



Harwin industrial
IoT solutions

Harwin industrial IoT solutions

Eliminate downtime by connecting with confidence

Harwin's industrial connectors and board solution products offer the quality assurance and rugged durability required for high performance in demanding environments. Failure in Industrial IoT applications can result in downtime and loss of resources. Harwin can help eliminate these risks with their selection of robust yet cost effective connectors that are capable of withstanding industrial levels of shock and vibration.

Harwin Datamate J-Tek 2mm pitch connector range



The Datamate J-Tek 2mm pitch connector range offers a secure and robust connection for demanding applications. The range has a proven track record for performance under extreme conditions; vibration, shock and high operating temperatures. The J-Tek design provides a low-profile and space saving solution. A variety of stainless-steel jackscrew hardware options are available to provide maximum strain relief in rugged industrial environments.

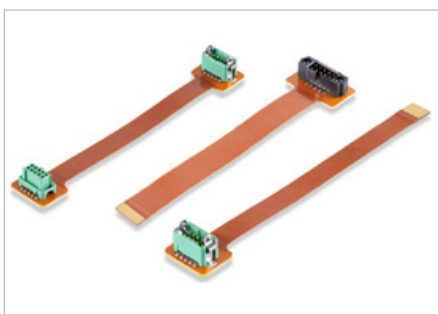
FEATURES

- 3A per contact (electrically loaded), beryllium copper and gold plated
- 4-finger contact design to maintain electrical continuity
- Withstands 100G shock for 6ms and 10G vibration for 6hrs
- Operating temperature range: -55°C to +125°C
- 500 mating cycles durability
- Fully shrouded and polarised to prevent mis-mating
- Plastic and metal backshells available for cable protection and RFI shielding

APPLICATIONS

- Industrial IoT
- Portable equipment
- Robotics systems
- Mobile machinery
- Drives and controls
- Test equipment
- Control panels and sub systems
- Factory equipment

Harwin Hi-Rel flex circuit assemblies



Discover the added versatility of Flexible Printed Circuits (FPC) from Harwin. These low-profile designs combine the go-anywhere routing of cables with the reduced vertical space required by SMT connectors. When you replace standard cable connectors with these flex-mounted SMT connections, you'll be able to stack your PCBs closer. The FPC design also allows for a right-angled connection. Choose between Datamate J-Tek for 2mm pitch connectors and 1mm pitch FPC or Gecko 1.25mm pitch connectors and 0.5mm pitch FPC.

FEATURES

- 10 position double row configurations with single and double end options
- Available in lengths of 100mm for Datamate J-tek and 75mm for Gecko
- Tighter bend radius under static and dynamic conditions
- 4-finger contact design to maintain electrical continuity
- Withstands extremes of shock and vibration
- Operates at temperatures of -65°C to +150°C
- Compatible with standard FPC/FFC connectors
- Fully shrouded and polarised to prevent mis-mating

APPLICATIONS

- Industrial IoT
- Portable equipment
- Robotics systems
- Mobile machinery
- Drives and controls
- Test equipment
- Control panels and sub-systems
- Factory equipment

Harwin surface mount spring contacts



Harwin's spring contacts offer a surface mount flexible connection option. Designed to provide electrical or grounding connections in IoT applications. A wide array of styles, configurations and working heights are available for flexibility in design requirements and space constraints.

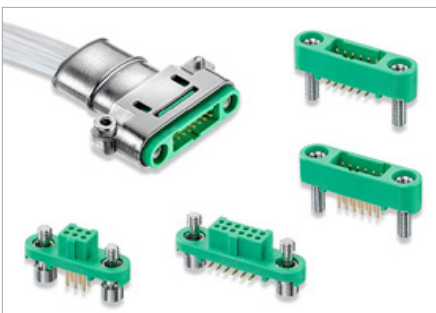
FEATURES

- Working heights from 0.90mm to 6.95mm
- Provided on tape and reel for automated placement
- Up to 10,000 mating cycles (dependent on style)
- Development kit available to assist in prototyping
- Available options:
 - > C-Shape for simple and effective contact with metal shields or frames
 - > Antenna contacts for smallest mating surface
 - > Positive stop prevents over-stressing
 - > Box style design prevents twist and snagging
 - > Multidirectional for vertical or horizontal use
 - > Extended beam design suitable for wiping and sliding actions

