Optiva OTS-IRIG Fiber Optic Intra-Facility Links

IRIG B000 / 1PPS Link

ORTEL®
A Photonics Foundries Enterprise

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Applications

- Satellite Reference Signals
- Satellite Time Code

Features

- IRIG B000
- 1 PPS (Pulse Per Second)
- 50 Ohm BNC, Dual-LC
- 30 ns, rms jitter
- Execellent Rise/Fall Time
- SNMP Monitoring and Control
- High-Dynamic-Range, Optically-Isolated 1310 DFB Lasers
- Fits in Optiva Enclosures, - 16, 6, 1 & 2 Slot Enclosures
- CE & CSA Certified, RoHS Complaint

Optiva OTS-IRIG (Inter-Range Instrumentation Group) B000 / 1 PPS (Pulse Per Second) Fiber Optic Intra-Facility links provide for simultaneous transmission of IRIG-B000 and 1PPS, or one signal each over fiber. These high-performance links feature low jitter and sharp rise and fall times.

GENUINE ORTEL TECHNOLOGY

Optiva IRIG Links are SNMP compliant. They can be housed in the same chassis and monitored by the same Network Management System (NMS) as other Optiva cards to support transport of multiple signal formats and frequency bands in a single flexible platform.

System Design

The Optiva platform includes a wide range fiber optic transport products for satellite and microwave communications from 1 MHz to 40 GHz. These units can be used to construct trans parent inter- and intra-facility links from 1 meter to >100 km for RF and microwave signal transport, antenna remoting, electronic warfare systems and other high-dynamic-range applications.

optiva PLATFORM

Optiva is a completely modular, hot-swappable platform. Both 19” rack-mount and compact tabletop, or wall-mountable enclosures are available. The 3 RU 19” rack mount, fan-cooled enclosures (Model OT-CC-16 and OT-CC-16F) can support up to 16 insert cards and utilize two dual-redundant, hot-swappable200 watt power supplies. The 1 RU 19” rack-mount, fan-cooled enclosure (Model: OT-CC-6-1U) can accommodate 6 insert cards and utilizes two hot-swappable 60 watt power supplies. Compact one-slot (OT-DTCR-1), or two-slot (OT-DTCR-2) enclosures are also available that use an external wall-mount power supply.

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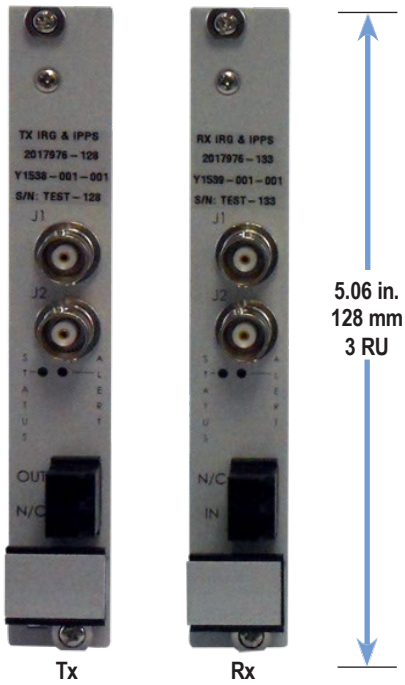
Performance Highlights

	Parameter	Min	Typical	Max	Units
Link	BNC Impedance	-	50	-	ohm
	Fiber Distance	0	-	10	Km
	Optical Loss		4		dBo
	Optical Output	-5.5	-2.0	-0.1	dBmo
	Optical Input	-20	-18	-	
IRIG	Temperature	-10	-	50	˚C
	Format	-	IRIG-B000	-	
	Level - True	+2.4	-	5.0	V
	Level - False	0.0	-	+0.4	V
	Rise Time Leading Edge 10 - 90 %	-	1	-	µ–sec
	Fall Time Leading Edge 90 - 10 %	-	1	-	µ–sec
	Jitter	-	-	30	n-sec rms
	Tx + Rx Latency (does not include segment to segment fiber time travel)	-	30	-	µ–sec
1 PPS	Frequency	-	1	-	Pulse per Second
	Level - True	+2.4	-	5.0	V
	Level - False	0.0	-	+0.4	V
	Pulse Width	-	10	-	m-sec
	Pulse Width, min	20	-	-	µ–sec
	Rise Time Leading Edge 10 - 90 %	<50	-	-	n-sec
	Fall Time Leading Edge 90 - 10 %	<2	-	30	n-sec, rms
	Jitter	-	30	-	n-sec
	Tx + Rx Latency (does not include segment to segment fiber time travel	-	30	-	µ–sec

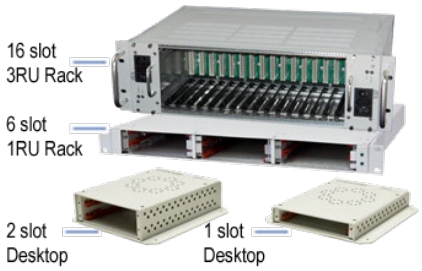
Ordering Information

Product Code	Specifications
OTS-IRIG-Tx-B5-LC	Transmitter, IRIG-B000 & 1PPS, 50 ohm BNC, Dual LC
OTS-IRIG-Rx-B5-LC	Receiver, IRIG-B000 & 1PPS, 50 ohm BNC, Dual LC
OPV-CTLR-IC	NMS SNMP Controller Card & MIB for Optiva Family
OTS-1ETR-A2/A2	Optical Tcvr, 1Ch, Ethernet, SM, Dual LC
OT-CC-16F-XXX	Chassis, Rack-Mount, 16-Slot, 3 RU -- See OT-CC-16F data sheet for exact models
PS-200F-XX	Power Supply, 12 VDC, 100 to 240 VAC, 50/60 Hz, (Specify power cord (NA, EU, UK))
OT-CC-6-XX	Chassis, Rack-Mount, 6-Slot, 1 RU -- See OT-CC-6 data sheet for exact models
OT-DTCR-1 / OT-DTCR-2	Chassis, Flange-Mount, w/Power Supply, 1 slot / 2 slot

OTS-IRIG (Tx & Rx)



Enclosure Options

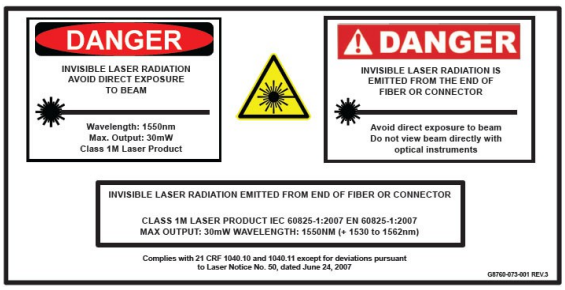


Laser Safety

This product meets the appropriate standard in Title 21 of the Code of Federal Regulations (CFR). FDA/CDRH Class 1M laser product. This device has been classified with the FDA/CDRH under accession number 0220191. All Versions of this laser are Class 1M laser product, tested according to IEC 60825-1:2007 / EN 60825-1:2007. An additional warning for Class 1M laser products. For diverging beams, this warning shall state that viewing the laser output with certain optical instruments (for example: eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. For collimated beams, this warning shall state that viewing the laser output with certain instruments designed for use at a distance (for example: telescopes and binoculars) may pose an eye hazard.

Wavelength = 1.3/1.5 µm.

Maximum power = 30 mW.



*Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

*IEC is a registered trademark of the International Electrotechnical Commision.

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