GUZIK PRODUCT BULLETIN

UNIVERSAL PREAMPLIFIER 14

- *Write channel with data speed up to 8 Gbit/sec*
- *Laser channel with data speed up to 8 Gbit/sec*
- *Three read channels with 100 kHz to 3.5 GHz bandwidth*
- *Two channels dynamic TFC control*
- *Write data and laser data modulation signals with bandwidth up to 20 MHz*

New

Universal Preamplifier 14 (UP14) is designed for TDMR and HAMR Head Amplifiers. With new Guzik RWA4000 TDMR, UP14 allows to process signals from three Read Channels. It also supports two high speed data channels for Write data and Laser data. UP14 has two channels for dynamic TFC control and allows to program TFC power per sector and close loop TFC power control in each channel. UP14 can generate two programmable modulation signals for write data and laser data with bandwidth up to 20 MHz. UP14 consist of two boards. The first UP14 RW Board processes high-frequency signals: read-back signals, write data and laser data. The second UP14 Control Board provides power, control and low-frequency signal generation: TFC, write data modulation and laser modulation.

Universal Preamplifier UP14 Specifications:

Write Channel & Laser channel
- **Up to 8 Gbit/sec data speed**
- **30 ps rise/fall time of write data (20-80%, typical)**
- **Positive +2.5V CML data outputs**

TFC Control
- **Dual channels TFC Control**
- **Maximum TFC Voltage: 4. 5V**
- **Fully programmable dynamic TFC Control with possibility to program power on each sector**
- **Close loop TFC power control**
- **Bandwidth: DC to 20MHz**
- **12 bit resolution**

Head Amplifier control
- **Real time control per sector**

16 Mb SRAM Memory
- **To store settings for real-time control of TFC, Headamplifier registers, Write current, and Laser modulation**

Read Channel
- **Bandwidth: 100 kHz to 3.5 GHz at –3 dB**
- **Flatness: ±0.2 dB to 1 GHz, ±0.3 dB to 2 GHz**
- **Output: Differential
  Nominal output level: 250 mV (SE, 50 Ohm termination)**
- **Typical Non-Linear Distortion: better than 1% (250 mV output level), full bandwidth**
- **Amplification 7 dB**

Write & Laser current Modulation signals
- **Max amplitude: ±2 V**
- **Output impedance: 50 Ohm**
- **Bandwidth: DC to 20 MHz**
- **12 bit resolution**

Software Requirements
- **WITE32 ver 4.50 or higher**