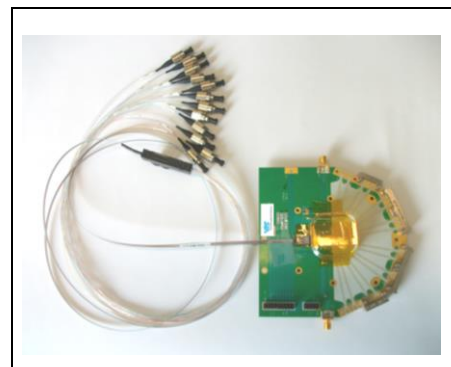


## Up to 12 x 28 Gbit/s transmitter testboard (850 nm VCSEL)



*Sample image only. Actual product may vary*

Product Code: VHXR5212A-840

## Preliminary

### Product Description

The VHXR5212A-840 transmitter utilizes a 12-channel VCSEL chip array and driver IC integrated on an evaluation board. The multi mode ribbon fiber coupled transmitter board is designed for short reach ultrahigh-speed data communication applications of up to 12 x 28 Gbit/s over multi mode fiber.

### Features

- up to 12 x 28 Gbit/s data rate
- high speed electrical connector (GPPO)
- ribbon-fiber coupled with FC/PC fan-out

### Applications

- Infiniband EDR
- Proprietary optical interconnects
- Research and development

Parameter	Typical (PD chips)	Notes
Emission Wavelength	850 nm	available from 835 – 865 nm
Optical fiber	50/125um ribbon fiber	
Power dissipation	< 1.9 W	

All product specifications and descriptions are subject to change without notice.

Please contact our sales department for additional information and to receive a quotation: [sales@v-i-systems.com](mailto:sales@v-i-systems.com)

# Datasheet

## VHXR5212A-840



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### Electro-optical characteristics (at Tambient = 25 °C)

Preliminary

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
VCSEL						
Peak emission wavelength	$\lambda$	$P_{out} = 0.5mW$	840	850	860	nm
Operating temperature	$T_{op}$	ambient	15		35	°C
RMS spectral width	$\Delta\lambda$	$P_{out} = 0.5mW$			0.6	nm
$\lambda_p$ temperature coefficient	$\Delta\lambda_p$			0.06		nm/°C
Relative intensity noise	RIN				130	dB/Hz
Rise/Fall time	$T_{r/f}$	20-80%		15		psec
Supply voltage	$V_{cc}$		0.3	3.3	4	V
Input resistance	$R_i$	differential		100		$\Omega$
Data input differential voltage	$V_{DF}$	Peak-Peak	0.1		1.2	V

### Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage temperature	$T_{st}$	10	40	°C
ESD (Human Body Model)			Class 1	
Power supply voltage	$V_p$	-0.3	4.0	

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# Datasheet

VHXR5212A-840



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## Functional overview

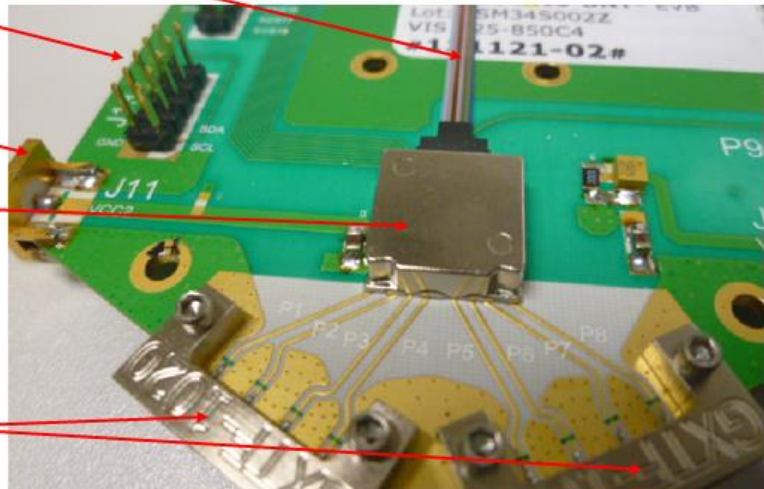
Ribbon fiber with 12-channel fan-out with FC/PC connectors

