99
+48 71 34 229 10
lithuania@avnet-abacus.eu

Netherlands

Takkebijsters 2
NL-4817 BL Breda
+31 (0) 76 57 22 300
+31 (0) 76 57 22 303
breda@avnet-abacus.eu

Norway

Ryensvingen 3 B
N-0680 Oslo
+47 67 97 87 20
+47 67 97 87 21
oslo@avnet-abacus.eu

Poland

Plac Solny 16
PL-50-062 Wroclaw
+48 71 34 205 99
+48 71 34 229 10
wroclaw@avnet-abacus.eu

Portugal

c/o Avnet Abacus Madrid
C/Chile, 10, Oficina 229
ES-28290 Las Matas /
Madrid
+34 (0) 913 72 7200
+34 (0) 91 636 9781
portugal@avnet-abacus.eu

Romania

c/o Avnet Abacus Slovenia
Dunajska Cesta 159
1000 Ljubljana
+386 (0)1 560 97 54
+386 (0)1 560 98 78
romania@avnet-abacus.eu

Russia

Office 26, Building 2
10 Korovinskoye Shoussee
127486 Moscow
+7 495 937 2167
+7 495 937 1263
moscow@avnet-abacus.eu

Serbia

c/o Avnet Abacus Slovenia
Dunajska Cesta 159
1000 Ljubljana
+386 (0)1 560 97 54
+386 (0)1 560 98 78
serbia@avnet-abacus.eu

Slovakia

c/o Avnet Abacus Austria
Schönbrunner Str. 297-307
A-1120 Vienna
+43 1 86642-0
+43 1 86642 250
slovakia@avnet-abacus.eu

Slovenia

Dunajska Cesta 159
1000 Ljubljana
+386 (0)1 560 97 54
+386 (0)1 560 98 78
ljubljana@avnet-abacus.eu

Spain

C/Mallorca, 1-23, 2a Plta 1
ES-08014 Barcelona
+34 (0) 93 327 85 50
+34 (0) 93 426 80 21
barcelona@avnet-abacus.eu

Spain

C/Chile, 10, Oficina 229
ES-28290 Las Matas /
Madrid
+34 (0) 913 72 7200
+34 (0) 91 636 9781
madrid@avnet-abacus.eu

Spain

Paza Zabalgane,
12 Bajo Izda
ES-48960 Galdakao /
Vizcaya
+34 (0) 94 457 0044
+34 (0) 94 456 77 10
bilbao@avnet-abacus.eu

Sweden

Smörhålevägen 3
SE-43442 Kungsbacka
+46 (0)300 140 50
+46 (0)300 140 15
gothenburg@avnet-abacus.eu

Sweden

Esplanaden 3D
Box 1830, SE-171 27 Solna
+46 (0)8 505 262 00
+46 (0)8 505 262 01
stockholm@avnet-abacus.eu

Switzerland

Bernstrasse 392
CH-8953 Dietikon
+41 (0) 43 322 49 90
+41 (0) 43 322 49 99
zurich@avnet-abacus.eu

Turkey

Bayar Cad, Gülbahar Sok,
No:17 Perdemsac Plaza
D:132 TR-34742 Kozyatagi
/ Istanbul
+90 216 372 59 54
+90 216 372 61 39
istanbul@avnet-abacus.eu

UK

Cherrycourt Way, Leighton
Buzzard, Bedfordshire
LU7 4YY
+44 (0)1525 858000
+44 (0)1525 858111
leightonbuzzard@avnet.eu

UK

Building 5, Waltham Park,
White Waltham, Maiden-
head, Berkshire SL6 3TN
+44 (0)1628 512912
+44 (0)1628 512999
maidenhead@avnet.eu

UK

Ground Floor, Chancery
House, 1 Premier Way
Abbey Park, Romsey
SO51 9AQ
+44 (0)1794 510150
+44 (0)1794 510160
southampton@avnet.eu

UK

Avnet House, Rutherford
Close, Meadway, Stevenage,
Hertfordshire SG1 2EF
+44 (0)1438 789 789
+44 (0)1438 789 799
stevenage@avnet.eu

UK

Deltron Emcon House,
Hargreaves Way, Sawcliffe
Industrial Park, Scunthorpe,
North Lincs, DN15 8RF
+44 (0)1724 407601
+44 (0)1724 281650
scunthorpe@avnet.eu

UK

Unit A5, 5 Ashworth House,
Deakins Business Park,
The Hall Coppice, Egerton,
Bolton BL7 9RP
+44 (0)1204 590270
+44 (0)1204 590299
bolton@avnet.eu

Ukraine

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wroclaw
+48 71 34 205 99
+48 71 34 229 10
ukraine@avnet-abacus.eu

All trademarks and logos are the property of their respective owners. This document provides a brief overview only and is not intended to be complete or binding offer. Product information, including information related to a product's specifications, uses or conformance with legal or other requirements, is obtained by Avnet from its suppliers or other sources deemed reliable and is provided by Avnet on an 'As Is' basis. Avnet makes no representation as to the accuracy or completeness of the product information and Avnet disclaims all representations, warranties and liabilities under any theory with respect to the product information, including any implied warranties of merchantability, fitness for a particular purpose, title and/or non-refrangement. All product information is subject to change without notice.