APPLICATIONS

- Industrial IoT
- Antenna connections
- Internal PCB grounding
- Motion control units
- Environmental monitoring
- Process control equipment

Harwin Gecko-SL series 1.25mm connectors



Harwin's Gecko Screw-Lok connectors provide a low profile, dual row interconnect solution, ideally suited for stacking and cable mating in areas where PCB real estate is at a premium. Equipped with mate-before-lock jackscrews for faster and easier assembly. With space and weight a consideration for many Industrial IoT applications, Gecko-SL connectors are designed to offer high performance in a miniature package. The 4-finger beryllium copper and gold-plated contact ensures integrity of connection while achieving 2A electrically loaded. Capable of withstanding extremes of shock vibration and temperatures.

FEATURES

- 2A per contact (electrically loaded)
- 4-finger patented contact design maintains electrical continuity
- Withstands 100G shock for 6ms and 20G vibration for 6hrs
- Improved operating temperature range: -65°C to +150°C
- 1,000 mating cycles durability
- 3 keyway polarisation points on each component prevent mis-mating
- Lightweight metal hoods available for cable protection and RFI shielding
- Up to 45% smaller and up to 75% lighter than industry standard equivalents

APPLICATIONS

- Industrial IoT
- Portable equipment
- Robotics systems
- Mobile machinery
- Drives and controls
- Test equipment
- Control panels and sub systems
- Factory equipment

Harwin M225 series high performance industrial connector range



The M225 series of connectors is aimed at the industrial market, and is a 2mm pitch, high performance industrial connector range from Harwin. Designed to resist industrial levels of vibration and shock, in a practical package suitable for automated assembly at high volume.

This cable-to-board, double row design mates a throughboard PCB male connector to a choice of crimp contacts, accommodating 22 to 28AWG wires on the female connector. The female crimp contacts are available in both loose (for prototyping) and reeled (for high-volume automation) packaging, and a hand crimp tool can be ordered for low-volume work.

To meet the higher requirements of vibration, shock and acceleration for industrial products, the contact style utilises three contact surfaces touching the mating male contact. Added security is optionally provided with a unique and simple connector locking mechanism fitted to the female housing, which is engaged by pressing home a pin on either end of the connector.

FEATURES

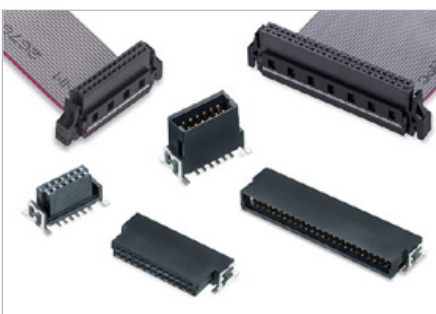
- 3A per signal contact (all electrically loaded; 3.3A per individual contact) at 2mm pitch
 - > Capable of signal and low power within a compact design, saving PCB real estate
- Innovative 3-finger stamped single-piece contact design
 - > Supplied in bandolier/carrier strip format for easy use on automated crimping systems
- Polarised housings with shrouded contacts
 - > Prevents accidental damage and incorrect mating orientations for ease of assembly
- Expanding rubber locking fixing
 - > Fast and secure connection between mated connectors, resistance to vibration

- From a manufacturer of avionics-grade connectors
 - > High quality manufacturing with modern production standards, EN9100 approval

APPLICATIONS

- Industrial
 - > Factory and mobile machinery, Control panels and sub-systems, Drives, Robotics and other automation
- Instrumentation
 - > Test equipment, Portable hand-held devices
- Site Control
 - > Remote control devices, ground and machinery monitoring

Harwin's Archer Kontrol range of compact 1.27mm pitch connectors



Archer Kontrol durable 1.27mm pitch connectors offer increased reliability for industrial applications. The compact surface mount design offers a robust and flexible connection choice. Get the stacking height you need by selecting different combinations of male and female vertical connectors. Add horizontal connectors to achieve right angle or co-planar arrangements. IDC female double-ended cable assemblies give you cable-to-board flexibility. Fully shrouded to assist with blind mating and to resist lateral and twisting forces experienced when under vibration. Dual-beam contact offer 1.2A per contact and mated connectors can carry a data rate up to 3Gbits/s.