I<sup>2</sup>C bus connector

SMA connector for supply voltage

Optical engine

GPPO connector for differential data signal input



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[www.v-i-systems.com](http://www.v-i-systems.com)

VI Systems GmbH Hardenbergstrasse 7 D-10623 Berlin

No. 140207-Rev 1.8

June 2016

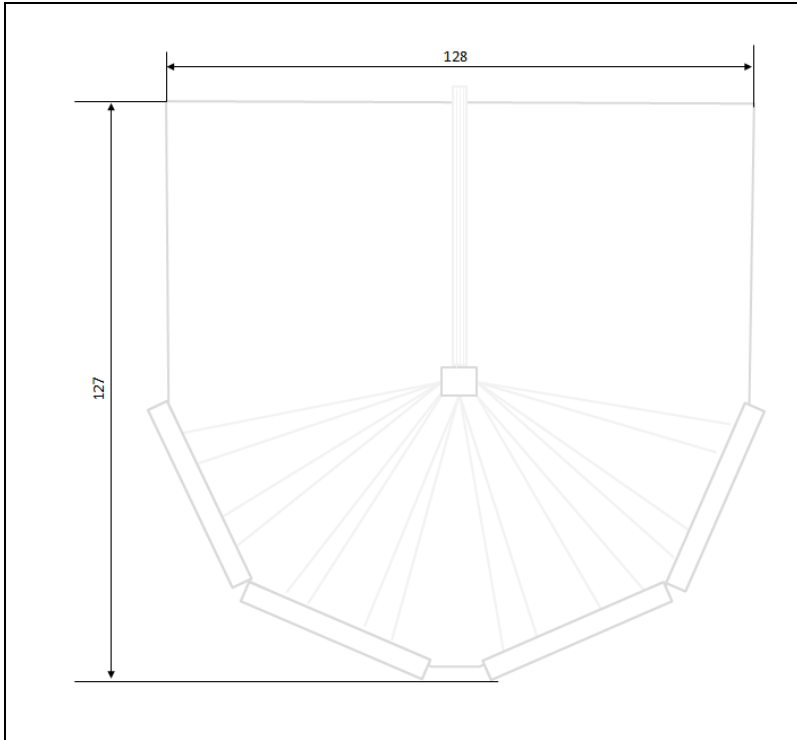
# Datasheet

VHXR5212A-840

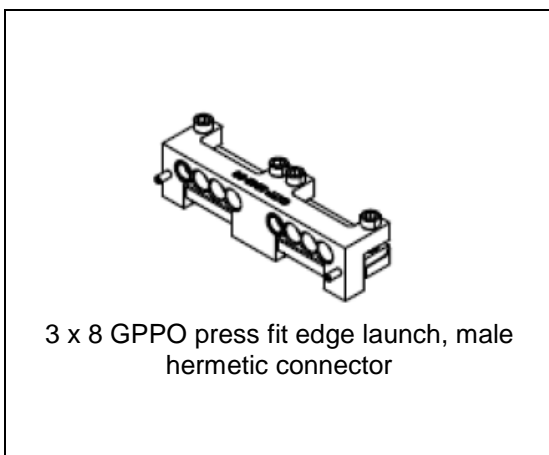


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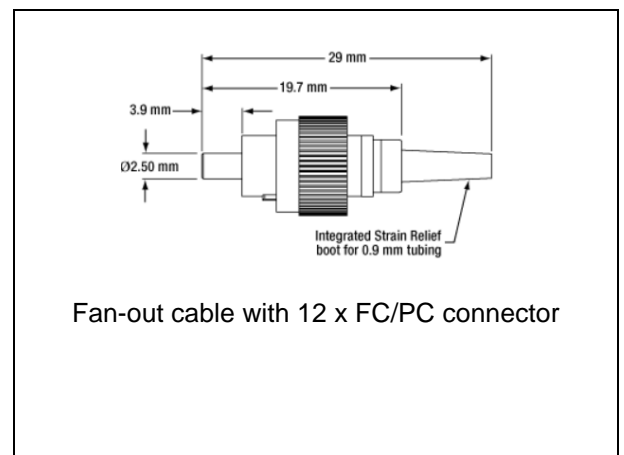
## Mechanical drawing (in mm)



