

TETRA



TETRA ^{HGS}

**TURKEY'S LEADING ELECTRONIC
TOLL COLLECTION COMPANY**



ACCOMPLISHED

- ✓ 1240 SINGLE LANE GATES
- ✓ 58 MULTI LANE FREE FLOW SYSTEMS
- ✓ 10 PLUS COMPLETED PROJECTS
- ✓ 3 MILLION TRANSACTIONS PER DAY
- ✓ 21 MILLION USERS NATIONWIDE

ABOUT US

Tetra HGS, as leading electronic toll collection company in Turkey, we offer solutions that fits best to our partners in ETC field. The solutions meet all requirements related to Tollgate, Integration, Single/Multi-Lane Free Flow, Speed Enforcement, AVC & OCR, Car Park and Congestion Charging.

Constantly rising traffic requires crucial action to build a system of high-tech roads. Our Single/Multi-Lane free flow tolling solutions generates revenue with high Return on Investment(ROI) that covers capital and operating expenditures while ensuring fast and efficient flow of traffic.

Our in house design lane controller systems works flawlessly with worldwide known operating systems and databases. We have already proven ourselves by going far beyond expectations for our partners and continues developing

"Dynamic, Smart, Driven"

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WHAT WE DO



SINGLE/MULTILANE FREE FLOW SYSTEMS



PLAZA TOLLING SYSTEMS



INTEGRATION SOLUTIONS



BACKOFFICE SOFTWARE DEVELOPMENT



OPERATION AND MAINTENANCE

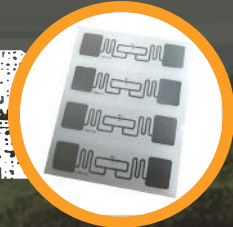
AVERAGE SPEED ENFORCEMENT



**PLATE IDENTIFICATION & AUTOMATIC
VEHICLE CLASSIFICATION**



RFID TAG PRODUCTION



CONGESTION CHARGING



PARKING/CAR PARK TOLLING



OUR SERVICES



**BUSINESS SYSTEM
ARCHITECTURE**



INSTALLATION



**BANKING AND
PROVISION SERVICES**

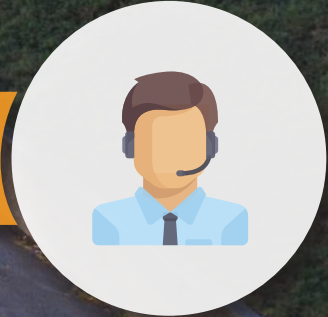
INTEGRATION



FIELD OPERATIONS



HELP DESK



WHAT WE DO

SINGLE/MULTILANE FREE FLOW SYSTEMS

System performs Vehicle Detection, Classification, Tag Reading and License Plate Recognition operations with accuracy close to 99%, all under the following conditions.

- ✓ High/low speeds
- ✓ Vehicles towing
- ✓ Straddling vehicles
- ✓ Speeds in excess of 200km/h
- ✓ Tailgating and stop/start congested traffic

Transaction data obtained from different points is converted into collection through backoffice and banking operations system. Daily 3.000.000 Transaction Data and Banking Provision operations are performed 99% successfully with entirely inhouse developed software.

- RFID Tag Reading
- DSRC Tag Reading
- ANPR Plate Recognition System



- ✓ Our toll collection systems are interoperable with other systems and meet international standards, including the highest safety standards.
- ✓ Additional traffic management functionalities can be added to the base infrastructure.
- ✓ We also offer our services for both technical and commercial system operation.
- ✓ All core technologies are produced in-house.

PLAZA TOLLING SYSTEMS

Road users pay tolls electronically, while driving through the plaza without stopping, only reducing their speed. Payment is processed automatically and barely affects traffic flow. This makes operations significantly more efficient.

Revenue streams due to high performance technology.

