Arrive is a carrier-class broadband and packet network semiconductor solutions company with a broad portfolio of highly integrated systems-on-a-chip products combining voice, data, Internet and multimedia content.Our ASICs and CodeChips™ provide flexible next-generation solutions allowing our customers to meet their growing broadband connection needs.

Arrive Technologies, Inc. was founded and incorporated in 2001, and is principally engaged in development of integrated circuit devices. Its design team is located in Ho Chi Minh City, Vietnam.

CodeChips are virtual ASICs. Unlike traditional integrated circuits with fixed features, CodeChips are system-on-a-chip solutions that are integrated onto advanced leading-edge programmable gate arrays. CodeChip's design and feature flexibility allow for lower costs, dramatically faster development cycles, and rapid response to changing requirements. Our CodeChips provide flexible next-generation solutions allowing our customers to meet their growing broadband connection needs.

CodeChip™ Product Line

CodeChips are system-on-a-chip solutions that are integrated onto advanced leading-edge FPGAs.Arrive's flexible CodeChip architecture allows for design changes in real-time, while providing flexibility to accommodate multiple design requirements, adapt to variances in worldwide network standards, and adjust to future technical standard changes–all at a price competitive with fixed-feature ASICs.PCB size, BOM, and power consumption are also reduced by the Arrive CodeChip family.

The CodeChip family begins with a series of core features. From these, each specific design is built to specifications agreed upon by the customer and Arrive.
There arecurrently three CodeChip families:

- **Pseudowire CodeChips**
- **SONET/SDH CodeChips**
- **Carrier Ethernet CodeChips**

Arrive is currently developing a new family of Next Generation CodeChips™. This new family will add SDN-Ready capabilities to Arrive's CodeChip products. This new capability will be known as FreeFlo™.

The CodeChip Advantage

CodeChip is more than just IP blocks for FPGAs. An Arrive CodeChip includes the full FPGA Image, a full software development kit including APIs and Drivers, and is backed by the integration and testing experience of Arrive. Many customer applications require combinations of these product lines. Arrive has the experience to combine these solutions effectively.

Carrier Ethernet CodeChips

Arrive's Carrier Ethernet CodeChip devices offer Packet Processing, Switch, and Flow Processors targeted with different capacities, I/O, features and cost to meet the varied needs of equipment suppliers. The Carrier Ethernet CodeChips can be used on various packet system line cards and pizza-box systems for optical packet transport and packet radio transport. Broad applications include wireline networks and wireless networks. Many specific applications are possible, such as WDM-PON, FTTH, wholesale Ethernet, LTE, 3G and 4G backhaul, microwave radio backhaul, eNodeB and RT.

Carrier Ethernet CodeChips, Bandwidth Specific Features

CodeChip	6/8/24G	50G	100G
Switching Capacity	Up to 24Gbps	Up to 12 Gbps	4 Gbps – 5 Gbps
10 GbE Ports	1 or 2, XAUI or Serial	1 to 4, XAUI or Serial	XAUI or Serial
GbE Ports	Up to 24, Serial	Up to 48, Serial	Serial
10/100 Ethernet Ports	Up to 2	Up to 2	Up to 2

Pseudowire CodeChips

Arrive'sPseudowire CodeChip product line offers a family of complete pseudowire and mobile backhaul CodeChip devices. Arrive provides total solutions in groupings of 1 to 32 E1/DS1/J1 lines; aggregation nodes with up to 84/63 DS1/E1 lines; high-density nodes with 336/252 DS1/E1 lines; or very dense nodes with 1344/1008 DS1/E1/J1 lines. The aggregation and higher density nodes use SONET/SDH interfaces for service side connection.

SONET/SDH CodeChips

Arrive's SONET/SDH CodeChip product line offers a family of highly integrated SONET/SDH Framer/Mapper products that can be used in Linear or Ring topology SONET/SDH networks. They can support typical transport configurations, including PDH-over-SONET/SDH, Ethernet/FE/GE-over-PDH, Ethernet/FE/GE-over-PDH over-SONET/SDH, and Ethernet/FE/GE-over-SONET/SDH. Anyfeatures of the above CodeChip product lines can combined together to fit a customer's exact design requirement.

Multiservice ADM ASIC Product Line

Arrive also specializes in high capacity ASIC devices. The AT4848 is a highly integrated OC-48/STM-16 or OC-12/STM-4 or OC-3/STM-1 Multiservice ADM (Add/Drop Multiplexer) on a chip. Devices in this family can be used in a variety of voice and data over SONET/SDH systems including Multiservice Provisioning Platforms (MSPP), broadband access and enterprise customer premise equipment with an integrated ADM.

CodeChip SDK (Software Development Kit)

All Arrive CodeChips come with a Software Development Kit. Major features are:

- Platform independent via a Hardware Abstraction Layer (HAL) module
- Operating System independent via Operating System Abstraction Layer (OSAL) module
- Modular device driver allowing transparent interface to higher level application layer
- Relieves the system software developer of the task of recreating the CodeChip device driver to speed up the system development and ensure a quick transition to production
- Compliant to standard telecommunications functions including configuration
- Supports interrupt handler
- Includes a command line debugger for controlling and monitoring the device
- Compliant to ANSI-C

Evaluation systems are available upon request.