

Optiva OTS-IRIG Fiber Optic Intra-Facility Links

IRIG B000 / 1PPS Link



DATASHEET | JULY 2017

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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
- Excellent 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 Compliant

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.

Optiva Wideband RF Redundancy Switch Units are SNMP compliant.



System Design

The Optiva platform includes a wide range fiber **optiva** PLATFORM optic transport products for satellite and microwave communications from 1 MHz to 40 GHz. These units can be used to construct transparent 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 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-swappable 200 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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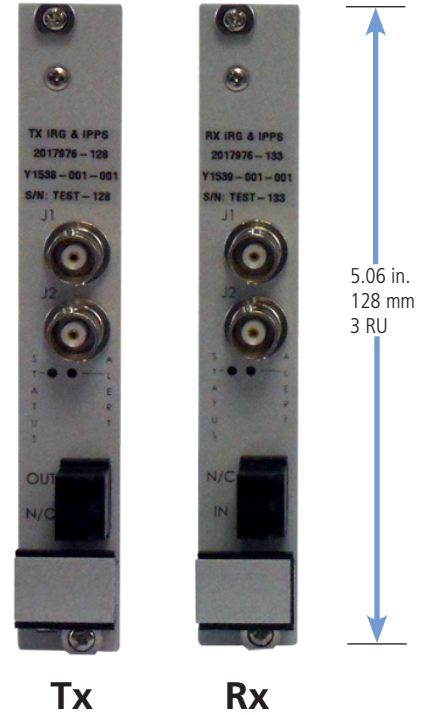
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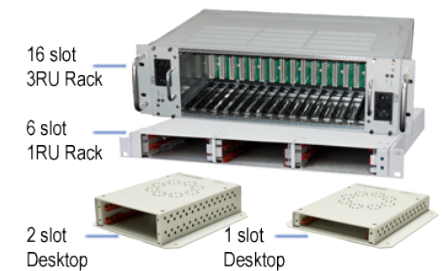
Performance Highlights

	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

OTS-IRIG (Tx & Rx)



Enclosure Options



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-CTRL-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

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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 Commission.