FEATURES

- 1.2A max. per contact and 3Gbits/s data rate
- Withstands vibration of 20G for 12 hours (10Hz to 2000Hz)
- Improved operating temperature range: -55°C to +125°C
- 500 mating cycles durability
- Design flexibility with different height options
- Provided on tape and reel for automated placement
- Surface mount design with hold-down solder tabs for strain relief
- Fully shrouded and polarised with location pegs

- Ready-made female cable assemblies in 150mm and 300mm lengths

APPLICATIONS

- Industrial equipment
 - > Factory equipment, production line controls, drive units for large scale installations
- Handheld equipment
 - > IoT markets, portable monitoring equipment, data collection
- Transport
 - > Trackside and train equipment, large vehicle control systems, roadside monitoring

EMC shield cans and clips



EMC shield can clips simplify the process of shielding sensitive board level components from RFI and EMI. This alternative to traditional PC tail cans and faraday cages saves production time and expense while increasing reliability. Shield clips are ready for automated placement and secured during the SMT phase of production. Shield cans are then pushed into the clips over the sensitive component or circuit in a secondary operation. Removing the need for hand soldering which saves time and production expense. The risk of creating thermal damage and grounding plane interference are also eliminated. Cans are removable providing easy access to the component for cleaning or rework. EMC clips are available in a variety of shapes and sizes to work with custom cans or Harwin's standard off the shelf cans.

FEATURES

- Provided on tape and reel for automated placement
- Decrease production time and costs
- Eliminate secondary soldering
- Remove risk of creating heat damage and hot spots
- Cleaning and rework made easy
- Wide variety of clip configurations and sizes
- Simple 5-sided nickel silver can design
- Shield can development kit available for custom can creation

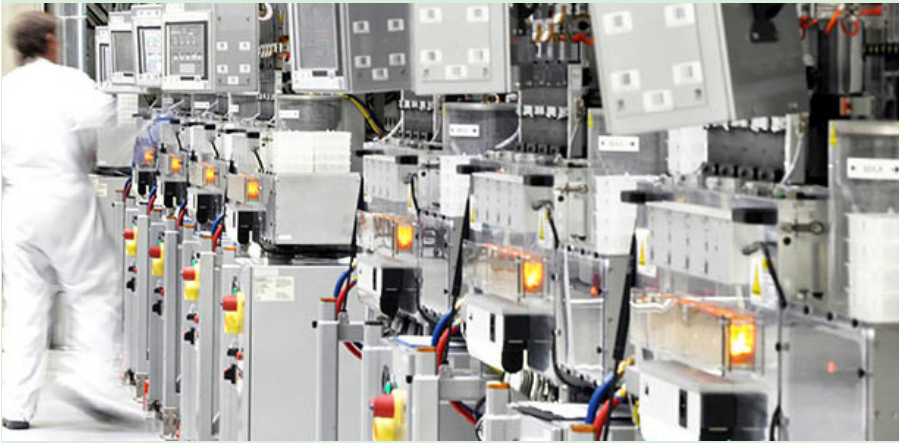
Shield cans

Product	Length x width	Height	Thickness	Compatible SMT shield clips	Tape and reel quantity
S01-30200500	30mm x 20mm	5mm	0.30mm	S1711-46R, S2711-46R, S0971-46R, S0921-46R	Loose
S01-30300500	30mm x 30mm	5mm	0.30mm	S1711-46R, S2711-46R, S0971-46R, S0921-46R	Loose
S01-50250500	50mm x 25mm	5mm	0.30mm	S1711-46R, S2711-46R, S0971-46R, S0921-46R	Loose
S02-20150300 S02-20150300R	20mm x 15mm	3mm	0.20mm	S1711-46R, S2711-46R, S0971-46R, S1721-46R, S0951-46R, S0961-46R, S0991-46R, S1001-46R, S0911-46R, S0981-46R	Loose 900
S02-25200300	25mm x 20mm	3mm	0.20mm	S1711-46R, S2711-46R, S0971-46R, S1721-46R, S0951-46R, S0961-46R, S0991-46R, S1001-46R, S0911-46R, S0981-46R	Loose
S02-30200250	30mm x 20mm	2.5mm	0.20mm	S1711-46R, S2711-46R, S0971-46R, S1721-46R, S0951-46R, S0961-46R, S0991-46R, S1001-46R, S0911-46R, S0981-46R	Loose
S03-10100300R	10mm x 10mm	3mm	0.15mm	S1721-46R, S0941-46R, S0961-46R, S1001-46R, S0911-46R	900
S03-15100300R	15mm x 10mm	3mm	0.15mm	S1721-46R, S0941-46R, S0961-46R, S1001-46R, S0911-46R	900
S03-3010300R	30mm x 10mm	3mm	0.15mm	S1721-46R, S0941-46R, S0961-46R, S1001-46R, S0911-46R	900

