

OPTICAL TRANSCEIVERS

Navigator



SIMPLIFICATION IS OUR INNOVATION

Radiall ™

OPTICAL TRANSCEIVERS NAVIGATOR

FAMILY

D-Lightsys[®] opto-electronic modules are transparent and protocol-independent optical transmitters, receivers and transceivers designed for harsh environments, demanding applications and markets. These products operate in a large temperature range and are available with a variety of options. There are several package options offered, including surface mount, pluggable and specific custom packages that cover data rates up to 12 Gbps.

INDUSTRIES



AEROSPACE

Avionics is a demanding environment where weight and power consumption are critical, especially in cockpit displays or avionics bays.



DEFENSE

Radars and on-board electronic warfare systems use processing capacities that need optical interconnect solutions.



SPACE

Our high quality, reliable solutions offer top performance in mission critical applications. The complete range of space qualified passive products includes a wide range of coaxial connectors, cable assemblies, microwave components and switches.

Qualifications - All active solution packages have been extensively qualified through MIL-STD-810 e/g, MIL-STD-883e and ARINC804.

SERIES



E-Light

Single channel transceiver for harsh environment applications with a tool-less removable optical patch cord based on ARINC801 contact. The product offers a balanced trade off between form factor and cost per channel, while maintaining a high level of performance.



S-Light

Single channel modules for harsh environment applications are available with an optical pigtail output. S-Light is among the world's smallest transceivers for severe environment applications. It is the perfect fit for endpoint equipment and sensors, where low power consumption and small board real estate are key.



D-Light

Multiple channel modules for harsh environment applications are available in transmitter, receiver or transceiver. Available in 4 or 12 channel counts, the D-Light family offers the highest channel integration density. This family has been designed for direct integration with high-speed FPGAs and SERDES to enable state-of-the-art data and signal processing applications. Several package options are offered, from surface mount to pluggable. D-Light is available up to 144 Gbps.

OPTIONS AND CUSTOMIZATION

CHANNELS

- E-Light is a single channel device: either simplex receiver (1 Rx) or full duplex (Tx + 1 Tx)
- S-Light is a single channel device: either simplex or full-duplex (1 Tx or 1 Rx or 1 Tx and Rx)
- D-Light families are available in 4 channels full duplex or 12 channels simplex:
 - 4-ch Transceiver (4 Tx and 4 Rx)
 - 12-ch Transmitter or Receiver (12 Tx or 12 Rx)

DATA RATE

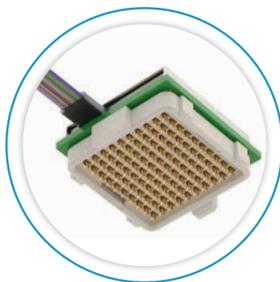
E-Light, S-Light and D-Light families are available in 3 data rate ranges:

- up to 10 Mbps
- up to 5 Gbps
- up to 12 Gbps

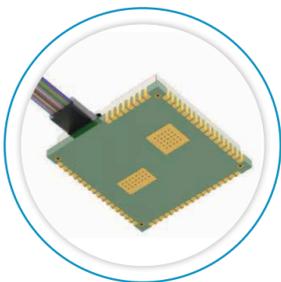
The modules are protocol agnostic and suitable for Fiber Channel, ARINC818, 1000BASE-SR, 10GBASE-SR, etc.

PACKAGING

Modules are available in surface mount or pluggable packages. Surface mount packages are ideal for low profile applications. Pluggable packages simplify module integration and handling.



Pluggable GM



Surface Mount - LCC



Through Hole - S SFF Connector



Pluggable & Screw-Mounted - E

OPTICAL TERMINI

A large variety of termini/connectors are available:

- Telecom standards (LC, ST, etc.)
- MIL-PRF-29504
- LuxCis[®] ARINC801, ABS1379
- Expanded beam solutions

MT ferrule based connectors (MPO, Q-MTitan[™], C-MTitan[™]) are used for the D-Light family. Single fiber optic termini are used on individual fibers.

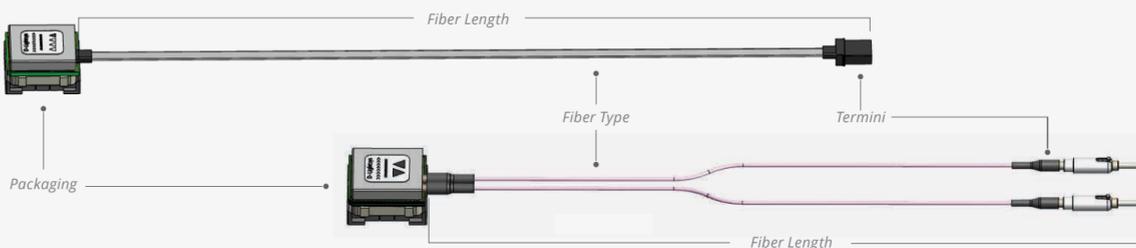
FIBER TYPE

Various ruggedized cable options are available:

- S-Light uses single ruggedized optical cable based on multimode 50/125 μ m or 62.5/125 μ m fiber.
- D-Light uses 12-channel ribbon fibers compatible with high temperatures.
- E-Light is the module that features the LuxCis[®] disconnect solution. Please refer to our cable assembly offer for more information on our LuxCis[®] disconnect solution.

