RF over Fiber Optics Interfacility Link

J-Series Modular Subsystem

FEATURES

- 30 MHz to 2.7 GHz Bandwidth
- Up to 9 pairs of OZ450/OZ510/OZ516 TRx
- Up to 18 individual OZ450/OZ510/OZ516 Tx/ Rx
- Up to 32 pairs of OZ101 TRx
- Up to 64 individual OZ101 Tx/Rx
- Front Fiber Management Bar
- Medical Grade High Efficiency Universal Hot Swappable Power Supply
- Optional Dual Fan per side
- Any module to any slot pluggable platform
- Front & Rear Panel Alarm LED Indicator
- -0°C to +60°C Operating Case Temperature
- Complex Alarm functions via Micro USB port.
- MTTF exceeds 10 years at +50°C

OPTIONS

- Extended Bandwidth of 10 KHz to 6 GHz
- CWDM Lasers
- Multimode Fiber compatibility
- Built-in LNA for Tx modules

APPLICATIONS

- Wi-Max/4G LTE
- Cellular Backhaul
- Remote Antenna Location
- Satcom
- In-Building Solutions
- GPS Distribution
- Timing Delay

J MODULAR CHASSIS

The J-Series is a modular EIA 310-D Standard 19 inch 1U rack-mounted unit with 10 slots which can hold up to 64 RFoF interchangeable and hot swappable OZ101 modules. It can also accommodate multiples of other high performance, broadband, fiber optic transceivers, transmitters and receivers. The J-Chassis provides flexibility, scalability, and functionality to help construct multi-task, RFoF and Digital sub-systems.

There are two types of the basic 1U chassis: (a) 8 inches single-deep FRONT-loading 5-Slot version or (b) 14 inches double-deep FRONT-loading and BACK-loading 10-Slot version. Each slot can hold hot swappable J modules which contain transceivers, power supply or individual receivers or individual transmitters. For a fully populated chassis designed to operate in an uncooled environment two optional fans may be installed per each set of five modules. The double-deep 14-Slot version has four (4) fans and the single-deep 5-slot version has two (2) fans. The fans are operated so to maintain a customer-set maximum temperature.

The J400 RFoF module building blocks are based upon the OZ450/OZ510/OZ516 products, and may be populated with up to 9 pairs of these transceivers or up to 18 individual transmitters and/or receivers. The J800 RFoF building block consists of OZ101 products. The 5-Slot chassis can hold up to 16 pairs, or 32 individual, OZ101 modules and the 10-Slot chassis can be populated with up to 32 pairs, or 64 individual, OZ101 modules. Each of these RFoF Links is capable of carrying an individual RF signal over single mode (SMF-28) fiber optic cable (multimode fiber cable also available).

The J-Series chassis is powered by hot-swappable Universal 85 VAC to 260 VAC, 100 W power supplies. Dual supplies are recommended for 10-Slot version for redundancy. Complex alarm functions are available for each transmitter and receiver via a micro USB connector in the front and rear panel of the J-Chassis. Front panel LED indicators provide visual status of each of the inserted module operation. Also individual and the cumulative link status may be read with granularity down to individual parameters (e.g. received power, temperature, etc.)

J400 Series REMOTE SLOT ENCLOSURE

Individual J-Modules are housed in J-Slots which can be used as standalone remote units. Each remote J-Slot enclosure can accept a single module, hence can be configured as a transceiver, receiver or individual transmitter. Also, it may hold up to 2 transmitters or 2 receivers. The remote J-Slot Enclosure is powered by DC +12 V power supplies. Complex alarm functions are available via the micro USB connector and the front panel LED indicators provide visual indication of link status.

J800 Series REMOTE SLOT ENCLOSURE

Individual J-Modules are housed in J-Slots which can be used as standalone remote units. Each remote J-Slot enclosure can accept a single module, hence can be configured as a transceiver, receiver or individual transmitter. The J800 Series remote module can hold up to 4 transceivers, 8 transmitters or 8 receivers. The remote J-Slot enclosure is powered by DC +12 V power supplies. Complex alarm functions are available via the micro USB connector and the front panel LED indicators provide visual indication of link status.

For all RF link characterizations, refer to OZ510 or OZ450 Data sheets.

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ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typical	Max	Units	Notes
AC Power Supply Voltage		85		264	Volts AC	1
AC Power Supply Current			TBD		Amperes	2
Chassis dimensions Long			19 x 15 x 1.75		Inches	
Chassis dimensions Short			19 x 12 x 1.75		Inches	
Power Supply Certifications	EN 60950 ITE and EN 60601-1 Medical					
Power Supply EMC Compliance	EN 61000-4-2, 3, 4, 5, 6 & 11 and EN 60601-1-2					
Power Supply Emissions	Class B Per EN 55022, 11					
Storage Temperature (Case)	T_s	-40	+85	°C		
Operating Temperature (Case)	T_o	0	+60	°C		
Maximum Number of TX per Chassis			18			3
Maximum Number of RX per Chassis			18			3
MTTF @ 50°C			10		Years	
Optical connectors	FC/APC or SC/APC					
RF connectors	SMA					

1. For +12 Volts or higher input DC voltage requirements contact Factory.
2. Configuration dependent.
3. Up to 5 Links may be integrated into one chassis. Link consists of 1 Transmitter and 1 Receiver.