## Electrical connector



## Optical connector



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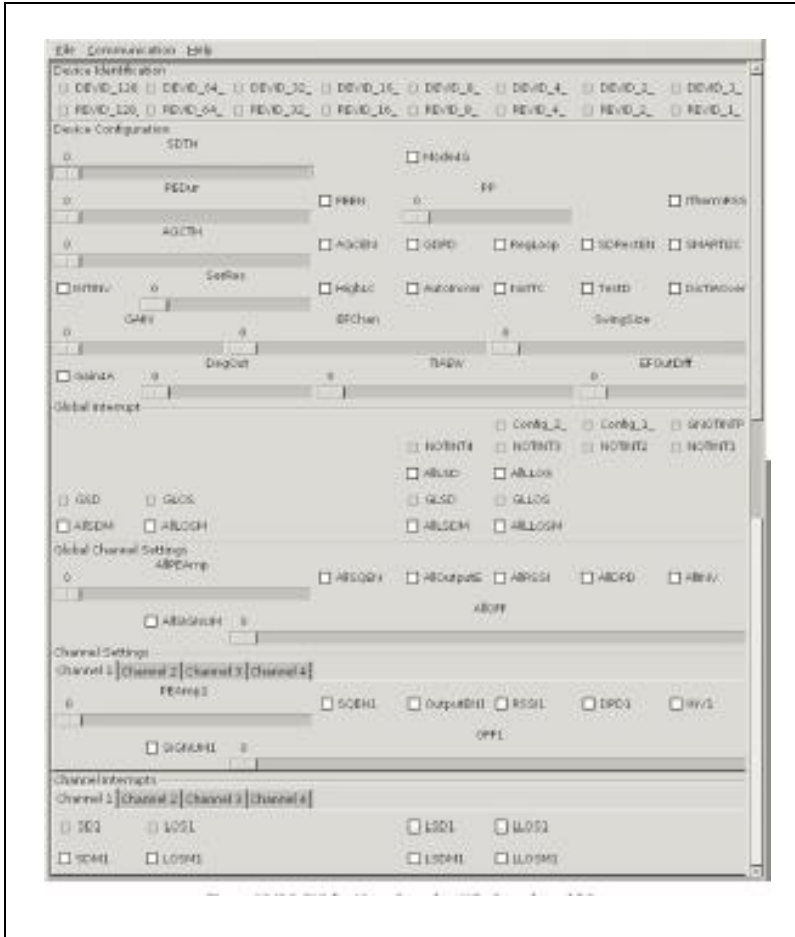
# Datasheet

## VHXR5212A-840

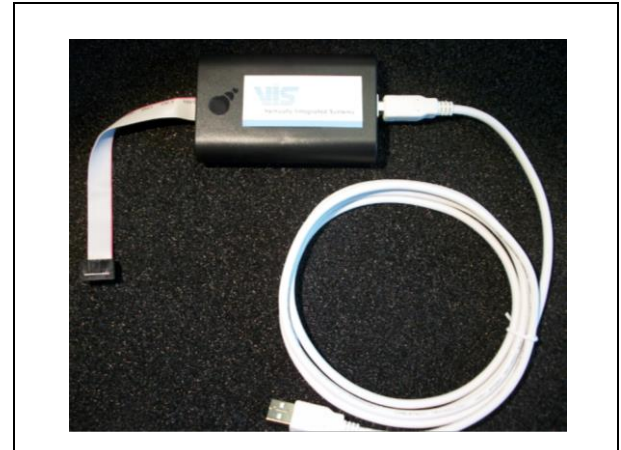


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### User interface (Windows based)



### USB-to-I<sup>2</sup>C converter



**LASER RADIATION. DO NOT VIEW  
DIRECTLY WITH OPTICAL  
INSTRUMENTS  
CLASS 1M LASER PRODUCT**

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