

# QSL RF Connector System

## DESCRIPTION

### Coaxial Cable Insulation Displacement Interface

- Low profile
- Highly reliable ruggedized interface
- Surface mount technology
- Excellent price-to-performance ratio

## APPLICATIONS

- Replacements for SMA, BNC, and other RF Connectors
- Mobile Antenna / GPS / Radio Systems
- PDA / PCS / Handheld applications
- Wireless Communications systems
- Satellite Communications, Broadcast, Multimedia
- Automotive Telematics
- WiFi, WiMax Antenna Mobility & Communications
- Broadcast / Set Top Box and Integration Media
- PCIe and WNIC Cards

## KEY FEATURES

- Surface and Panel Mount Compatible
- RoHS Compliant [Lead-free SMT process (260° C) compatible]
- Designed for RG 174 & RG 316 Cable
- 3 port QSL footprint  
12.5 mm D x 17.5 mm W x 10mmH
- 10 mm x 10.6 mm max. footprint (w/o panel extension)
- IP67 compatible designs available upon request
- Platform expandable for multiple ports, configuration, and color options

## FOR MORE INFORMATION

### Internet

<http://tycoelectronics.com/products/rfcoax>

### Technical Support Center

Phone: 1-800-522-6752

E-mail: [product.info@amp.com](mailto:product.info@amp.com)

### Product Specification/ Design Objectives:

108-2324 PCB Receptacles

108-2302 Panel Mount Receptacles

108-2307 Antennas

### Global Product Manager — Claude de Lorraine

Phone: 717-986-5793

E-mail: [cdeLorraine@tycoelectronics.com](mailto:cdeLorraine@tycoelectronics.com)

### Europe Product Manager — Patrick Duquerroy

Phone: (49) 61824538

E-mail: [pduquerroy@tycoelectronics.com](mailto:pduquerroy@tycoelectronics.com)

### US Product Manager — Dave Gravina

Phone: 717-329-5657

E-mail: [gravinad@tycoelectronics.com](mailto:gravinad@tycoelectronics.com)

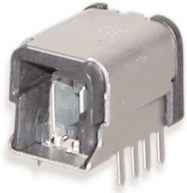
### Asia Product Manager — Alex Yeh

Phone: 2-87682788 EXT297

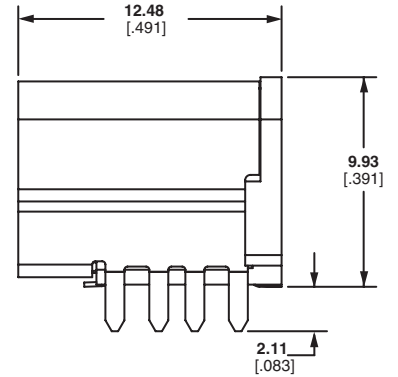
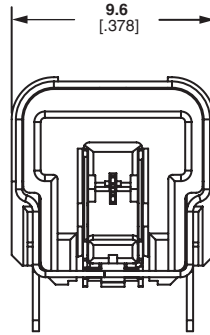
E-mail: [alex.yeh@tycoelectronics.com](mailto:alex.yeh@tycoelectronics.com)

## PCB RECEPTACLES

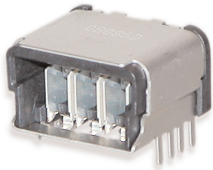
### Single Port Receptacle



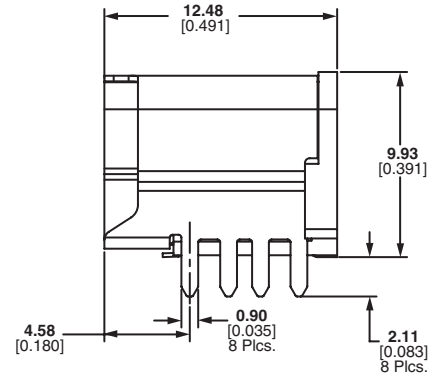
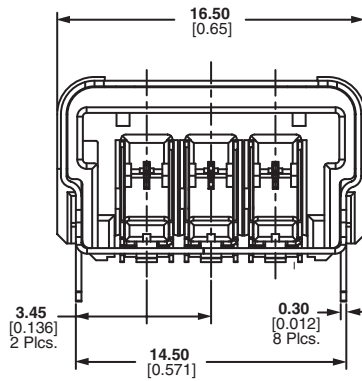
Part Number  
1274794-1