Power Redundancy

All the J-Chassis power supplies (medical equipment grade) are hot-swappable and modular. Installing two (2) into a chassis provides redundancy and extends reliability since active current sharing reduces the load on each power supply. A fully loaded chassis can run continuously with only one power module fitted into the chassis.

Cooling Fan

To further increase system reliability, the J400 chassis is fitted with two (2) fan modules either front-loaded or rear-loaded chassis.

Power Consumption

Condition/ Loaded Modules	Value	Units	Notes
J400 with 1 Power supply @ 240 VAC	13	Watts	No other plug-in modules
J400 with 1 Power supply @ 240 VAC	30	Watts	With 8, OZ510 Receivers
OZ510 Receiver Power @ 240 VAC	2.2	Watts	Will vary slightly upon number of modules installed.
J400 with 1 Power supply @ 240 VAC	21	Watts	With 8, OZ510 Transmitters
OZ510 Transmitters Power @ 240 VAC	1.1	Watts	Will vary slightly upon number of modules installed.
J400 with 1 Power supply @ 120VAC	7	Watts	No other plug-in modules
J400 with 1 Power supply @ 120 VAC	24	Watts	With 8, OZ510 Receivers
OZ510 Receiver Power @ 120 VAC	2.2	Watts	Will vary slightly upon number of modules installed.
J400 with 1 Power supply @ 120 VAC	16	Watts	With 8, OZ510 Transmitters
OZ510 Transmitters Power @ 120 VAC	1.1	Watts	Will vary slightly upon number of modules installed.
2 fans @ 120 VAC or 240 VAC	3	Watts	

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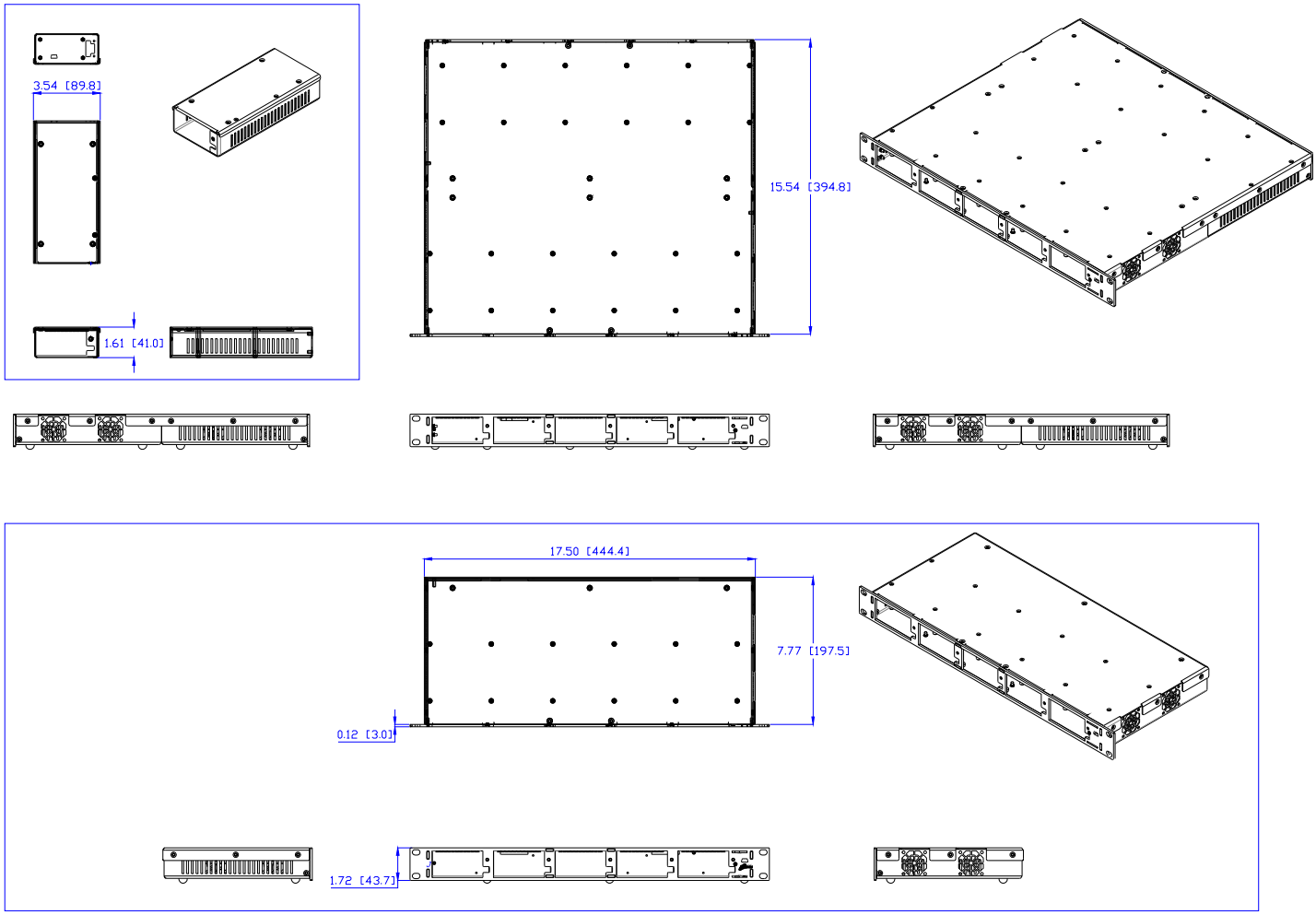
MECHANICAL DRAWING & INTERNAL LAYOUT (outline reference only)



