

GL Digital Fixed Link System

2 to 23 GHz



Features:

- Indoor only, or indoor/outdoor split configurations
- Data rates to 155 Mbit/s
- Many AC and DC power options
- Asymmetrical data rates in duplex links
- DVB-T or DVB-S modulation
- QPSK, 16, 32, or 128 QAM operation
- Available in Part 74 or Part 101 bands from 2 to 24 GHz
- SNMP control over internet
- Diversity, 1+1 hot standby configurations
- Power outputs up to +39 dBm
- Optional internal MPEG-2 encoder and decoder cards
- Wide variety of highly versatile baseband and RF modules
- Password protected front panel

Modular architecture makes the RF Central GL Fixed Link series the most advanced and flexible microwave fixed link on the market today. Available in all Part 74 and Part 101 microwave bands from 2 to 23 GHz, GL systems can be configured as a traditional indoor system, or a split system with all the RF equipment housed in a separate weatherproof outdoor unit. Over four dozen different modules are available, making it simple to fill any system requirement. The versatile MFR2 mainframe makes it easy to build configurations ranging from a basic simplex link to sophisticated high power, hot standby diversity systems. As new modules are introduced, backward compatible with existing systems is maintained, making the GL link virtually obsolescence proof and ensuring availability of replacement modules for many years to come. Among the modules and features recently added to the GL line, are the PWS/A and PWS/D redundant power supplies, and the excitingly versatile SFP/4 hitless switch and mux card.

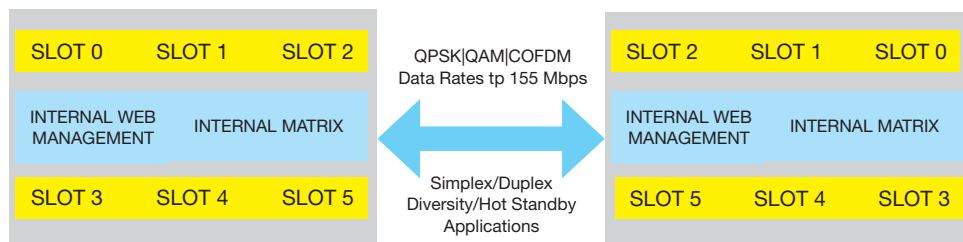
A number of our customers requested redundant power supplies for high availability and we heard you. A pair of the new PWS/A and PWS/D fit into a standard MFR/2 mainframe improving reliability. The PWS/A operates on any line voltage from 85 through 264 volts AC. The companion DC supply, the PWS/D runs on 18 through 75 volts DC. A pair of supplies may be mixed and matched within a frame for AC/DC, AC only or DC only operation.

Our SFP/4 combines so many functions into one card it is difficult to list them all. In addition to acting as a four ASI input multiplexer or demultiplexer, this module can serve as a multi-stream 1+1 hitless switch, and an ASI to SMPTE-310 (and reverse) converter. Using the SFP/4 lowers the cost of complicated systems by reducing the card count. Separate hot standby shelves are a thing of the past.

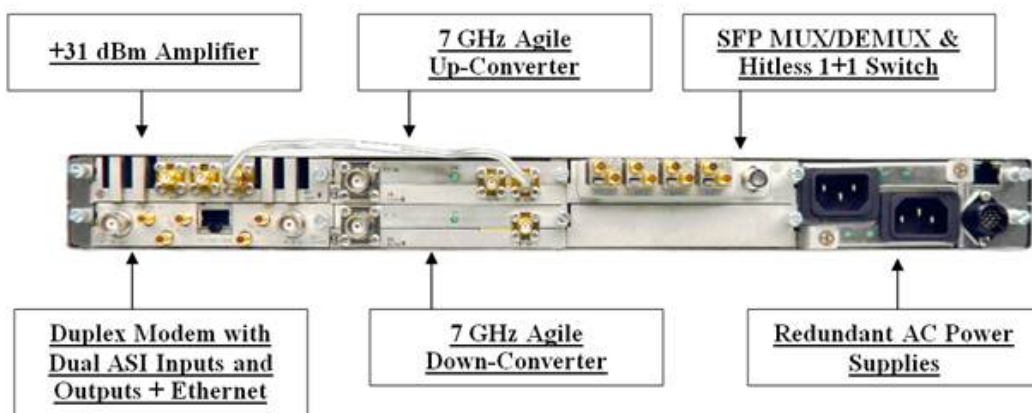
The same modules that make GL Link indoor systems so versatile, work just as well with our GL Link outdoor unit (ODU) systems. All bands are available, from 2 GHz through 24 GHz, in simplex, duplex or even 1+1 hot standby configurations. ODUs can be pole mounted, or used on a tripod with a dish antenna. For portable operation, COFDM (DVB-T) modulation is built into the UNM/3 modem card. Transmit ODUs are available in power outputs upto +30 dBm.

