

# 2070 ATC 1C CPU MODULE

## Part of the Intelight Complete Traffic Framework



2070-1C Module Front Panel View



2070-1C Module Side View

### Module Overview

Intelight's 2070-1C is a powerful Linux based CPU module for the 2070 ATC platform. The 2070-1C can upgrade Caltrans compliant 2070 controllers to ATC 5.2b performance levels. It is also available integral to Intelight's revolutionary Advanced Transportation Controllers (ATC's). Benefits over a standard 2070-1B/1E Module Include:

- Over 10 times the performance
- Robust Dual Integrated High Speed 10/100Base-T Ethernet Ports
- An Open Architecture Linux Operating System Environment
- A Front panel USB Port ([v2.0 compliant](#))
- Simultaneous support for multiple high speed communications channels

### Intelight 2070-1C Highlights

#### Package Description

The Intelight 2070-1C Module is comprised of two sub-modules as follows:

1. Engine Board CPU Module
  - [Fully ATC 5.2b hardware and software compliant](#) to latest national ITE/NEMA/ASSHTO joint ATC standard
  - Freescale MPC885 embedded microprocessor
  - Linux port based on the "next" branch of Freescale PowerPC Development Kernel
  - 5 SDLC ports
  - 64 Megabytes of DRAM and 64 Megabytes of Flash Memory
  - 1 Megabyte of battery backed-up SRAM
  - RTC battery backed
  - 2 IEEE 802.3-2002 100Base-T Ethernet ports
2. 2070 Slot Carrier Module with front panel support for
  - 2070 Standard 1X module
  - Front Panel USB Port (v2.0 compliant)
  - Front Panel DataKey socket (w/ support for up to 32 Megabit (4MB) datakeys )
  - 256 bytes SPI serial EEPROM (parameter storage)
  - 2 RJ45 Front Panel Ethernet jacks
  - TEES compliant D type 25pin C13S port
  - Fully Compliant to City of Houston/Harris County ATC Specifications

#### Standard Features

- Linux Operating System
- Integrated Web Server
- Open source U-Boot Loader
- ATC 5.2b standards compliment CPU Engine Board
- Runtime libraries per ATC5.2b
- C++ support (libstdc++ 6.0.10 and uclibc 0.9.30)
- Full support for all required ATC 5.2b software drivers under the latest Linux kernel release v 2.6.34
- Compatible with the very latest Caltrans QPL approved (TEES 2009) 2070E hardware.
- Compatible with legacy 2070's (TEES 2002 to present)
- Capable of running multiple independent applications.
- Board-support toolchain package with all necessary libraries for 3<sup>rd</sup> party software development
- Standards based API Library which allows applications to share front panel and field I/O resources
- Data Storage via USB and Data Key Ports
- Hardware based security accelerator engine with Crypto-channel support for IPSEC, SSL and other common encryption protocols
- Environmentally hardened (Operating ambient temperature from -40C to +80 C)

#### Optional Features

- gcc cross-compiler software development environment
- Web server based framework allowing Users to display and/or edit local (non-vendor specific) NTICIP compliant data via a simple browser connection





3450 S Broadmont Ste 126/ Tucson, Arizona 85713 / Phone: (520) 795-8808 / FAX :(520)795-8811 / [info@intelight-its.com](mailto:info@intelight-its.com)  
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