

OTDC-440 Down Converter

Features / Benefits



The OTDC-440 Down Converter is the companion unit for the RSM-II Return Spectrum Multiplier. It is housed in a single rack chassis with a universal 90-250VAC power supply. Some of the many features are as follows:

- 1) Wide AGC range derived from 4.5MHz pilot. -8dBm to 0dBm on the standard unit and -12dBm on the High Sensitivity version.
- 2) All four outputs are locked in phase to the RF Inputs to the RSM-II
- 3) Transparent Phase Noise Performance

SPECIFICATION

| | |
|----------------------------|---|
| Input Frequency Range..... | 5 MHz to 206.5 MHz |
| Band 1 | - 5 MHz to 42 MHz |
| Band 2 | - 51.5 MHz to 88.5 MHz |
| Band 3 | - 121.5 MHz to 158.5 MHz |
| Band 4 | - 169.5 MHz to 206.5MHz |
| Optical Input..... | -8 dBm minimum to 0 dBm maximum -12dBm to 0dBm w/High Sensitivity option |
| Optical Connector..... | SC/APC or specify |
| RF Input Level..... | +20 dBmV ±10 dB (without Optical Receiver) |
| RF Connectors | Type F |
| Output Frequency | Four outputs of 5 MHz to 42 MHz |
| Frequency Accuracy | Locks to 4.5 MHz pilot from up-converter 4.5 MHz ±150 Hz |
| Phase Noise | >-110 dBc Hz @ 10 KHz |

