The MT90222, MT90223, and MT90224 are multi-rate inverse multiplexing for ATM (IMA) and transmission convergence (TC) devices that process ATM traffic for transmission over T1/E1, fractional T1/E1, and DSL lines. With this series of ICs, Zarlink provides complete hardware and software IMA solutions. The ICs integrate features that optimize flexibility and ease implementation of broadband access equipment.

Applications

- ATM Edge Switches
- DSL Access Multiplexers (DSLAMs)
- Wireless Basestations and Controllers
- Integrated Multiservices Access Platforms

Flexible Solution

- Identical package and pin-out locations support multiple combinations to accommodate four- to 32-ports on a single IMA line card with scalable cost.
- Multi-rate functionality allows the devices to support ATM traffic over T1/E1, fractional T1/E1 or DSL carriers.
- Up to six devices can be cascaded into IMA groups via a TDM ring that handles up to 32 links.
- Mixed-mode services allow independent IMA and TC layer applications, as well as symmetrical and asymmetrical DSL links.

Dependable Implementation

- Field-proven software state machines deliver robust designs.
- Complete hardware and software solution is reinforced by interoperability track record.
- Flexible TDM interface is compatible with off-the-shelf framers without glue logic.

Advanced Features

- Pre-processing of Rx ICP cells off-loads CPU.
- Loopback capability at both TDM and UTOPIA ports simplifies diagnostics.
- Port aggregation allows data rates up to 10Mb/s to be supported.
- Simultaneous support of IMA Spec. V1.1 and V1.0.
- True common and independent transmit clocking options for each link.

Standards Compliant

- ATM Forum's IMA specification 1.1 (AF-PHY-0086.001); backwards compatible with version 1.0.
- ATM Forum's AF-PHY-0130.00 specification for ATM over Fractional T1/E1.
- ITU G.804 recommendations for cell mapping.
- ITU I.432 cell delineation process.

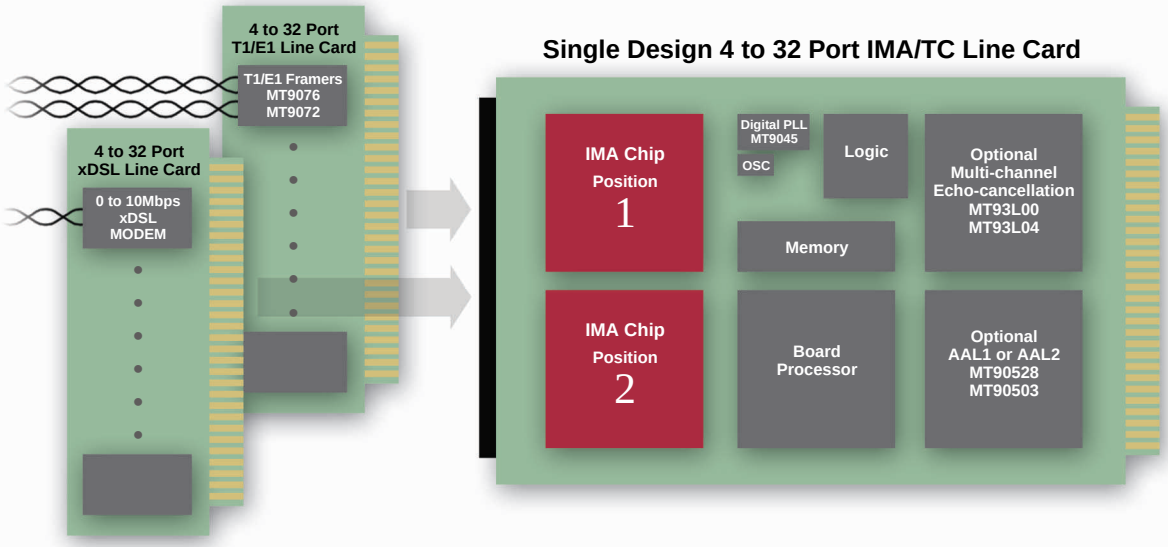
Customer Support

All three devices are supported with extended in-house support, which includes the evaluation board, device driver and the IMA CORE state machine software. An expert system support team works in synergy with customers' design team to achieve fast time-to-market results.

Applications

IMA has been used very successfully to bridge the bandwidth gap between T1/E1 and DS3/E3 in ATM broadband access applications. With the rapidly expanding popularity of this function comes the market demand for a variety of configurations: 4 ports, 8 ports, 16 ports, 24 ports and 32 ports. The MT90222/3/4 series of IMAs address this requirement in a seamless and cost-effective fashion.

DSL deployment provides an inexpensive means for broadband users to be connected to the ATM network. Again, Zarlink's multi-rate IMAs offer a simple solution to doubling or quadrupling this bandwidth without costly installation expenses on the part of service providers.



Same Design Scalable from 4 to 32 Ports

Number of Ports	4	8	16	24	32
IMA Chip Position 1	4-Port IMA MT90222	8-Port IMA MT90223	16-Port IMA MT90224	16-Port IMA MT90224	16-Port IMA MT90224
IMA Chip Position 2	Not Populated	Not Populated	Not Populated	8-Port IMA MT90223	16-Port IMA MT90224

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