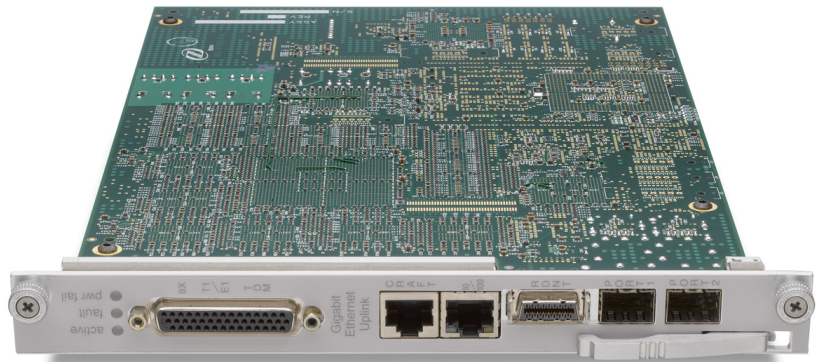


## MALC Dual GigE/RPR Capable of Supporting Rings as well as GR303/V5.2

- ✓ *Supports Redundancy in Active/Standby Configuration*
- ✓ *RPR - IEEE 802.17 Transport*
- ✓ *Integrated TDM Ports for direct connection to traditional Voice Switches*



The MALC is a full-featured Broadband Loop Carrier (BLC) optimized for delivering voice, data, and video services over a pure packet access network. MALC gives carriers the flexibility to cost-effectively deliver triple play services over existing facilities today and to migrate these services on a port-by-port, service-by-service basis to a pure packet network. This migration is accomplished without disrupting subscriber service or revenue streams, giving carriers the ultimate flexibility for optimizing their networks and serving their subscribers.

The MALC's GigE uplink cards enables thiemigration to pure packet networks by integrating TDM interfaces onto the uplink card. This allows direct connections to the GR303 or V5.2 Voice switch for transport of analog voice while allowing the transport of VoIP, Video and data services over the GigE ports.

In addition the GigE Uplink provides full card and network redundancy by supporting an active card and backup standby card in the same chassis. If a card or network failover occurs the standby card will take over. The failover to the standby card occurs without the loss of voice calls.

## Technical Specifications

### Interfaces

- 2 SFP Based GigE Ports Supporting Copper or Fiber SFPs
- 8 T1/E1 TDM Ports Integrating GR303/V5.2 (Optional)

### Voice Support

- VoIP: MGCP (RFC 3435), SIP (RFC 3261), H.248
- G.711 encoding with G.168 echo cancellation
- G.726
- G.729 with fallback to G.711 for fax
- 2 Interface Groups per card
- GR-303 / V5.2
- Full GR-303 EOC and TMC implementation

### Protocol Support

- RIP v1 (RFC 1058)/RIP v2 (RFC 2453)
- DHCP Server (RFC 2131, 2132)
- DHCP Relay
- Bridging 802.1D
- VLAN 802.1Q with 802.1p Priorities
- Multicast IGMP v1/v2
- IEEE 802.17 RPR
- 802.3ad Link Aggregation

### Management

- Terminals
  - ZMS (Zhone Management System) via SNMP v2c for GUI and CORBA IDL machine interface
  - Terminal for Command Line Interface (CLI)
  - Built-in GUI-based Management
- Management Interfaces
  - In-band IP
  - Out-band IP over 10 / 100 Base-T Ethernet or V.24 serial for async terminal

### Regulatory Compliance

- NEBS level 3 compliant
- RUS listed
- Safety: UL 60950 3rd edition, CSA 950 3rd edition, EN 60950, AS / NZS 3260, TS 001
- Emissions: EN 55022A, CFR47 PART 15A (FCC)
- Immunity: NEBS GR-1089-Core level 3, EN 55024, EN 55082-1, T1.601-1992
- Environmental: NEBS GR-63-Core level 3, GR-487 compliant, ETS 300 019-2-x compliant, ISTA transportation and handling
- Network Certification: FCC Part 68, CTR-12, CTR-13, DOC CS-03, TSO 16, GR-57
- Telcordia OSMINE certification

### Operating Requirements

- Ambient operating temperature: -40° C to +65° C
- Relative operating humidity: up to 85% (non-condensing)
- GR-487 compliant
- Designed for outside plant deployment

## Ordering Information

### GigE Uplink Cards

MALC-UPLINK-2-GE	2-Port GigE & 8 Port T1/E1 TDM Uplink Card, Requires SFPs
MALC-UPLINK-2-GE-R	2-Port GigE & 8 Port T1/E1 TDM Uplink Card, Includes 2 cards and Cable, Requires SFPs
MALC-UPLINK-2-GE-ONLY	2-Port GigE Uplink Card, Requires SFPs
MALC-UPLINK-2-GE-ONLY-R	2-Port GigE Uplink Card, Includes 2 Cards and Cable, Requires SFPs

### Accessories

MALC-CBL-GE-RED	Inter-card redundancy cable for Dual GigE Cards
MALC-GE-SFP-LX	SFP Long-Reach Optics up to 10km (Dual Fiber)
MALC-GE-SFP-SX	SFP Short-Reach Optics up to 500m (Dual Fiber)
MALC-GE-SFP-TP	SFP Copper Interface
MALC-GE-SFP-ZX	SFP Extended Reach Optics up to 80km (Dual Fiber)
MALC-AE-SFP-GE-LX-1310	SFP Long Reach Optics up to 10km, Transmit on 1310nm (Single Fiber)
MALC-AE-SFP-GE-LX-1490	SFP Long Reach Optics up to 10km, Transmit on 1490nm (Single Fiber)
MALC-AE-SFP-GE-LX-PAIR	SFP Long Reach Optics up to 10km, Pair of single fiber
MALC-AE-SFP-GE-40KM-LX-1550	SFP Long Reach Optics up to 40km, Transmit on 1550nm (Single Fiber)
MALC-AE-SFP-GE-40KM-LX-1310	SFP Long Reach Optics up to 40km, Transmit on 1310nm (Single Fiber)

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