OTDC-440

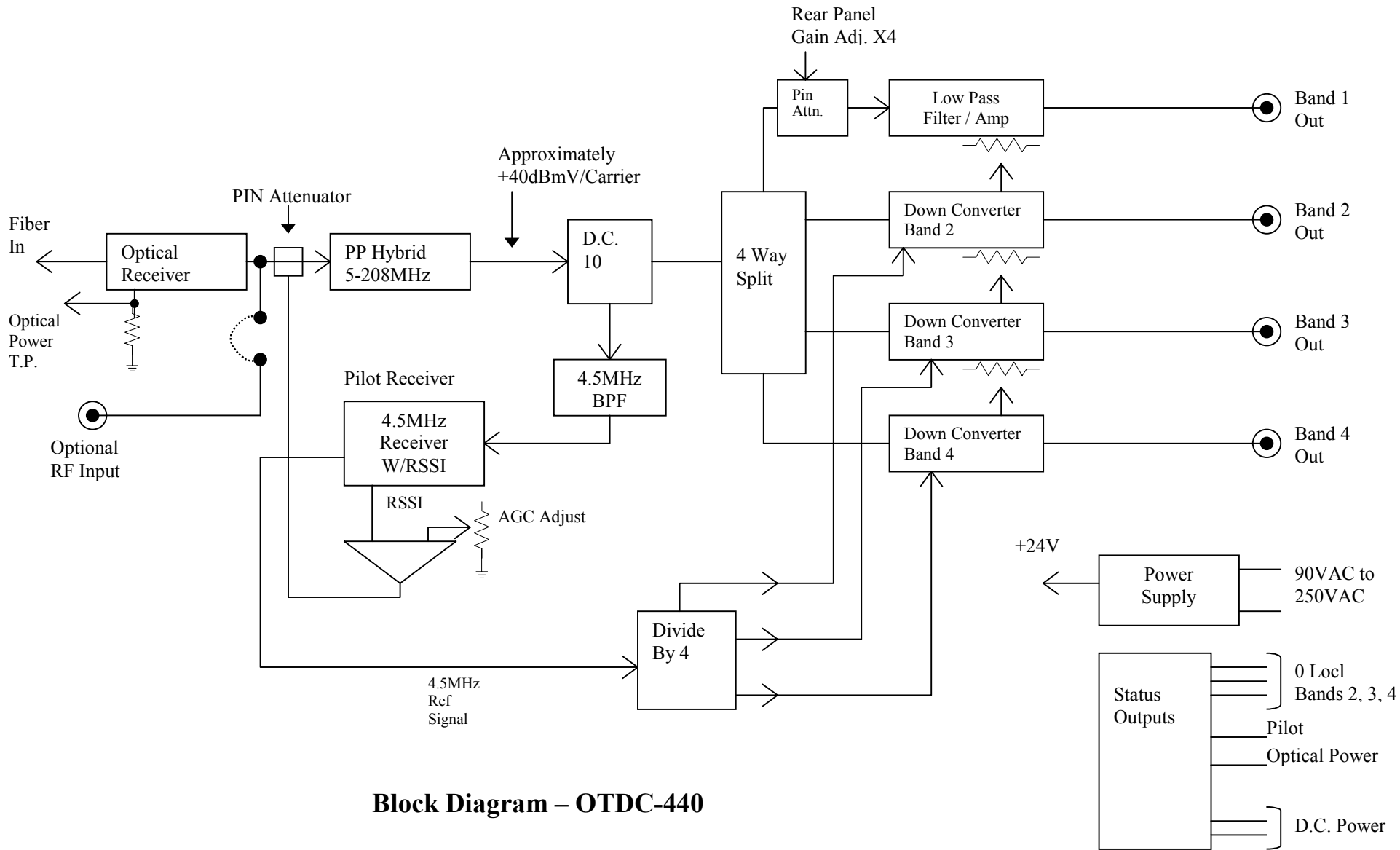
Down Converter with AGC



SPECIFICATION

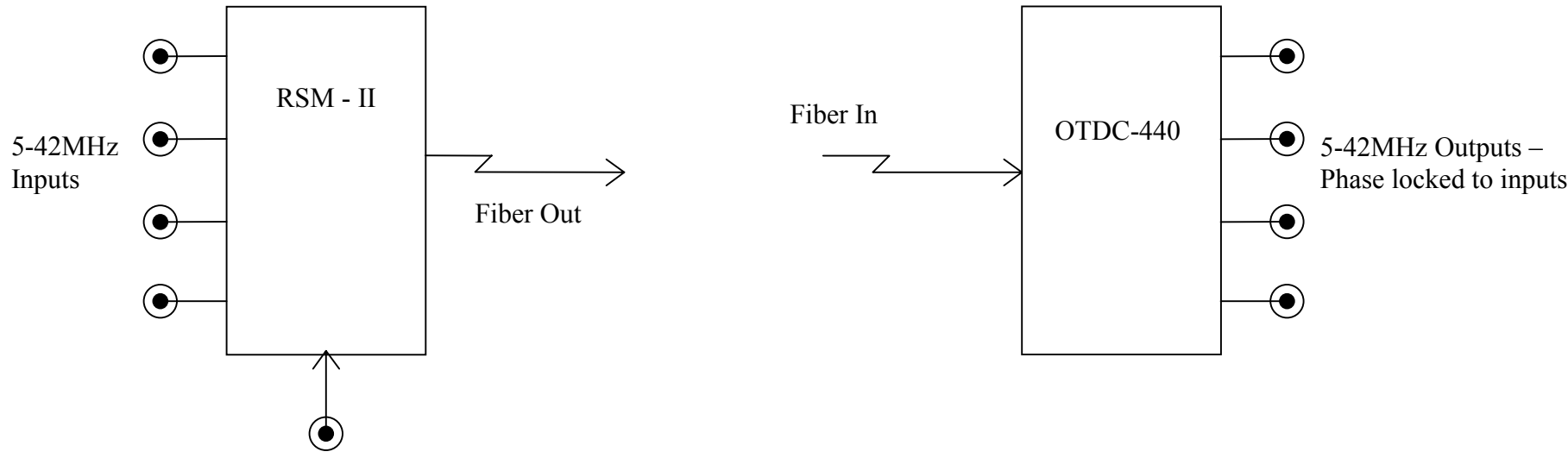
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|---|---|---|--|
| AGC Range | +35 dBmV/carrier RF output ± 2 dB for 8 dB Optical input change or 16 dB RF input change | | |
| | Output level rear panel control adjustable downward by 5 dB minimum. | | |
| *3 rd Order I.M. @ +30 dBmV/Carrier Output | >55 dB | } Measured using Block up-converter @+15 dBmV/carrier input | |
| (Six carriers) | | | |
| *2 nd Order I.M. @ +30 dBmV/Carrier Output | >55 dB | | |
| Image Rejection..... | Band 2 | - | 98.5 MHz to 133.5 MHz 55 dB minimum, 60 dB typical |
| | Band 3 | - | 168.5 MHz to 203.5 MHz 55 dB minimum, 60 dB typical. |
| | Band 4 | - | 216.5 MHz to 251.5 MHz 55 dB minimum., 60 dB typical. |
| Output Return Loss..... | >15 dB 5 MHz to 42 MHz Each of 4 outputs | | |
| Power requirements | 90 – 250 VAC @ 50-60 Hz IEC 320 Power Receptacle | | |
| Size | 1.75” rack enclosure, 12” deep | | |

*Measured without optical path – Up-Converter output is connected to Down Converter after the photodiode.



Block Diagram – OTDC-440

System Application Diagram Spectrum Multiplier System



Spectrum for RSM-II