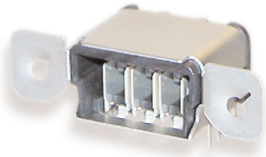
### Three Port Receptacle



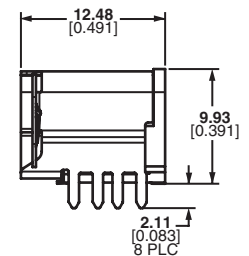
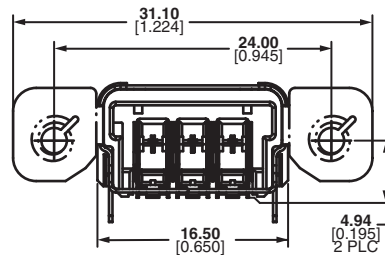
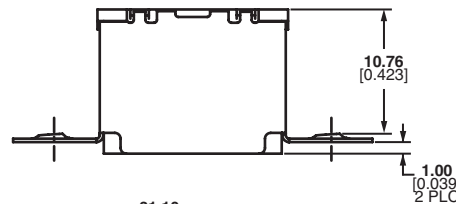
Part Number  
2016032-1



### Three Port Flange Receptacle



Part Number  
1274824-2



Dimensions are millimeters over inches unless otherwise specified.

## ELECTRICAL

### SINGLE PORT BOARD MOUNT

### THREE PORT BOARD MOUNT

Characteristic Impedance:	50 Ohms*	50 Ohms*
Frequency Range:	DC — 6 GHz	DC — 6 GHz
VSWR:**		
DC — 3 GHz	1.3 max	1.3 max
3 — 6 GHz	1.45 max	1.45 max
Insertion Loss:		
DC — 3 GHz	0.30 dB max	0.30 dB max
3 — 6 GHz	0.40 dB max	0.40 dB max
Rated voltage:	60 VAC (rms)	60 VAC (rms)
Rated Current Per Port:	5 A max	5 A max
Diel. Withstanding Voltage:		
(50Hz for 1 min at sea level)	800 VAC	800 VAC
Insulation Resistance:	100 Megohms min	100 Megohms min
Contact Resistance:		
Center:	20 milliohms max	20 milliohms max
Outer:	20 milliohms max	20 milliohms max

\*75 Ohm available upon request

\*\* Mated Pair

## MECHANICAL/ ENVIRONMENTAL

### SINGLE PORT

### THREE PORT

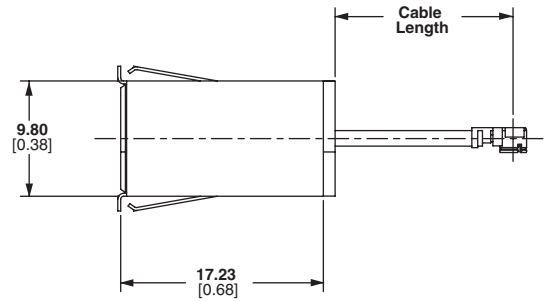
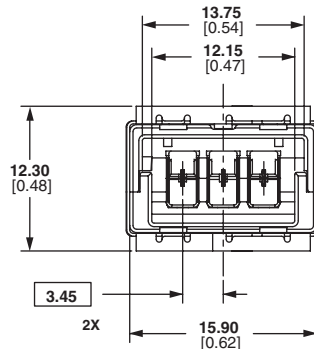
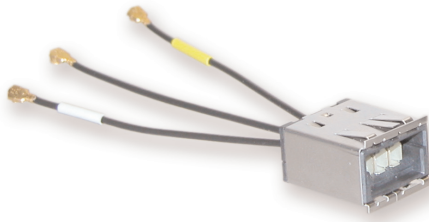
Engagement Force:	< 30 N	< 40 N
Disengagement Force:	< 20 N	< 30 N
Cable Retention:	> 89 N	> 110 N
Operating Temperature:	- 40 to + 85°C	- 40 to + 85°C
Durability:	500 cycles	500 cycles

