



## Small Integrated Receiver Unit SIRU2300-XZ

0.05 – 1 GHz

The Emcore Small Integrated Receiver Unit (SIRU2300) is a high-performance optical receiver with guaranteed performance over the 50 MHz to 1 GHz frequency band. The SIRU2300-XZ is a fully integrated unit that contains the high frequency photodiode, RF amplifier and the control electronics. Only DC input voltages and the optical input signal are required for operation.

The unit contains an internal ITU wavelength optical filter to provide high isolation for multi-channel DWDM systems.

The unit can be used to construct transparent optical links for antenna remoting, microwave delay lines and other applications where it is necessary to transport RF and microwave signals over long distances without signal degradation.

The SIRU2300-XZ is an ideal receiver to use with Emcore's high-performance directly modulated SITU2400-XZ fiber optic transmitters.

### Applications

- Cellular and PCS Antenna-Remoting
- Microwave Delay-Lines
- Frequency Distribution Systems
- Radar System Calibration
- Phased Array Antenna Systems

### Features

- Wavelength-specific operation for multi-channel DWDM systems
- Integrates a high frequency photodiode and bias circuitry into a connectorized package
- Integrated optical filter to provide high channel isolation for DWDM systems
- 0.05 – 1 GHz bandwidth
- Photocurrent monitoring circuit
- Ruggedized for operation in military or other harsh environments

### Specifications

#### Electrical

Frequency Range	0.05 to 1 GHz
Electrical Power Requirements	+15 V @ 60 mA max
Photodiode Monitor Output	1 V/mA
RF Connector	SMA (female)
RF Output Impedance	50 $\Omega$
RF Return Loss	9 dB

#### Optical

Wavelength	1527.99 -1563.05 nm, ITU specific
Connector	FC/APC
Optical Output Power	+ 3 dBm maximum
Responsivity at DC at 1550 nm	> 0.8 A/W

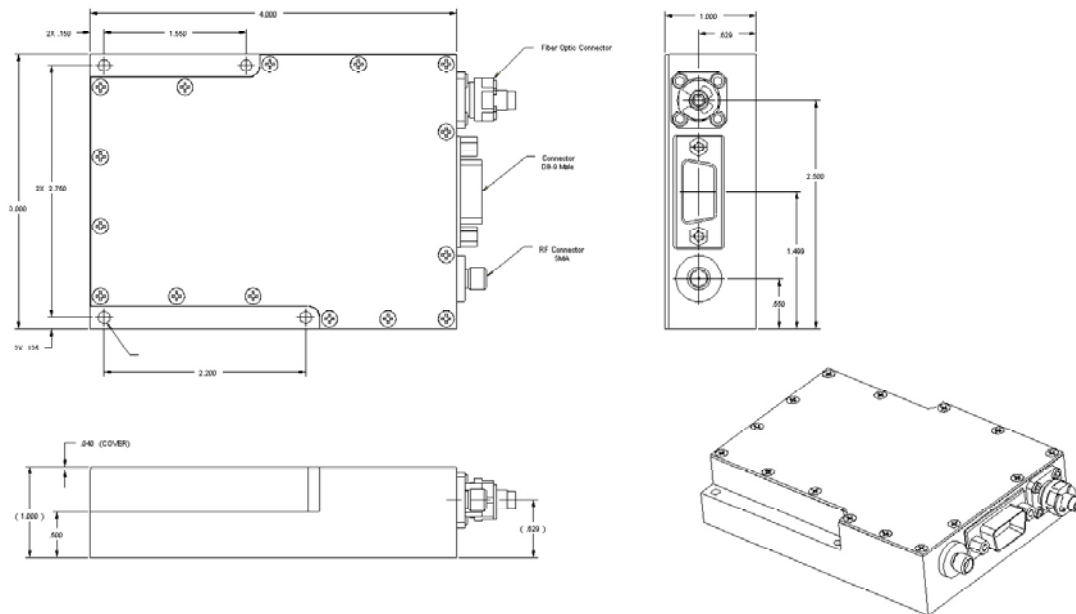
#### Physical

Dimensions	1.0" H x 3.0" W x 4.0" D
Operating/Storage Temperature	-20 °C to +70 °C

**For more information on this and other products:**

Contact Sales at Emcore 626-293-3400, or visit [www.emcore.com](http://www.emcore.com).

## Package Outline Drawing



## D-Connector Pin Out

1	+15 V
2	n/c
3	n/c
4	GND
5	n/c
6	Photodiode Monitor
7	n/c
8	n/c
9	n/c

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### EMCORE

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## Ordering Information

SIRU-2300-XZ      XZ = ITU Wavelength Channel

ITU Channel	Frequency (THz)	Wavelength (nm)
62	196.2	1527.99
61	196.1	1528.77
60	196.0	1529.55
59	195.9	1530.33
58	195.8	1531.12
57	195.7	1531.90
56	195.6	1532.68
55	195.5	1533.47
54	195.4	1534.25
53	195.3	1535.04
52	195.2	1535.82
51	195.1	1536.61
50	195.0	1537.40
49	194.9	1538.19
48	194.8	1538.98
47	194.7	1539.77
46	194.6	1540.56
45	194.5	1541.35
44	194.4	1542.14
43	194.3	1542.94
42	194.2	1543.73
41	194.1	1544.53
40	194.0	1545.32

ITU Channel	Frequency (THz)	Wavelength (nm)
39	193.9	1546.12
38	193.8	1546.92
37	193.7	1547.72
36	193.6	1548.51
35	193.5	1549.32
34	193.4	1550.12
33	193.3	1550.92
32	193.2	1551.72
31	193.1	1552.52
30	193.0	1553.33
29	192.9	1554.13
28	192.8	1554.94
27	192.7	1555.75
26	192.6	1556.56
25	192.5	1557.36
24	192.4	1558.17
23	192.3	1558.98
22	192.2	1559.79
21	192.1	1560.61
20	192.0	1561.42
19	191.9	1562.23
18	191.8	1563.05

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