OSIRIS OC-48 Optical Access Unit

Overview

The Positron OSIRIS Multi-service Platform (MSP) is an integrated access solution for the rapidly expanding synchronous optical network (SONET) broadband markets. It delivers the most cost-effective, compact and simple-to-deploy solution for multi-service traffic such as data, voice and video.

The Optical Access Unit (OAU) provides the multiplexing and demultiplexing for all mapper units in SONET networks. It also provides electrical-to-optical conversion of the associated signals. The OC-48 OAU collects up to 12 STS-1 payload traffic from the backplane and add the SONET framing and overhead to build the standard STS-1 signals.

OC-48 OAU Technology

The OC-48 OAU performs all necessary synchronization, pointer and overhead processing. To provide traffic protection, two OAUs can be installed. One OAU, installed in the OAU-A slot, provides the optical interface to the working ring. The other OAU, installed in the OAU-B slot, provides the optical interface to the protection ring.

Two different OC-48 OAUs are offered. The standard OC-48 OAU can be mounted in the OSIRIS STD Shelf. For the OSIRIS XTD and OSIRIS XTS shelves, the OC-48 OAU is mechanically coupled with a buffer interface unit (BIU) via a slider system. The OAUs have two connectors for input/output connection to fiber patch cords. ST, SC and FC connectors are available.

Key Benefits

- Capability to achieve wide-range distances and operate in a multi-vendor network
- Cost-effective and compact unit
- Easy in-service capacity upgrade
- Multi-ring interconnection capacity
- No requirement for external synchronization modules
- Robust SONET-based protection

Key Features

- Various optical budgets and wavelengths available
- One-step multiplexing allowing time slot assignment
- Single OAU faces both east and west directions in a ring
- Drop-and-continue support
- Built-in synchronization circuitry
- Full support of unidirectional path switched ring (UPSR) protection
- Capability to interoperate with other SONET equipment
- Ability to drop any STS-1 from OC-48 line
- Support for concatenated traffic (STS-3c and STS-12c)

Technical Specifications

Product Code	800813 800833	800810 800830	800815 800835	800814 800834	800816 800836
Laser type	SR-1	IR-1	IR-2	LR-1	LR-2
Receiver Connector faceplate Detector	 SC, ST, FC InGaAs PIN	 SC, ST, FC InGaAs PIN	 SC, ST, FC InGaAs PIN	 SC, ST, FC InGaAs APD	 SC, ST, FC InGaAs APD
Input power (average) Maximum Minimum	 -3 dBm -18 dBm	 0 dBm -18 dBm	 0 dBm -18 dBm	 -9 dBm -27 dBm	 -9 dBm -28 dBm
Transmitter Connector faceplate Optical source	 SC, ST, FC InGaAs FP, laser (SLM)	 SC, ST, FC InGaAs DFB, laser (SLM)	 SC, ST, FC InGaAs DFB, laser (SLM)	 SC, ST, FC InGaAs DFB, laser (SLM)	 SC, ST, FC InGaAs DFB, laser (SLM)
Output power (average) Maximum Minimum	 -3 dBm -10 dBm	 0 dBm -5 dBm	 0 dBm -5 dBm	 3 dBm -2 dBm	 3 dBm -2 dBm
Wavelength Center Maximum Minimum	 1310 nm 1360 nm 1266 nm	 1310 nm 1360 nm 1260 nm	 1550 nm 1580 nm 1430 nm	 1310 nm 1335 nm 1280 nm	 1550 nm 1580 nm 1500 nm
Transmitter and receiver Optical budget Reach	 8 dB 2 Km	 13 dB 20 Km	 13 dB 20 Km	 25 dB 60 Km	 26 dB 60 Km

General Data Summary

LEDs BIU OAU	 1 for card status 1 for card status and alarm conditions
Power Consumption (maximum) Per OC-48 OAU Per OC-48 OAU coupled with BIU	 26.5 watts (maximum) 31.5 watts (maximum)
Compliance Safety	 UL 1950, 3rd Edition; CSA C22.2, No. 950