We engineer and deploy a variety of different solutions for traditional plaza tolling, ranging from manual toll collection by means of cash or card payments to electronic toll payment using on-board units (OBUs). ANPR/ALPR (Automatic Number Plate Recognition, Automatic License Plate Recognition) can also be implemented to support tolling efforts for RFID, DSRC technology. Our solutions are suitable for all vehicle categories and unique installations (bridges, tunnels, highways, etc.), and pricing models (time or distance-based, passing specific checkpoints, or any combination of these parameters).

We develop the core technologies in-house.

We provide system integration, as well as technical and commercial operation of toll collection systems.



- | | |
|----------------------|----------------------------|
| ✓ Time saving | ✓ Fuel saving |
| ✓ Emission control | ✓ Payment flexibility |
| ✓ Increased Capacity | ✓ Congestion reduction |
| ✓ Accident reduction | ✓ Enhanced data collection |

In this age, wide range of deployment of ETC has a tremendous effect upon the toll industry worldwide. Tolling techniques such as high-occupancy toll (HOT) lanes would have been not possible without this technology. The ability to price transportation by time of day, especially in urban areas, offers many opportunities to improve travel behavior.

INTEGRATION SOLUTIONS

Full featured end-to-end solution tailored to business needs Developed for reliable toll collection with built in controls for fraud prevention

Interoperability & compliancy with international standards Technology neutral solution, supporting all key electronic tolling technologies: CEN DSRC 5.8GHz, RFID-63

Core technologies and products produced in-house

Scalability to handle increasing numbers of users or road network extensions

Modular architecture, enabling deployment in brown- and green-field environment

Flexible for tailor-made transitions to multi-lane free flow tolling Designed for efficient and easy technical and commercial operation "One-stop-shop" solution offering, providing assistance during the planning phase, customized solution design, system implementation and technical and/or commercial operation of the system

As a global provider of various intelligent mobility solutions, we offer the broadest portfolio allowing you to upgrade your solution to include other ITS applications



BACKOFFICE SOFTWARE DEVELOPMENT

Offers contemporary solid Front-end and Back-end designs can be easily customized by the needs of the users.

Smart dashboard and menu for any level of user ranges from operator to manager with custom authorization for user,

Detailed transaction information pages with parameters such as date, time, plate no, account, fee, lane, communication information,

Modified statistical reports, Compatible with mobile devices.

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OPERATION AND MAINTENANCE

We are able to supply all of the technical services for the solutions we install. These include service and maintenance of the roadside components as well as operation of all point-of-sale and data center applications. We maintain strict service level agreements with our customers, who are able to rely on the perfect functionality of our solutions, the accuracy of all transactions, data integrity, and adherence to strict security requirements.

Our services in the area of commercial operation extend from issuing the relevant access devices, for example in the form of On-Board Units (OBUs) and transponders, to processing payments, including collection management, and providing all information systems necessary for implementation. We set up and operate the points of sale and online shops. We also provide call center services and manage websites and mobile apps for our customers.



All services are tracked continuously on the basis of contractually agreed Key Performance Indicators (KPI's) and Service Level Agreements (SLA's).