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J SERIES - ENCLOSURE ORDERING INFORMATION

730-J010-00	J-Series – Single-Slot Enclosure module w/management
730-J050-00	J-Series – 5-Slot standalone (NOT rack mount)
730-J050-01	J-Series – 5-Slot standalone w/fan(2) (NOT 19" rack mount)
730-J05R-00	J-Series – 5-Slot 19" rack-panel mount (single-deep)
730-J05R-01	J-Series – 5-Slot 19" rack-panel mount with two (2) fans
730-J10R-00	J-Series – 10-Slot 19" rack-panel mount (double-deep)
730-J10R-01	J-Series – 10-Slot 19" rack-panel mount with four (4) fans

J-SERIES POWER SUPPLY ORDERING INFORMATION

AP3-JACPS-00	J series - AC Power Supply - 100W 85 – 264 VAC, 50/60 Hz

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J400 ORDERING INFORMATION

PART NO. AX3- J4XxXx – XX – XX

0 – One Transmitter Tx and One Receiver Rx
1 – One Transmitter Only (TX)
11 –Two Transmitters (2xTX)
2 – One Receiver Only (RX)
22 – Two Receivers (2xRX)

SLOT 1
R – Receiver
F – Isolated FP Tx
D31 – 1310 nm DFB
D47 – 1470 nm DFB
D49 – 1490 nm DFB
D51 – 1510 nm DFB
D53 – 1530 nm DFB
D55 – 1550 nm DFB
D57 – 1570 nm DFB
D59 – 1590 nm DFB
D61 – 1610 nm DFB

SLOT 2
R – Receiver
F – Isolated FP Tx
D31 – 1310 nm DFB
D47 – 1470 nm DFB
D49 – 1490 nm DFB
D51 – 1510 nm DFB
D53 – 1530 nm DFB
D55 – 1550 nm DFB
D57 – 1570 nm DFB
D59 – 1590 nm DFB
D61 – 1610 nm DFB

L – LNA (Tx only)
0 – No LNA

S – Single Mode Fiber Compatible
M – Multi mode Fiber Compatible

A – APC (recommended)
U – UPC

S – SC
F – FC
L - LC

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J800 ordering information (assembly of n+m units of J-101 in J-8 insert)

PART NO. AX3- J8Xxn Xxn – XX – XX

- **0** – One Way Link with Tx & Rx
  T – Transmitter(s) Only (TX)
  R – Receiver(s) Only (Rx)
- **L** – LNA
  0 – No LNA
- **S** – Single Mode Fiber Compatible
  M – Multimode Fiber Compatible
- **A** – APC (recommended)
  U – UPC
- **S** – SC
  F – FC
  L – LC

Type 1 (n=count)
R – Receiver
F – Isolated FP Tx
D31 – 1310 nm DFB
D47 – 1470 nm DFB
D49 – 1490 nm DFB
D51 – 1510 nm DFB
D53 – 1530 nm DFB
D55 – 1550 nm DFB
D57 – 1570 nm DFB
D59 – 1590 nm DFB
D61 – 1610 nm DFB

Type 2 (m=count)
R – Receiver
F – Isolated FP Tx
D31 – 1310 nm DFB
D47 – 1470 nm DFB
D49 – 1490 nm DFB
D51 – 1510 nm DFB
D53 – 1530 nm DFB
D55 – 1550 nm DFB
D57 – 1570 nm DFB
D59 – 1590 nm DFB
D61 – 1610 nm DFB

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