Shield clips

Product	Shield thickness	Height	Base material	Tape and reel quantity	Special feature
S1411-46R	0.70mm to 1mm	3.65mm	Beryllium copper	1,900	-
S1711-46R	0.17mm to 0.30mm	3.55mm	Beryllium copper	1,900	-
S2711-46R	0.17mm to 0.30mm	3.55mm	Cupro-nickel	1,900	-
S0971-46R	0.20mm to 0.30mm	2mm	Stainless steel	5,000	Higher force
S1721-46R	0.13mm to 0.23mm	2.23mm	Beryllium copper	5,000	-
S0941-46R	0.135mm to 0.16mm	1mm	Stainless steel	10,000	-
S0951-46R	0.20mm	1.28mm	Stainless steel	10,000	-
S0961-46R	0.15mm to 0.20mm	1.28mm	Stainless steel	10,000	Higher force
S0991-46R	0.20mm to 0.25mm	1.28mm	Stainless steel	15,000	Higher force
S1001-46R	0.15mm to 0.20mm	0.80mm	Stainless steel	20,000	Higher force, very low profile
S0911-46R	0.15mm to 0.20mm	2mm	Beryllium copper	6,500	Ultra-compact
S0981-46R	0.20mm to 0.25mm	1.30mm	Stainless steel	6,000	Higher force, corner style
S0921-46R	0.30mm to 0.40mm	5.45mm	Cupro-nickel	600	Corner style with shield

ARTICLE - Specifying rugged connectors for IIoT applications



Harwin's Wendy Preston discusses the key environmental factors that connectors have to cope with in an Industrial IoT context.

[READ ARTICLE](#)



Harwin Archer Kontrol sample kit request form



Complete the form below to request a Harwin Archer Kontrol sample kit*. If you need advice or design support, get in touch with our technical specialists in your local language.

The kit includes 2 horizontal SMT and 2 vertical SMT, 1.27mm pitch industrial connectors:

- M55-7101642R: 8x8 male DIL horizontal SMT connector
- M55-7001242R: 6x6 male DIL vertical SMT connector
- M55-6001242R: 6x6 female DIL vertical SMT connector
- M55-6101642R: 8x8 female DIL horizontal SMT connector

[REQUEST SAMPLE KIT](#)



Engineering Services - Ask an expert



Have a question?
Our regional technical specialists are on hand to help

[GET IN TOUCH](#)



Offices

AUSTRIA

Avnet Abacus Vienna
Avnet EMG Elektronische
Bauelemente GmbH
Grünbergstraße 15/1/4. OG
1120 Wien / Austria
Phone: +43 1 86642 0
wien@avnet-abacus.eu

BELARUS

c/o Avnet Abacus Russia
Office 24, Building 2
10 Korovinskoye Shosse,
127486 Moscow
Phone: +7 (495) 737 3688
Fax: +7 (495) 737 3686
belarus@avnet-abacus.eu

BELGIUM

De Kleetlaan 3
1831 Diegem
Phone: +32 2 227 2000
diegem@avnet-abacus.eu

BULGARIA

c/o Avnet Abacus Romania
4 Gara Herastrau,
Building B, 2nd Floor RO-020334
Bucharest
Phone: +4021 528 16 90
bulgaria@avnet-abacus.eu

CROATIA

c/o Avnet Abacus Slovenia
Dunajska Cesta 167
1000 Ljubljana
Phone: +386 (0)1 560 97 54
Fax: +386 (0)1 560 98 78
croatia@avnet-abacus.eu

CZECH REPUBLIC

Amazon Court Karolinska 661/4
CZ-18600 Prague Czech Republic
Phone: +420 234 091 011
Fax: +420 234 091 010
praha@avnet-abacus.eu

DENMARK

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

Lyskær 9, DK-2730 Herlev
Phone: +45 86 84 84 84
Fax: +45 43 29 37 00
herlev@avnet-abacus.eu