OPTICAL CABLE LENGTH ⁽¹⁾

The cable length is customized according to customer requirements. The standard length is between 40 and 500 mm. Tolerance is 0/+5 mm. Cable strengthening options and harness integration are available.



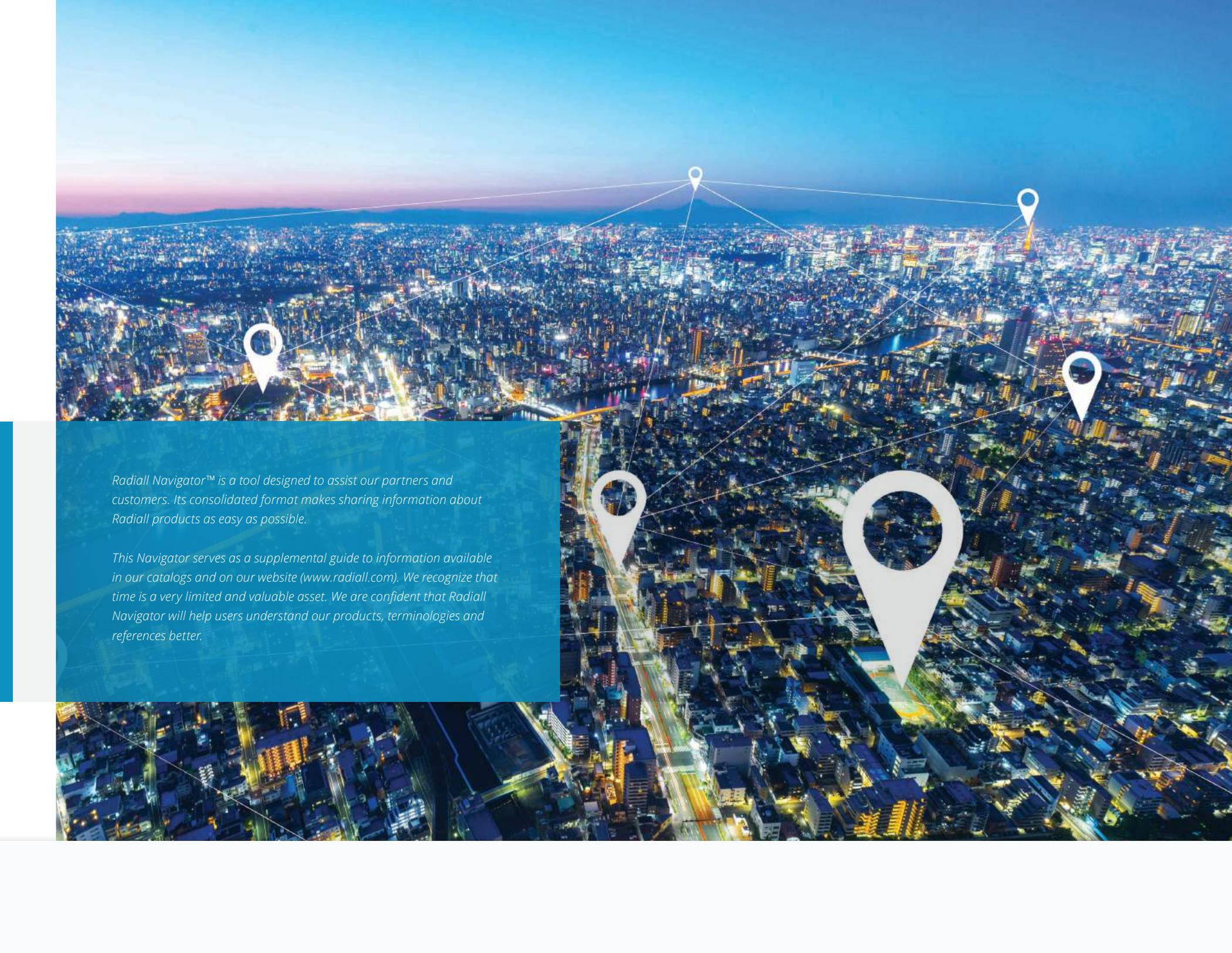
PRODUCT ORDERING

	CHANNELS				PERFORMANCES				PACKAGING				OPTICAL CONTACTS/CONNECTORS ⁽²⁾						FIBER TYPE			
	S	M	Tx	Rx	Data Rate	Optical Power Min	Sensitivity Max	Link Budget Min	GM	LCC	S	E	LuxCis [®] / ARINC801	ABS1379	LC	29504/4&5	MPO/MT	Q-MTitan	C-MTitan	50/125	62.5/125	
E-Light	S	M	425	E1XM	1	1	up to 5 Gbps	-4 dBm	-15 dBm	11 dB												
	S	M	425	E2XM	1	1	up to 5 Gbps	-4 dBm	-15 dBm	11 dB												
S-Light	S	M	001	S	1	1	up to 10 Mbps	-5 dBm	-17 dBm	12 dB												
	S	M	255	GM	1	1	up to 4.25 Gbps	-2 dBm	-15 dBm	13 dB												
	S	M	1001	GM	1	1	up to 10 Gbps	-2 dBm	-10 dBm	8 dB												
	S	R	255	GM		1	up to 4.25 Gbps	-	-15 dBm	-												
	S	R	1001	GM		1	up to 10 Gbps	-	-	-												
	S	T	255	GM	1		up to 4.25 Gbps	-2 dBm	-	-												
D-Light	S	T	1001	GM	1		up to 10 Gbps	-2 dBm	-	-												
	D	M4	255	GM	4	4	up to 4.25 Gbps	-2 dBm	-15 dBm	13 dB												
	D	M4	1000	GM	4	4	up to 12 Gbps	-2 dBm	-12 dBm	10 dB												
	D	R12	255	GM		12	up to 4.25 Gbps	-	-14 dBm	-												
	D	R12	1000	GM		12	up to 10 Gbps	-	-10 dBm	-												
	D	R12	1000	LL		12	up to 12 Gbps	-	-10 dBm	-												
	D	T12	255	GM	12		up to 4.25 Gbps	-2 dBm	-	-												
	D	T12	1000	GM	12		up to 10 Gbps	-2 dBm	-	-												
D	T12	1000	LL	12		up to 12 Gbps	-2 dBm	-	-													

Notes

1. D-Light and S-Light pigtailed modules only. Please refer to our cable assembly offer for E-Light disconnect modules

2. Feel free to contact us for other contact configurations

An aerial night view of a city, likely Tokyo, with a network of white location pins connected by thin white lines. The city lights are visible in the background, and the sky is a deep blue. The pins are scattered across the city, with some larger than others. The lines connect the pins, creating a network-like structure.

Radiall Navigator™ is a tool designed to assist our partners and customers. Its consolidated format makes sharing information about Radiall products as easy as possible.

