ADS Graphics Client™ Plus Embedded Single Board Systems

The market demanded an embedded system with a great GUI interface and Blue Collar Graphics. It demanded a compact form factor that highlights a complete integration to the Application Program Interface (API) for such IO devices as Ethernet, CAN, and ADS proprietary SMART IO. Minimal heat output. Industry-standard OSs such as Windows CE, Linux, and VxWorks with JAVA. The market wanted ALL of this at a low price point… so ADS engineered it.

Welcome to the ADS Graphics Client Plus Family: uniquely embedded systems that combine the features your application requires with all of its stacks and low level drivers done for you. The cornerstone of the package is Intel's StrongARM microprocessor: powerful yet low in power consumption. The Graphics Client's tremendous IO includes 3 serial ports, CAN, Ethernet, PCMCIA, and a "SMART IO" user-selectable combination of 32 digital IOs/12 analog inputs/PWMs.

The ADS added value is the integration of the hardware and software at the API, for such physical layers as 3 serial ports, Ethernet, an on-board LCD controller, PCMCIA and CAN. This engineering lets you bypass the complications of writing all the drivers yourself and focus directly on what's most important to you and your customer: your application. For those using the Win32 API, with an easier transition path from Win98/95/NT to WinCE, the time to market can be reduced from years to months.
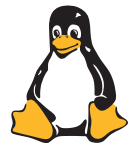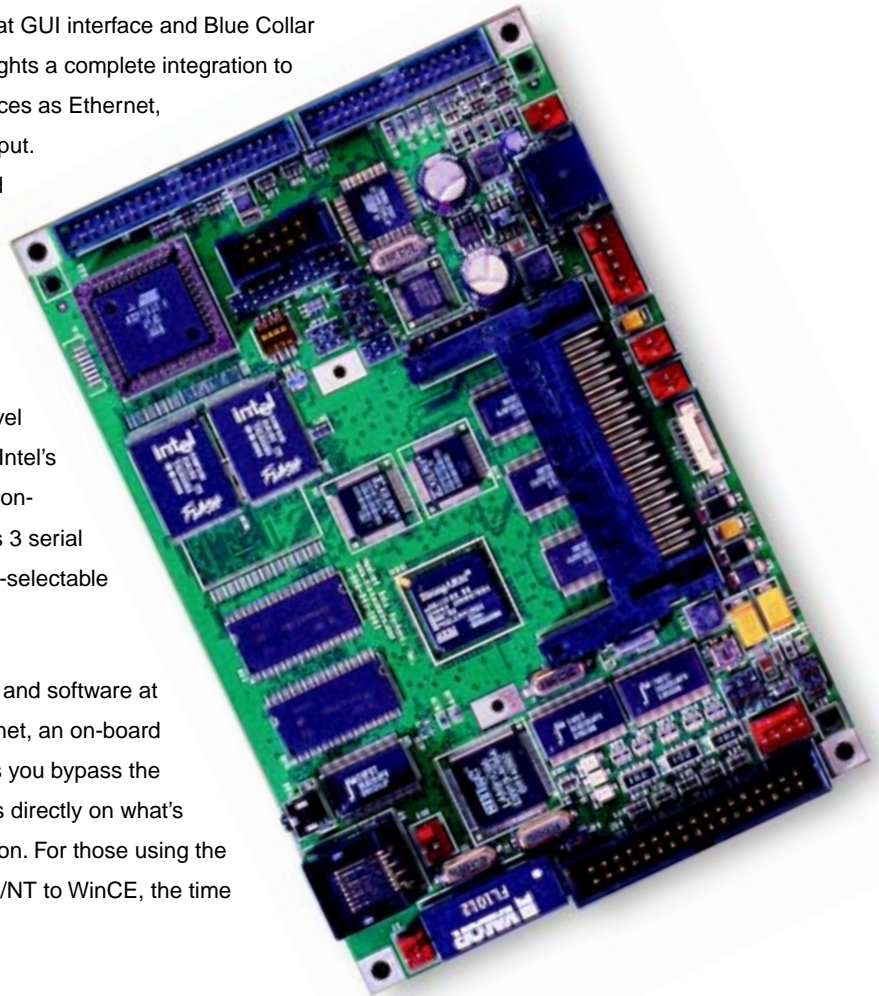
The right product for today's embedded applications

The Graphics Client Plus comes at a pivotal time in the embedded world. Microprocessors such as the StrongARM are a move beyond their PC ancestors: they are designed with embedded in mind, rather than being a reconfiguration of a desktop PC. This paradigm shift ensures more compact yet robust systems, lower power-usage and lower price. In short, the Graphics Client Plus is a complete, applications-ready package designed to complement the growth of innovative software applications. It offers laptop-type performance and with a tremendous GUI, a microcontroller price point and package.

The litmus test for any single board system

The true test to any new product is in its market interest. After its release, the Graphics Client Plus was quickly sought after by Fortune 100 companies as an alternative to their in-house development, and among industries that includes process control, medical monitoring, asset and vehicle management, kiosks and battery-operated/handheld devices.

The ADS Graphics Client Plus: Blue Collar Graphics for the most innovative of applications... Please contact us for a demonstration or evaluation system.

