



## CHECK21 SYSTEM DEVELOPMENT FOR CHEQUE & DOCUMENT SCANNING



### THE CLIENT

The client is a market leader in publishing industry.



### BUSINESS NEED

Check21 System scans and checks A4 size documents at the rate of about 28 sheets per minute at 200 Dpi in gray-scale mode. The client outsourced designing the hardware part of the system to us. The challenges we faced in the development process includes the following:

- Identifying the right scanner module and controller was the biggest challenge. This was because most of the scanner manufacturers are OEMs to one or the other leading scanner brands like HP, EPSON.
- Modifying the existing scanner driver supporting dual scanners and integrating them on the same transport to get two clean and clear dual A4 scans within the desired time of 2.2 seconds ensuring a throughput of 28 pages per minute.



### TECHNOLOGY USED

- Hardware:** Renesas Micro-controller, RS232, USB 2.0, Scanner, GPIO,
- Firmware:** Scanner driver, APIs, GUI for Scanner, Firmware, C++



### SOLUTION DELIVERED

Check21 system is based on Celeron X86 motherboard with most of the standard interfaces that any desktop PC would have. The rationale behind developing the system on X86 platform was to simplify hardware and support Windows based scanner and printer drivers. The system also had an USB extender board for interfacing various sensors on the transport to detect paper in paper tray, paper jam on the transport and drives paper input solenoid and pocket selection solenoid.

ALLEN Calsoft Labs developed APIs for the scanner interface to initiate scan, capture image in JPEG or Bitmap format and send it on Ethernet to the central server.



### BUSINESS BENEFITS

- High Speed Work Delivery

### ABOUT ALLEN CALSOFT LABS

ALLEN Calsoft Labs is a next gen digital transformation, enterprise IT and product engineering services provider. The company enables clients innovate, integrate, and transform their business by leveraging disruptive technologies like mobility, big data, analytics, cloud, IoT and software-defined networking (SDN/NFV). ALLEN Calsoft Labs provides concept to market offerings for industry verticals like education, healthcare, networking & telecom, hi-tech, ISV and retail. Headquartered in Bangalore, India, the company has offices in US, Europe and Singapore. ALLEN Calsoft Labs is a part of ALLEN group, a leader in technology consulting and engineering services.

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