This Navigator serves as a supplemental guide to information available in our catalogs and on our website (www.radiall.com). We recognize that time is a very limited and valuable asset. We are confident that Radiall Navigator will help users understand our products, terminologies and references better.

SIMPLIFICATION is our INNOVATION

We advance the design and engineering process for innovators, groundbreakers and pioneers of technology. We reduce weight, improve durability and streamline installation to provide leading-edge connectors that drive product performance.

AREA OFFICES / LOCAL CONTACTS

EUROPE	ADDRESS	PHONE	FAX	EMAIL
FINLAND	Radiall Finland PO Box 202, 90101, Oulu	+358407522412		infofi@radiall.com
FRANCE	Radiall SA 25 Rue Madeleine Vionnet, 93300, Aubervilliers	+33149353535		info@radiall.com
GERMANY	Radiall GmbH Carl-Zeiss-Straße 10, 63322, Rödermark	+49607491070	+496074910710	infode@radiall.com
ITALY	Radiall Elettronica S.R.L. Via Zambelletti 19, 20021, Baranzate Milano	+39024885121	+390248843018	infoit@radiall.com
NETHERLANDS	Radiall Nederland BV Hogebrinkerweg 15b, 3871, KM Hoevelaken	+31332534009	+31332534512	infoln@radiall.com
SWEDEN	Radiall AB Sollentunavägen 63, 191 40 Sollentuna	+4684443410		infose@radiall.com
UNITED KINGDOM	Radiall Ltd. Profile West, 950 Great West Rd., Brentford, Middlesex TW8 9ES	+441895425000	+441895425010	infouk@radiall.com

ASIA

CHINA	Shanghai Radiall Electronics Co., Ltd. No.688 Hui Fang Road, Shanghai, China, 201806	+862166523788	+862166521177	infosh@radiall.com
HONG KONG	Radiall Electronics (Asia) Ltd. Room A, 16/F., Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong	+85229593833	+85229592636	infohk@radiall.com
INDIA	Radiall India Pvt. Ltd. 25D, Phase 2, Peenya Industrial Area, Bengaluru 560 058	+918028395271	+918028397228	infoin@radiall.com
JAPAN	Nihon Radiall K.K. Sawada Building 8F, Shibuya-ku, Tokyo 150-0011	+81364274455	+81364274456	infojp@radiall.com

AMERICAS

USA & CANADA	Radiall USA, Inc. 8950 South 52nd Street, Ste. 401 Tempe, AZ 85284	+14806829400	+14806829403	infousa@radiall.com
-------------------------	--	--------------	--------------	---------------------

GLOBAL PRESENCE

*Australia · Austria · Belgium · Brazil · Czech Republic · Denmark · Estonia · Greece · Hungary · Indonesia · Israel · Korea · Latvia · Lithuania
Malaysia · Norway · Philippines · Poland · Portugal · Singapore · South Africa · Spain · Switzerland · Taiwan · Thailand · Turkey · Vietnam*