EGYPT

c/o Avnet Abacus Turkey
Tatlısu Mahallesi Pakdil
Sokak No: 7 Kat: 2 34774
Umraniye Istanbul Türkiye
Phone: +90 216 52 88 370
Fax: +90 216 52 88 377
egypt@avnet-abacus.eu

ESTONIA

Suur-Jõe 63, Pärnu,
80042 Pärnu Maakond,
Estonia
Phone: +372 56637737
paernu@avnet-abacus.eu

FINLAND

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

FRANCE

Immeuble Carnot Plaza
14 Avenue Carnot
91349 Massy Cedex, Paris
Phone: +33 (0) 1 6447 2929
Fax: +33 (0) 1 6447 9150
paris@avnet-abacus.eu

8 chemin de la Terrasse
Bat D 1er étage
31500 Toulouse
Phone: +33 (0) 5 6247 4787
Fax: +33 (0) 5 6247 4761
toulouse@avnet-abacus.eu

35 avenue des Peupliers
Les Peupliers 2
35510 Cesson
Phone: +33 (0) 2 9983 7720
Fax: +33 (0) 2 9983 4829
rennes@avnet-abacus.eu

Parc Club du Moulin à Vent
Bât 10, 33 rue du Dr. G Lévy
F-69693 Vénissieux Cedex, Lyon
Phone: +33 (0) 4 7877 1370
Fax: +33 (0) 4 7877 1391
lyon@avnet-abacus.eu

GERMANY

Englische Str. 27
D - 10587 Berlin
Phone: +49 (0) 30 790 997 0
Fax: +49 (0) 30 790997 51
berlin@avnet-abacus.eu

Industriestr. 26
D-76297 Stutensee
Phone: +49 (0)7249 910 149
Fax: +49 (0)7249 910 177
stutensee@avnet-abacus.eu

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

Oehleckerring 9a - 13 22419
Hamburg
Phone: +49 (0) 40 608 23 59 0
Fax: +49 (0) 40 608 23 59 20
hamburg@avnet-abacus.eu

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

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

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

Gaußstraße 10 D-31275 Lehrte
Phone: +49(0) 5132 5099 0
Fax: +49(0) 5132 5099 76
lehrte@avnet-abacus.eu

GREECE

c/o Avnet Abacus Serbia
Milentija Popovića 5B,
Floors 6-8 Belgrade RS11070
Phone: +381 11 4022302
Fax: +381 11 4049900
belgrade@avnet-abacus.eu

HUNGARY

c/o Avnet Abacus Czech Republic
GreenPoint Offices,
Blok F Turcianska 2 SK-82109,
Bratislava
Phone: +421 232 242 608
Fax: +421 2 32 1111 40
budapest@avnet-abacus.eu

IRELAND

c/o Avnet Abacus Bolton
Oceanic Building
Waters Meeting Road
Bolton BL1 8SW
Phone: +44 (0)1204 547170
Fax: +44 (0)1204 547171
bolton@avnet.eu

ISRAEL

Avnet Abacus Israel
1 Habrosu Street
Bney Dror 4581500
Phone: 972-9-778-0280
Israel@avnet-abacus.eu

ITALY

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

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

Via di Settebagni, 390
I-00138 Roma
Phone: +396-41231951
roma@avnet-abacus.eu

Via Scaglia Est, 31/33
41126 Modena
Phone: +39 059 34891
Fax: +39 059 344993
modena@avnet-abacus.eu

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

LATVIA

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

LITHUANIA

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

NETHERLANDS

Stadionstraat 2, 6th fl. NL-4815
NG Breda
Phone: +31 (0) 76 57 22 300
Fax: +31 (0) 76 57 22 303
breda@avnet-abacus.eu

NORWAY

Olaf Helsetsvet 6,
0694 Oslo Norway
Phone: +47 (0) 94 89 53 73
oslo@avnet-abacus.eu

POLAND

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

PORTUGAL

Tower Plaza, Rot. Eng. Edgar
Cardoso,
23, Pl. 14, Sala E
PT-4400-676 Vila Nova de Gaia
Phone: +351 223 779502
Fax: +351 223 779503
portugal@avnet-abacus.eu