ENFORCEMENT

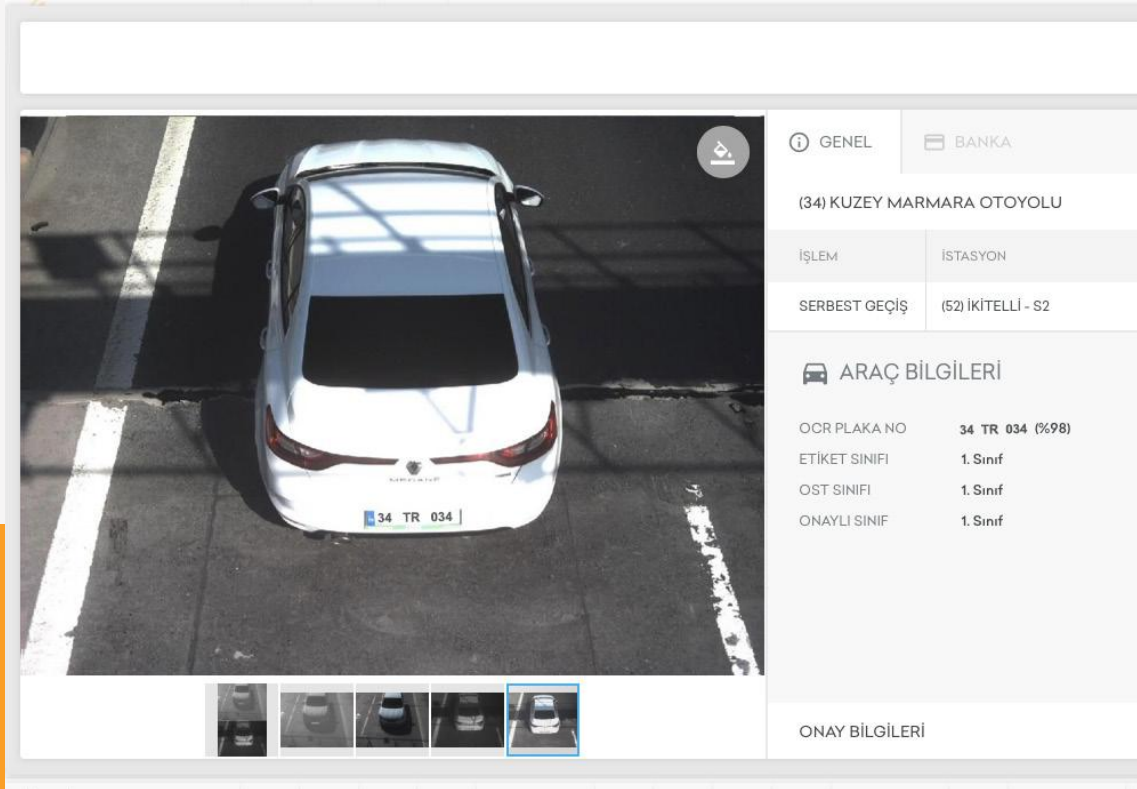
Provides a range of fixed, portable and mobile enforcement solutions which help minimise revenue leakage. Enforcement utilizes the tolling technologies as classification and video (ALPR, ANPR) and may be combined with DSRC, RFID to verify correct equipped vehicles in tolling systems.



PLATE IDENTIFICATION & AUTOMATIC VEHICLE CLASSIFICATION

Systems for plate identification play a crucial role in many applications relating to security. They enable individual vehicles to be identified quickly and reliably without intervening in the traffic flow.

- ✓ Automatic matching to number plate databases
- ✓ Support for blacklist and whitelist methods
- ✓ Top recognition rates including at high speeds
- ✓ Data protection and data security via encryption and selective transmission



Tetra HGS VC is flexible in design and supports changing classification schemes. The classification is based on axles, distance between axles, single and double wheels and multiple vehicle heights. A specific interface to the toll lane controller enables the exchange of vehicle related transaction. Additionally VC provides vehicle tracking information for the toll lane controller.

RFID TAG PRODUCTION

Manufacturing or Toll Collection firms can find rapid return on investment in RFID solutions.

Applications can track components and sub-assemblies during manufacturing, they can track valuable or process critical tools; they can be used to help manage warranty and goods returns processes; and they can be used to help authenticate products in a world where counterfeit products devalue brands or even cause safety risks.



- ✓ See an instant revenue increase
- ✓ Have confidence in a fail-safe system that functions in offline mode even if the network connection is lost.
- ✓ Have complete transparency into vendor sales and product performance.
- ✓ Real-time data reporting on sales, product popularity, and more.
- ✓ Offer multiple top-up methods (cash, credit card, debit) available online, via mobile app, automatically.
- ✓ Automatic top-ups mean guests never run out of cash or need to use an ATM.
- ✓ Process transactions 6x faster compared to other systems.