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Typical 7 GHz Duplex Link with +31 dBm Amplifier - Indoor Version



A Sample of GL Fixed Link Modules

The GL Series offers a flexible and modular system to meet your company's growing needs, providing up to six expansion slots in the mainframe. Our most popular cards include:

- | | |
|---|--|
| CDC/1: 4:2:0 Real-Time MPEG-2 CODEC with In/Out CVBS with MUX/DEMUX | DCM/X: Internal agile Down-Converter module. Convert selected frequency to 70 MHz. Available from 1.98 to 14.5 GHz |
| CDC/2: 4:2:0 Real-Time MPEG-2 CODEC with Analog Audio or SDI with MUX/DEMUX | CDP/1: Coaxial Adapter Module, used connect outdoor units Internal Amplifier. 2.5W Linear (+34 dbm) Available for 2/5/7/10/13 GHz |
| ASW/6: Automatic or manual switch over between two IF signals without loss of signal | AMP/X: 2.5W Linear (+34 dbm) Available for 2/5/7/10/13 GHz |
| SWO/4: Automatic or manual switch over between RF signals (Up to 2 GHz) | UNM/3: DVB-S/DVB-T Modem |
| SWO/5: Automatic or manual switch over between RF signals (Up to 14 GHz) | MPA-4: 4 ASI to ASI Transparent Multiplexer |
| UCM/X: Internal agile Up-Converter module. Convert 70 MHz input to selected frequency. Available from 1.98 to 14.5 GHz | DMA-4: ASI to 4 ASI Transparent De-multiplexer |
| | MPX/8: Multiplex and De-multiplex T-1/E-1 to ASI |

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Model (EKAMP/x)	5	6	10	12	13	14
Freq band (GHz)	5.2/5.7	6.4/7.2	10.0/10.7	12.1/12.5	12.7/13.3	14.25/14.5
Saturated output power*	38.0 dBm	38.0 dBm	38.0 dBm	38.0 dBm	38.0 dBm	38.0 dBm
Output power QPSK	34.0 dBm	34.0 dBm	34.0 dBm	34.0 dBm	34.0 dBm	33.5 dBm
16QAM	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	30.5 dBm
32QAM	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	30.5 dBm
64QAM	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	30.5 dBm
128QAM	31.0 dBm	31.0 dBm	31.0 dBm	31.0 dBm	30.0 dBm	29.5 dBm
Linear Gain	15 +/-3 dB	15 +/-3 dB	14 +/-2 dB	14 +/-2 dB	12 +/-2 dB	10 +/-2 dB
Monitor Port	-30 dB +/-5 dB					
Power Consumption	43 Watt					

* Output power excluding branching filter (necessary)

Model (EKDCM/x)	1.9	2	5	5.9	6	7	8	10	11	12	13	14
Freq band (GHz)	1.98 - 2.1	2.3 - 2.7	5.2 - 5.7	5.9 - 6.4	6.4 - 7.2	7.0 - 8.0	8.0 - 8.5	100 - 107	11.7 - 12.4	12.1 - 12.5	12.7 - 13.3	14.2 - 14.5
Freq step	100 KHz											
Noise Figure *	2.0 dB	2.0dB	2.0dB	2.5 dB	2.5 dB	2.5 dB	2.5 dB	3 dB	3 dB	3 dB	3 dB	3.5 dB
Dynamic Range	-20/-100 dBm (bandwidth limited)											
IF Monitor Port	1 internal, 1 rear BNC 0 dBm											

* Noise Figure excluding branching filter (necessary)

Model (EKUCM/x)	1.9	2	5	5.9	6	7	8	10	11	12	13	14
Freq band (GHz)	1.98 - 2.1	2.3 - 2.7	5.2 - 5.4	5.9 - 6.4	6.4 - 7.2	7 - 8	8 - 8.5	10 - 10.7	11.7 - 12.4	12.1 - 12.5	12.7 - 13.3	14.2 - 14.5
Freq step	100 KHz											
Saturated Output Power*	0**	0**	29	31	31	32	32	32	30	30	30	32
Output power QPSK	0**	0**	22	27	27	27	27	26	26	26	26	28
16QAM	0**	0**	19	24	24	24	24	23	23	23	23	25
32QAM	0**	0**	15	24	24	24	24	23	23	23	23	25
64QAM	0**	0**	19	24	24	24	24	23	23	23	23	25
128QAM	0**	0**	13	18	18	18	18	17	17	17	17	19
256QAM	0**	0**	13	18	18	18	18	17	17	17	17	19
ALC dynamic range (dBm)	0**	0**	29/13	31/18	31/18	32/18	32/18	32/17	30/17	30/17	30/17	32/19
MGC dynamic range	30 dB											
Monitor port	-30 dB +/-5 dB											
IF inputs	1 internal, 1 rear BNC (remotely switchable)											

* Output power excluding branching filter (necessary)

** Power Amp Required