Analytical Design Solutions, Inc

KioWare OS

Overview
The Need

- Increasing interest in deploying Android OS in kiosks
- Kiosk software needs low level OS access
  - Lockdown
  - User session management
  - Device integration
  - Remote monitoring/management
- Windows hardware all has identical low-level API access
- Android HW manufacturers develop their own custom APIs
- API quality varies widely as does 3rd party access
- Kiosk software for Android is complicated by the lack of standardization
Samsung Knox

- Market leader and most versatile API
- Problem: tablets not ideal for most kiosks
- Prefer separate CPU and display components
  - Lower cost
  - Design flexibility
  - Easier/cheaper operating maintenance
- More screen size and I/O options
- Same enclosure integration issues as tablets
- Often no general-purpose kiosk API
- Often tied to their kiosk system software
- Bottom line: limited flexibility
KioWare OS

• KioWare for Android targets Single Board Computers (SBC)
• KioWare is integrated as a firmware solution
• Includes existing KioWare for Android functionality
• All low-level API hooks that KioWare previously relied on hardware manufacturers to provide are now included in KioWare.
• No longer tied to a particular hardware manufacturer
• KioWare is now the Operating System
KioWare OS Features

- System signed
- Device has two modes:
  - KioWare (deployed state)
  - KioWare Configuration (authentication required)
  - No Home Screen access
- Modify/hide nav/status bar
- Full GPIO functionality
- Silent install/update apps via our KioWare Server/KioCloud kiosk management platform
- Automated OTA updates of firmware via KioWare OTA Server
ASUS Tinker Board SBC

- Micro USB power-in (5V/2~2.5A power is required)
- HDMI
- MIPI CSI
- 192K/24bit HD Audio
- GbE LAN
- PWM
- S/PDIF
- Upgradeable i-PEX antenna header (MHF4)
- 802.11 b/g/n Wi-Fi & Bluetooth 4.0 + EDR
- 40-pins GPIO header
- USB 2.0 Ports

56mm x 85mm PCB
49mm x 58mm mount
Markets

- Informational kiosks
- Transactional kiosks
- Vending machines
- Custom machinery – ex, goose chasing robot