## MATERIAL AND FINISH

Part Description	Material	Finish
Housing (Cable Plug)	PBT	Black, UL 94V-0
Housing (Receptacle)	LCP	Black, UL 94V-0
Hold Downs / Shell	Copper Alloy	Sn over Ni
Shield & Strain Relief (Cable Plug)	Copper Alloy	*
Shield (Recpt)	Copper Alloy	*
Center Contact (Cable and recpt)	Copper Alloy	*
Insulator (Cable Plug)	PBT	Black UL 94HB

\* Conforms to the requirements of EIA/ECA-364-1000.01A (controlled environment applications), and Tyco Electronics production specification 108-2324.

## CABLE ASSEMBLIES, RECEPTACLE, PANEL MOUNT, 3 PORT PUSH IN



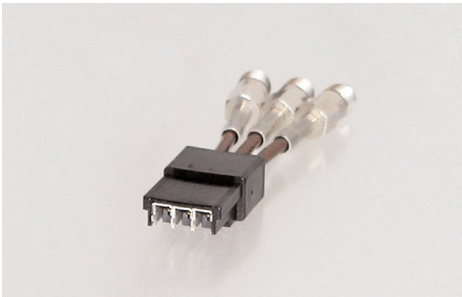
### QSL Vista

For Standard PCI Brackets (1.00mm THR)

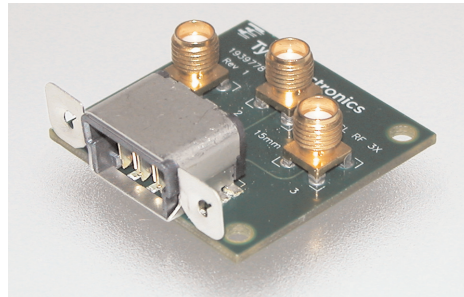
Part Number	Cable Length
1274999-1	63.5mm [2.5"]
1274999-2	130.0mm [5.12"]
1274999-3	508.0mm [20.0"]

Note: Pigtails use 1.32mm dia, double braid coax cable and are terminated with Style A UMCC cable connectors.

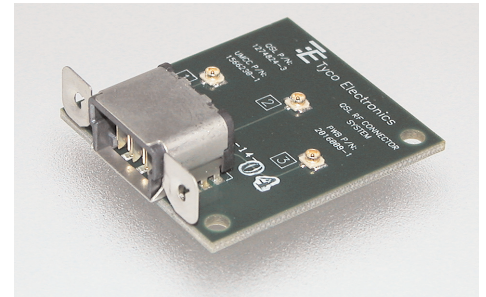
## QSL CONNECTOR MATED PAIR VSWR TEST BOARDS



Test dongle, QSL to SMA  
Part Number 2032605-1



Test board with Receptacle,  
QSL to SMA  
Part Number 1513743-1



Test board with Receptacle,  
QSL to UMCC  
Part Number 2016008-1

### Technical Documents:

Instruction Sheet:

408-10212 QSL Connector Mated Pair  
VSWR Test Procedure

## JUMPER AND PIGTAIL CABLE PLUG ASSEMBLIES

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All jumpers and pigtails use RG-174 cable.