Microsoft® Windows® Embedded Partner
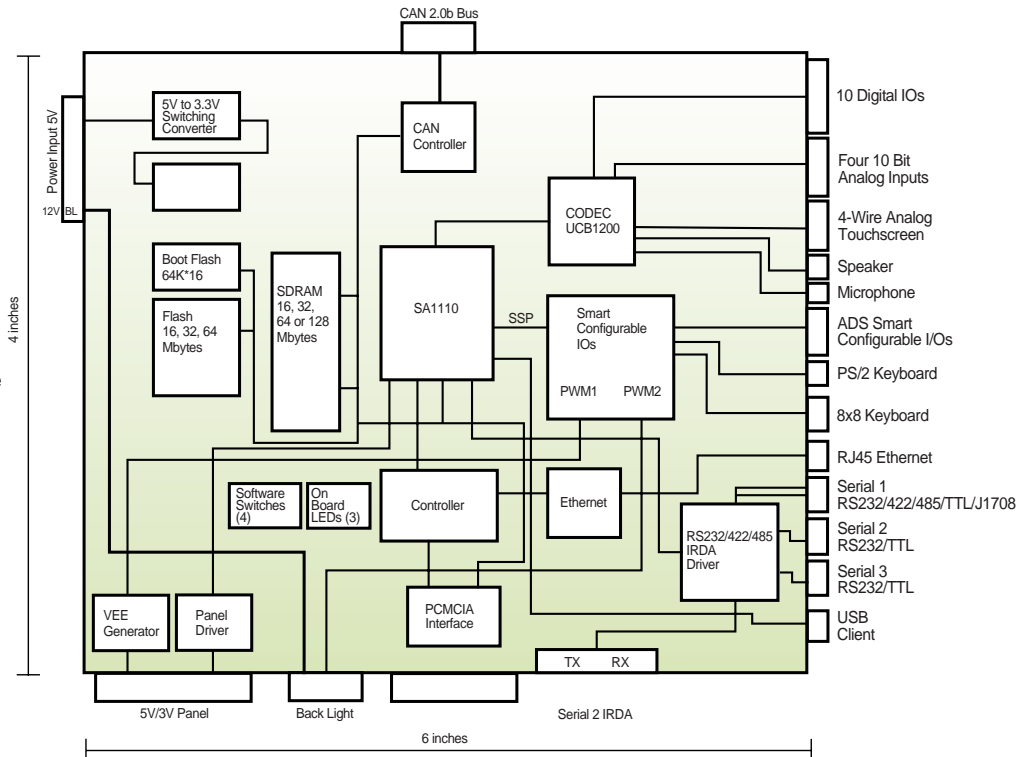
Accelerated Technology INCORPORATED

QNX®

intel®

WindRiver® An ISO 9001 Registered Company

ARM POWERED™

Applieddata.net
Embedded Computer Systems
www.applieddata.net

Graphics Client Plus Specifications

- 32-bit Digital StrongARM SA-1110 (235 MIPS/<260 mW @ 206MHz)
- Operating environments include Windows CE, CE.NET, Linux, VxWorks, QNX and Nucleus
- Supports JAVA™ with a RTOS
- Synchronous DRAM to 128 Mbytes
- Flash Memory up to 64 Mbytes
- 128 Kbytes of EPROM as a boot device
- One PCMCIA
- Three (3) Serial Ports:
    - COM1: RS232, RS485/422, TTL, Optional J1708
    - COM2: RS232, TTL or IRDA
    - COM3: RS232, TTL
- Voice/Sound:
    - 1 Speaker Output (100 mW)
    - 1 Microphone Input
- Ethernet interface: 10BT
- CAN Bus 2.0b
- Video interface up to XGA (1024 x 768) color LCD controller (passive or active; 4,092 palette)
- VEE generator with PWM control by software
- Backlight connector with PWM + ON/OFF controlled by software
- Dedicated Real Time Clock Module
- Inputs/Outputs:
    - 10 TTL Digital Software configurable Inputs/Outputs, 4 Analog Inputs (0-10V), PLUS:
- ADS Configurable IOs:
    - 8x8 Keypad/Digital Touch screen + 6 Digital IOs or,
    - 8 Analog Inputs (0-2.5V) + 14 Digital IOs
    - 22 Digital IOs
- 3 Software controlled LED status indicators, 4 configuration switches software readable, PS2 Keyboard, Real Time Clock, Touch Screen (Analog/Digital, see Configurable IO)
- Physical dimension of 4.0 inches by 6.0 inches

Block Diagram

CAN 2.0b Bus

Power Input 5V
12V BL
4 inches

5V to 3.3V Switching Converter
CAN Controller
CODEC UCB1200
Boot Flash 64K*16
Flash 16, 32, 64 Mbytes
SDRAM 16, 32, 64 or 128 Mbytes
SA1110
SSP
Smart Configurable IOs
PWM1 PWM2
Software Switches (4)
On Board LEDs (3)
Controller
Ethernet
RS232/422/485 IRDA Driver
VEE Generator
Panel Driver
PCMCIA Interface
TX RX

10 Digital IOs
Four 10 Bit Analog Inputs
4-Wire Analog Touchscreen
Speaker
Microphone
ADS Smart Configurable I/Os
PS/2 Keyboard
8x8 Keyboard
RJ45 Ethernet
Serial 1 RS232/422/485/TTL/J1708
Serial 2 RS232/TTL
Serial 3 RS232/TTL
USB Client

5V/3V Panel   Back Light   Serial 2 IRDA
6 inches

Customer Benefits

- Compact, battery operable
- Off-the-shelf: quick time to market
- Low power = low heat
- Universal interconnectability
- Tremendous GUI
- Low cost