Product Code	CPR	ECI/Bar Code	CLEI Code	Description	Shelves
800813/2 ST	R70890	278222	SN56CSMDAA	OAU-SR (1310 nm, 8 dB), OC-48	OSIRIS STD
800813/2 SC	R70890	278223	SN56CSNDAA	OAU-SR (1310 nm, 8 dB), OC-48	OSIRIS STD
800813/2 FC	R70890	278224	SN56CSPDAA	OAU-SR (1310 nm, 8 dB), OC-48	OSIRIS STD
800810/2 ST	R70890	278204	SN56CSJDAA	OAU-IR (1310 nm, 13 dB), OC-48	OSIRIS STD
800810/2 SC	R70890	278220	SN56CSKDAA	OAU-IR (1310 nm, 13 dB), OC-48	OSIRIS STD
800810/2 FC	R70890	278221	SN56CSLDAA	OAU-IR (1310 nm, 13 dB), OC-48	OSIRIS STD
800814/2 ST	R70890	278225	SN56CSRDAA	OAU-LR (1310 nm, 25 dB), OC-48	OSIRIS STD
800814/2 SC	R70890	278226	SN56CSSDAA	OAU-LR (1310 nm, 25 dB), OC-48	OSIRIS STD
800814/2 FC	R70890	278227	SN56CSTDAA	OAU-LR (1310 nm, 25 dB), OC-48	OSIRIS STD
800815/2 ST	R70890	278228	SN56CUJDAA	OAU-IR (1550 nm, 13 dB), OC-48	OSIRIS STD
800815/2 SC	R70890	278229	SN56CUKDAA	OAU-IR (1550 nm, 13 dB), OC-48	OSIRIS STD
800815/2 FC	R70890	278230	SN56CULDAA	OAU-IR (1550 nm, 13 dB), OC-48	OSIRIS STD
800816/2 ST	R70890	278231	SN56CUUDAA	OAU-LR (1550 nm, 26 dB), OC-48	OSIRIS STD
800816/2 SC	R70890	278232	SN56CUVDAA	OAU-LR (1550 nm, 26 dB), OC-48	OSIRIS STD
800816/2 FC	R70890	278233	SN56CUWDAA	OAU-LR (1550 nm, 26 dB), OC-48	OSIRIS STD
800833/2 ST	R70892	278267	SN56DSMDAA	XTD/OAU-SR (1310 nm, 8 dB), OC-48	OSIRIS XTD, XTS
800833/2 SC	R70892	278268	SN56DSNDAA	XTD/OAU-SR (1310 nm, 8 dB), OC-48	OSIRIS XTD, XTS
800833/2 FC	R70892	278269	SN56DSPDAA	XTD/OAU-SR (1310 nm, 8 dB), OC-48	OSIRIS XTD, XTS
800830/2 ST	R70892	278242	SN56DSJDAA	XTD/OAU-IR (1310 nm, 13 dB), OC-48	OSIRIS XTD, XTS
800830/2 SC	R70892	278265	SN56DSKDAA	XTD/OAU-IR (1310 nm, 13 dB), OC-48	OSIRIS XTD, XTS
800830/2 FC	R70892	278266	SN56DSLDAA	XTD/OAU-IR (1310 nm, 13 dB), OC-48	OSIRIS XTD, XTS
800834/2 ST	R70892	278270	SN56DSRDAA	XTD/OAU-LR (1310 nm, 25 dB), OC-48	OSIRIS XTD, XTS
800834/2 SC	R70892	278271	SN56DSSDAA	XTD/OAU-LR (1310 nm, 25 dB), OC-48	OSIRIS XTD, XTS
800834/2 FC	R70892	278272	SN56DSTDAA	XTD/OAU-LR (1310 nm, 25 dB), OC-48	OSIRIS XTD, XTS
800835/2 ST	R70892	278234	SN56DUJDAA	XTD/OAU-IR (1550 nm, 13 dB), OC-48	OSIRIS XTD, XTS
800835/2 SC	R70892	278235	SN56DUKDAA	XTD/OAU-IR (1550 nm, 13 dB), OC-48	OSIRIS XTD, XTS
800835/2 FC	R70892	278236	SN56DULDAA	XTD/OAU-IR (1550 nm, 13 dB), OC-48	OSIRIS XTD, XTS
800836/2 ST	R70892	278237	SN56DUUDAA	XTD/OAU-LR (1550 nm, 26 dB), OC-48	OSIRIS XTD, XTS
800836/2 SC	R70892	278238	SN56DUVDAA	XTD/OAU-LR (1550 nm, 26 dB), OC-48	OSIRIS XTD, XTS
800836/2 FC	R70892	278239	SN56DUWDAA	XTD/OAU-LR (1550 nm, 26 dB), OC-48	OSIRIS XTD, XTS

Ordering Information

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