### QSL Single Port Jumper Cable Plug Assembly



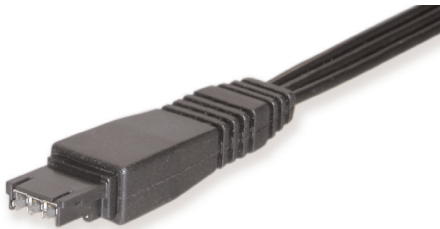
**Part Number**  
2015911-1

### QSL Single Port Pigtail Cable Plug Assembly



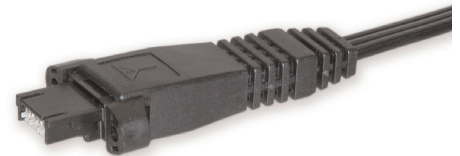
**Part Number**  
2015706-1

### QSL Three Port Without Flange Jumper Cable Plug Assembly



**Part Number**  
2015518-1

### QSL Three Port With Flange Pigtail Cable Plug Assembly



**Part Number**  
2053075-1

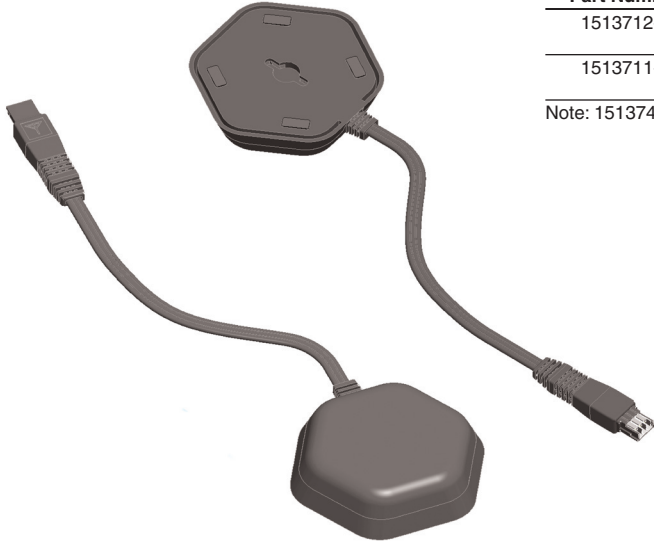
## FOR MORE INFORMATION ON QSL CABLE ASSEMBLY APPLICATION CONTACT

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**Product Manager — David Stonfer**  
Phone: 717-986-5950  
E-mail: david.stonfer@tycoelectronics.com

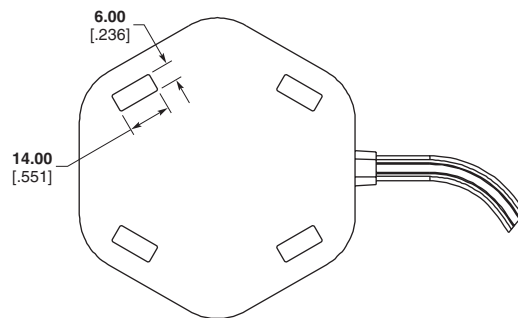
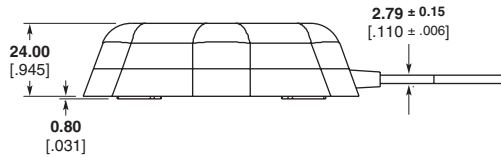
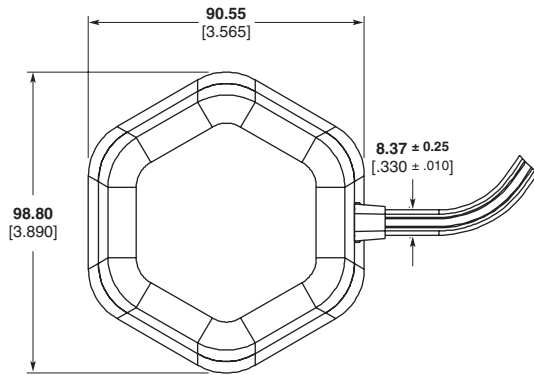
## 3 PORT CABLE PLUG WITH ANTENNA MODULE ASSEMBLY

### Straight Cable Plug 3 port with Antenna Module Assembly



Part Number	Cable	Length	Antenna Type
1513712-1	RG-174	0.8 meters	802.11 a/b/g/n and WiMax antenna assembly w/flange
1513711-1	RG-174	0.8 meters	802.11 a/b/g/n and WiMax antenna assembly w/o flange

Note: 1513743-1 Test Board Adapter Available for VSWR Testing



### FOR MORE INFORMATION

Global Product Manager —

**Frank Basile**

Mobile: 408-234-7737

E-mail: [fjb@tycoelectronics.com](mailto:fjb@tycoelectronics.com)

Global Engineering Manager —

**Bruce Bishop**

Phone: 831-662-1154

E-mail: [bbishop@tycoelectronics.com](mailto:bbishop@tycoelectronics.com)

Dimensions are millimeters over inches unless otherwise specified.