ROMANIA

4 Gara Herastrau, Building B,
2nd Floor
RO-020334 Bucharest
Phone: +4021 528 16 90
romania@avnet-abacus.eu

RUSSIA

49A Tatischeva Street,
Ekaterinburg
RUS-620028
Phone: +7 (912) 650 1944
Ekaterinburg@avnet-abacus.eu

Office 24, Building 2
10 Korovinskoye Shosse
127486 Moscow
Phone: +7 (495) 737 3688
Fax: +7 (495) 737 3686
Moscow@avnet-abacus.eu

SERBIA

Milentija Popovića 5B, Floors 6-8
Belgrade RS11070
Phone: +381 11 4022302
Fax: +381 11 4049900
belgrade@avnet-abacus.eu

SLOVAKIA

GreenPoint Offices, Blok F
Turcianska 2
SK-82109, Bratislava
Phone: +421 232 242 608
Fax: +421 2 32 1111 40
slovakia@avnet-abacus.eu

SLOVENIA

Dunajska Cesta 167
1000 Ljubljana
Phone: +386 (0)1 560 97 54
Fax: +386 (0)1 560 98 78
ljubljana@avnet-abacus.eu

SOUTH AFRICA

First Floor, Forrest House
Belmont Office Park
Belmont Road,
Rondebosch 7700, Cape Town
Phone: +27 (0) 21 689 4141
Fax: +27 (0) 21 686 4709
sales@avnet.co.za

11 Forest Square, Suite 4,
Bauhnia Building, Derby Place,
Westville, 3629, Durban
Phone: +27 (0) 31 266 8104
Fax: +27 (0) 31 266 1891
sales@avnet.co.za

Block 13, Pinewood Office Park
33 Riley Road Woodmead,
2191 Sandton, Johannesburg
Phone: +27 (0) 11 319 8600
Fax: +27 (0) 11 319 8650
sales@avnet.co.za

SPAIN

NyN Tower, C/ Tarragona,
149-157, Floor 19
ES-08014 Barcelona
Phone: +34 (0) 93 327 85 50
Fax: +34 (0) 93 425 05 44
barcelona@avnet-abacus.eu

Plaza Zabalgane 12 Bajo Izda,
Galdakao / Vizcaya
ES -48960 Bilbao
Phone: +34 (0) 94 457 0044
Fax: +34 (0) 94 456 8855
bilbao@avnet-abacus.eu

C/Chile, 10 2ª Pta. Oficina 229
ES -28290 Las Matas / Madrid
Phone: +34 (0) 913 72 7200
Fax: +34 (0) 916 36 9788
madrid@avnet-abacus.eu

SWEDEN

Löfströms Allé 5,
Sundbyberg, Box 1830,
SE-171 27 Solna
Phone: +46 (0) 858 746200
Fax: +46 (0) 858 746 001
stockholm@avnet-abacus.eu

Smörhålevägen 3
SE-43442 Kungsbacka
Phone: +46 (0)8 58746 200
Fax: +46 (0)300 140 15
gothenburg@avnet-abacus.eu

SWITZERLAND

Bernstrasse 394
CH-8953 Dietikon
Phone: +41 (0) 43 322 49 90
Fax: +41 (0) 43 322 49 99
zurich@avnet-abacus.eu

TURKEY

Tatlısu Mahallesi Pakdil
Sokak No: 7 Kat: 2 34774
Umraniye Istanbul Türkiye
Phone: +90 216 52 88 370
Fax: +90 216 52 88 377
istanbul@avnet-abacus.eu

UK

Building 5 Waltham Park
White Waltham
Maidenhead Berkshire SL6 3TN
Phone: +44 (0)1628 512900
Fax: +44 (0)1628 512999
maidenhead@avnet.eu

Avnet House
Rutherford Close
Meadway, Stevenage
Hertfordshire SG1 2EF
Phone: +44 (0)1438 788 500
Fax: +44 (0)1438 788 250
stevenage@avnet.eu

Oceanic Building
Waters Meeting Road
Bolton BL1 8SW
Phone: +44 (0)1204 547170
Fax: +44 (0)1204 547171
bolton@avnet.eu

UKRAINE

c/o Avnet Abacus Poland
Plac Solny 16
PL-50-062 Wroclaw
Phone: +48 71 34 205 99
Fax: +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, no binding offers are intended. No guarantee as to the accuracy or completeness of any information. All information is subject to change, modifications and amendments without notice. Printed on FSC certified paper.