

GL DIGITAL FIXED LINK SYSTEM

2 to 23 GHz

FEATURES:

- COFDM and single carrier QAM modulation
- Data rates to 155 Mbit/s
- Simultaneous split modulation/demodulation (COFDM and single carrier QAM)
- DVB-S
- DVB-T
- MER - Status
- BER - Status
- Loss of signal detection for carrier, ASI, video and many other input signals
- Full SNMP control over internet/intranet
- Simplex/duplex
- Diversity/hot-standby
- Channel bandwidth 6 to 40 MHz
- Any band between 1.4 to 24 GHz with internal or external RF options
- Internal SD/HD MPEG2 encoder/decoder option
- Many AC and DC power options
- Full control via password protected front panel
- External telemetry for monitoring third party equipment
- Power control over third party power amplifiers
- External alarm inputs



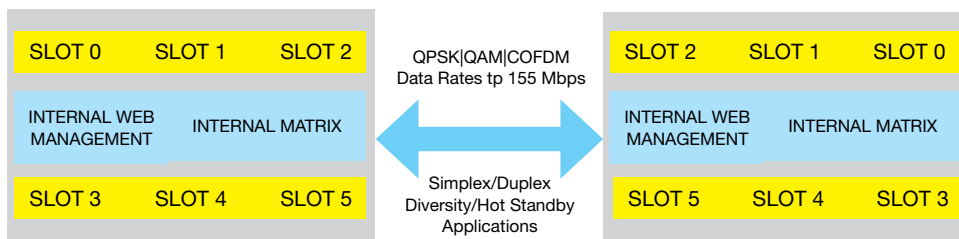
An extremely flexible, modular digital fixed link system, the GL offers a remote RF head (to 23 GHz) and internal RF modules (to 14 GHz) for fixed link (STL, TSL, ICR) applications. Through interface modules, the main-frame can be configured to meet any application now and in the future.

Central to the GL is the internal bidirectional modem card, configurable for single carrier QAM or COFDM modulation, at rates up to 155 Mbps, in duplex or split modulation modes. In split modulation, it receives COFDM on the receiver side while simultaneously transmitting DVB-S QAM. If configured as a duplex system, an SNMP subchannel provides command and control and link status without affecting payload.

Optionally, users can select internal RF modules for existing waveguide installations or external RF Heads (using low cost coax cable) (high and low power heads available) where long waveguide lengths are expensive and suffer high losses. This feature can truly maximize link and costs budgets.

Available T1 and E1 interfaces transport PBX and RS 232/422 traffic as well as audio and control signals. An Ethernet interface is available for Internet and Intranet traffic and is multiplexed on the carrier as ASI. Internal MPEG2 encoder options support legacy CVBS video signals, while digital services can be added by the internal multiplexer input. Users can “chain” the external ASI while adding all the tables necessary for easy decoding and signal identification with ease.

The GL can optionally provide internal transparent multiplexing for transport of streams without re-mapping. Up to 8 streams can be muxed with complete transparency. Hot standby, ASI switching, automatic logging of 15,000 alarm events, 100 to 240 VAC and 24/48 DC power options, full Java web interface and dedicated remote program control over Internet or Intranet, are just some of the features that are standard with the GL 2 to 23 GHz fixed link.



GL DIGITAL FIXED LINK

2 to 23 GHz

GL Series Modem

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 MPEG2 CODEC with In/Out CVBS with MUX/DEMUX
- CDC/2:** 4:2:0 Real-Time MPEG2 CODEC with Analog Audio or SDI with MUX/DEMUX
- ASW/6:** Automatic or manual switch over between two IF signals without loss of signal
- SWO/4:** Automatic or manual switch over between RF signals (Up to 2 GHz)
- SWO/5:** Automatic or manual switch over between RF signals (Up to 14 GHz)
- UCM/X:** Internal agile Up-Converter module. Convert 70 MHz input to selected frequency. Available from 1.98 to 14.5 GHz
- DCM/X:** Internal agile Down-Converter module. Convert selected frequency to 70 MHz. Available from 1.98 to 14.5 GHz
- CDP/1:** Coaxial Adapter Module, used connect outdoor units
- AMP/X:** Internal Amplifier. 2.5W Linear (+34 dbm) Available for 2/5/7/10/13 GHz
- UNM/2:** DVB-S/DVB-T Modem
- MPA-4:** 4 ASI to ASI Transparent Multiplexer
- DMA-4:** ASI to 4 ASI Transparent De-multiplexer
- MPX/8:** Multiplex and De-multiplex T-1/E-1 to ASI

Amplifier	Model (EKAMP/x)	5	6	1	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)

Down Converter Board	Model (EKDCM/x)	1.9	2	5	59	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	10.0 - 10.7	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)											

Up Converter Board	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