## 3 PORT CABLE PLUG WITH ANTENNA MODULE ASSEMBLY

### MIMO Triple Dipole 802.11a/b/g/n Antenna Module Assembly with 3 Port QSL Connector



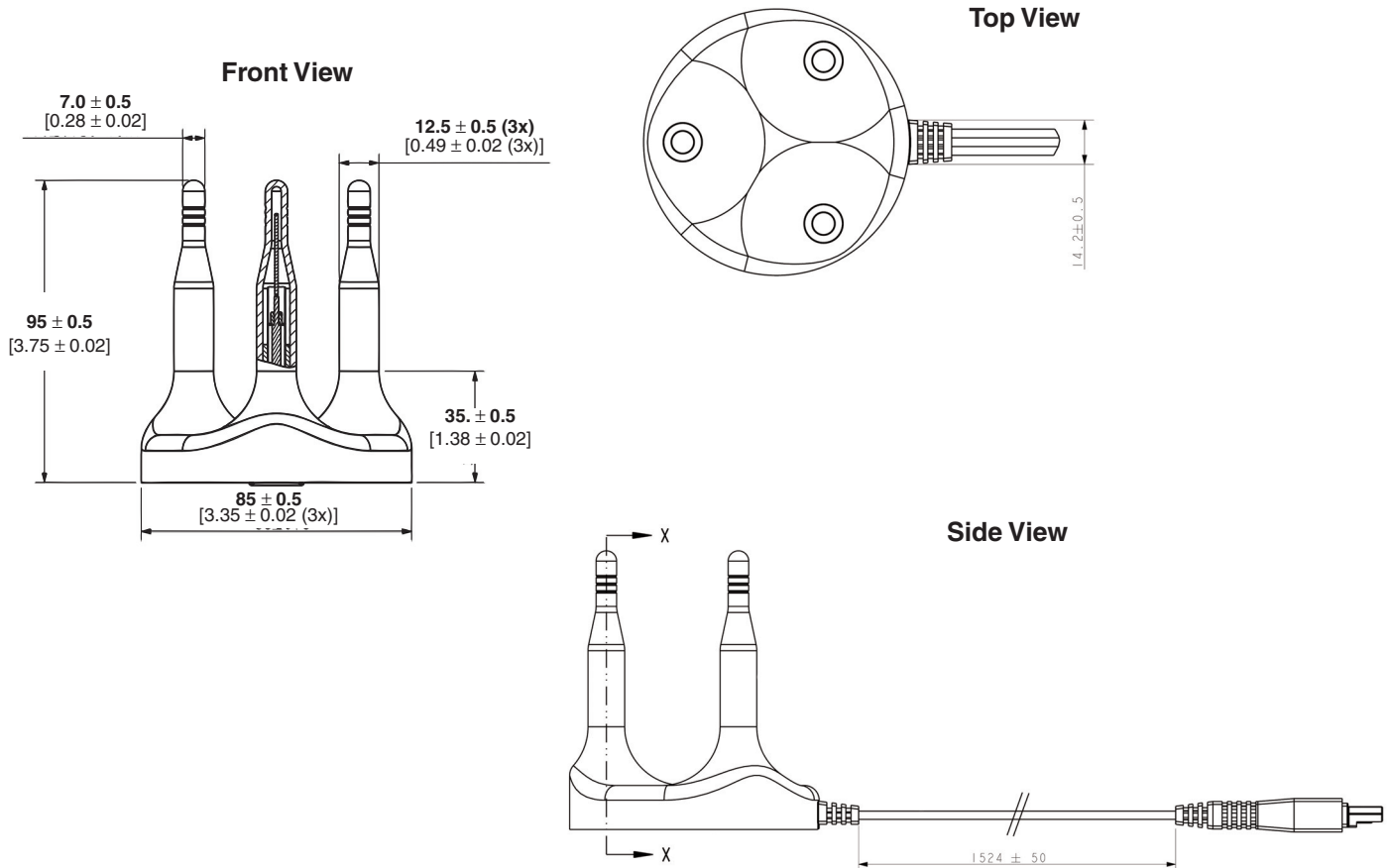
#### 3X RGI74 flat terminated with Tyco Electronics 3-port QSLConnector

##### Specifications

Frequency Range (GHz)	2.4 – 2.4835; 4.9 – 5.875 GHz
Azimuth Gain at connector (Ave.)	-2 dBi @ 2.4 GHz -4 dBi @ 5 GHz
Return Loss	< -10 dB
VSWR	< 2.0:1
Operating Temperature	-40°C to 70°C
Polarization	Vertical
Power Handling	10 Watts max.
Feed Point Impedance	50 Ohms
Size	95mm x 85mm dia.
Weight	180g.

Part Number	Cable
1513837-1	3X RG-174 or equivalent

Note: 1513743-1 Test Board Adapter Available for VSWR Testing





## GLOBAL CONTACTS

### Americas

**Argentina** — Buenos Aires  
Phone: +54-11-4733-2200  
Fax: +54-11-4733-2211

**Brazil** — São Paulo  
Phone: +55-11-3611-1311  
Fax: +55-11-3611-0397

**Canada** — Toronto  
Phone: +905-475-6222  
Fax: +905-474-5520  
**Product Information Center:  
(Technical Support)**  
Phone: +905-470-4425  
Fax: +905-474-5525

**Colombia** — Bogotá  
Phone: +57-1-231-9398  
Fax: +57-1-660-0206

**Mexico** — Mexico City  
Phone: +52-55-1106-0800  
Fax: +52-5-361-8545

**United States** — Harrisburg, PA  
Phone: +717-564-0100  
Fax: +717-986-7575  
**Product Information Center:  
(Technical Support)**  
Phone: +800-522-6752  
Fax: +717-986-7575

**For Latin/South American  
Countries not shown**  
Phone: +54-11-4733-2015  
Fax: +54-11-4733-2083

### Asia/Pacific

**Australia** — Sydney  
Phone: +61-2-9554-2600  
Fax: +61-2-9502-2556  
**Product Information Center:  
(Technical Support)**  
Phone: +61-2-9840-8200  
Fax: +61-2-9634-6188

**India** — Bangalore  
Phone: +91-80-285-40800  
Fax: +91-80-285-40820

**Indonesia** — Jakarta  
Phone: +65-6482-0311  
Fax: +65-6482-1012

**Japan** — Tokyo  
Phone: +81-44-844-8111  
Fax: +81-44-812-3207  
**Raychem & Identification Products**  
Phone: +81-44-844-8183  
Fax: +81-44-844-8184  
**Product Information Center:  
(Technical Support)**  
Phone: +81-44-844-8013  
Fax: +81-44-812-3200

**Korea** — Seoul  
Phone: +82-2-3415-4500  
Fax: +82-2-3486-3810

**Malaysia** — Kuala Lumpur  
Phone: +60-3-78053055  
Fax: +60-3-78053066

**New Zealand** — Auckland  
Phone: +64-9-634-4580  
Fax: +64-9-634-4586

**Philippines** — Makati City  
Phone: +632-848-0171  
Fax: +632-867-8661

**People's Republic of China  
Hong Kong**  
Phone: +852-2735-1628  
Fax: +852-2735-0243

**Shanghai**  
Phone: +86-21-64857333/64850602  
Fax: +86-21-64856222/54260190

**Singapore** — Singapore  
Phone: +65-6482-0311  
Fax: +65-6482-1012

**Raychem Products**  
Phone: +65-4866-151  
Fax: +65-6545-514

**Identification Products**  
Phone: +65 (0) 6482-0311  
Fax: +65 (0) 6481-5514

**Taiwan** — Taipei  
Phone: +886-2-8768-2788  
Fax: +886-2-8768-2268

**Thailand** — Bangkok  
Phone: +66-2-955-0500  
Fax: +66-2-955-0505

**Vietnam and Indochina** —  
Ho Chi Minh City  
Phone: +84-8 930-5546  
Fax: +84-8 930-3443

### Europe/Middle East/Africa

**Austria** — Vienna  
Phone: +43-1 90 5 60-0  
Fax: +43-1 90 5 60-1333

**Belgium** — Kessel-Lo  
Phone: +32-16-35-23-00  
Fax: +32-16-35-23-52

**Bulgaria** — Sofia  
Phone: +359-2-971-2152  
Fax: +359-2-971-2153

**Czech Republic** — Kurim  
Phone: +420-5-41-162-111  
Fax: +420-5-41-162-223

**Denmark** — Glostrup  
Phone: +45-43-480-452  
Fax: +45-43-441-414

**Egypt** — Cairo  
Phone: +20-2-29 04 281  
Fax: +20-2-41 92 334

**Estonia** — Tartu  
Phone: +372-5138-274  
Fax: +372-7400-779

**Finland** — Helsinki  
Phone: +358-95-12-34-20  
Fax: +358-95-12-34-250

**France** — Cergy-Pontoise  
Phone: +33-1-3420-8888  
Fax: +33-1-3420-8600

**Product Information  
Center:  
(Technical Support)**  
Phone: +33-1-3420-8943  
Fax: +33-1-3420-8623

**Germany** — Bensheim  
Phone: +49-6251-133-0  
Fax: +49-6251-133-1600

**Product Information  
Center:  
(Technical Support)**  
Phone: +49-6251-133-1999  
Fax: +49-6251-133-1988

**Germany** — Langen  
Phone: +49-6103-709-0  
Fax: +49-6103-709-1223

**Germany** — Speyer  
Phone: +49-6232-30-0  
Fax: +49-6232-30-2243

**Germany - HTS Division** —  
Neunkirchen  
Phone: +49-2247-305-0  
Fax: +49-2247-305-122

**Greece** — Athens  
Phone: +30-210-9370-396/397  
Fax: +30-210-9370-655

**Hungary** — Budapest  
Phone: +36-1-289-1000  
Fax: +36-1-289-1010

**Ireland** — Dublin  
Phone: +353-1-820-3000  
Fax: +353-1-820-9790

**Israel** — Yokneam  
Phone: +972-4-959-0508  
Fax: +972-4-959-0506

**Italy** — Collegno (Torino)  
Phone: +39-011-4012-111  
Fax: +39-011-4031116

**Lithuania** — Vilnius  
Phone: +370-5-2131-402  
Fax: +370-5-2131-403

**Netherlands** —  
Hertogenbosch  
Phone: +31-73-624-62-46  
Fax: +31-73-621-23-65

**Product Information  
Center:  
(Technical Support)**  
Phone: +31-73-6246-999  
Fax: +31-73-6246-998

**Norway** — Nesbru  
Phone: +47-66-77-8886  
Fax: +47-66-77-8855

**Poland** — Warsaw  
Phone: +48-22-45-76-700  
Fax: +48-22-45-76-720

**Romania** — Bucharest  
Phone: +40-21-311-3479/3596  
Fax: +40-21-312-0574

**Russia** — Moscow  
Phone: +7-495-926-5506/07/08/09  
Fax: +7-495-926-5505

**Russia** — St. Petersburg  
Phone: +7-812-718-8192  
Fax: +7-812-718-8193

**Slovenia** — Ljubljana  
Phone: +386-1561-3270  
Fax: +386-1561-3240

**South Africa** — Port Elizabeth  
Phone: +2741-503-4500  
Fax: +2741-581-0440

**Spain** — Barcelona  
Phone: +34-93-291-0330  
Fax: +34-93-201-7879

**Product Information  
Center:  
(Technical Support):**  
Phone: +34-93-291-0330  
Fax: +34-93-200-3779

**Sweden** — Upplands Väsby  
Phone: +46-8-50-72-50-00  
Fax: +46-8-50-72-50-01

**Switzerland** — Steinach  
Phone: +41-71-447-0447  
Fax: +41-71-447-0444

**Turkey** — Istanbul  
Phone: +90-212-281-8181/8181/2/3  
Fax: +90-212-281-8184

**Ukraine** — Kiev  
Phone: +380-044-206-2265  
Fax: +380-044-206-2264

**United Kingdom** — Swindon  
Phone: +44-8706-080-208  
Fax: +44-1793-572-516  
**Product Information  
Center:  
(Technical Support)**  
FreePhone GB: 0800-267-666  
Phone: +44-8706-080-208  
Fax: +44-208-420-8081

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