CONGESTION CHARGING

- ✓ **Improve** journey times or make them less variable,
- ✓ **Reduce** and redistribute urban traffic,
- ✓ **Lessen** the environmental impact of transportation

Our solutions for congestion charging can be made to fit into any city setting, offering fair and reliable services with high degrees of availability.



✓ We offer world-class solutions in both these technologies but decisions over exactly which to use have to take into account many factors. Some of these include:

- Whether all vehicles will have to pay, or whether there will be exemptions,
- Whether there is a good, up-to-date register of vehicles which can be used for identification purposes,
- How much an agency is prepared to pay for procurement and/or operation of a system;
- If other services are desired besides Road User Charging (such as access control, or payment for parking, mass transit and retail),
- If the visual intrusion of tolling equipment is going to be acceptable,
- Whether enforcement will use fixed, mobile, portable or a mix of systems.

PARKING/CAR PARK TOLLING

Advances in technology, coupled with the rise of global standards and increased customer confidence in and acceptance of electronic payments, open up a range of opportunities for car park operators to streamline their operations while also enhancing the customer experience.

Benefits for car park operators

- ✓ Reduces staffing requirements
- ✓ Low installation & maintenance costs
- ✓ No tickets, no ticket handling/stock
- ✓ Parking fee can be based on a variety of time periods

We Provide Services as;

- ✓ Installation of turn-key system
- ✓ Software Integration of Provision and Interface applications
- ✓ Maintenance



PRODUCTS

SYSTEMS

AUTOMATIC LICENCE PLATE RECOGNITION & AUTOMATIC VEHICLE CLASSIFICATION

Powerful and intuitive license plate recognition

Built on patented imaging technology, offers the highest performance, plug-and-play license plate recognition solution. Operating in the visible spectrum in daylight (IR at night) with a wide, multi-lane field of view, the engine is ten times more accurate than competitive systems in independent comparative testing. Combining leading image analysis technologies with next generation IP HD cameras, latest CPU architectures and advances in solid state lighting, Veracity eliminates the challenges traditionally associated with Automatic Number Plate Recognition (ANPR) systems. With Veracity, complicated set up, configuration and constant maintenance are things of the past through our patented plug and-play technology that means low system configuration and simple, fast deployment.



SYSTEM COMPONENTS



LIGHTHOUSE KIT



ANPR PROCESSOR



INFRA-RED ILLUMINATOR



4K ULTRA HD BOX CAMERA

BUS SURVEILLANCE SYSTEM

One of the key problems facing fleet managers who have mobile CCTV deployed on their fleet, is how to manage this sort of infrastructure and its health without introducing extra maintenance checks. To resolve this issue Tetra HGS has engineered a plug-n-play solution that is both simple and cost effective, combining live remote monitoring to access and review evidence with automated condition monitoring and alerting to keep it all healthy and let you know if it isn't. An additional advantage is that it also supports integration of existing networkable CCTV solutions via the original software. The solution provides a smooth hassle free upgrade path and instant access to CCTV footage via 3G rather than waiting for HDD recovery back at the depot.



SYSTEM COMPONENTS



5 OR 8 INCH TFT MONITOR



4 CHANNEL NETWORK VIDEO ENCODER



HD-IP CAMERA



CAM SWITCH PoE



FULL HD HYBRID DVR/ NVR

PRODUCTS

SYSTEMS

RAILWAY SURVEILLANCE SYSTEM

Tetra HGS Train Control and Monitoring System is a simple, centralized system of servers, operator displays, controllers, and event recorders. All system components are designed with reliable, modular technology that integrates with new or existing train equipment for maximum efficiency and flexibility. Our train control and monitoring system is a smart solution that increases fleet interoperability, expedites maintenance, and, ultimately, enhances revenue service.



SYSTEM COMPONENTS



CCTV MONITOR



HD RAIL PRO
COMPACT NVR



HD-IP CAMERA



CAM SWITCH PoE

PEOPLE COUNTER

The Bus Passenger Counting system is designed for types of bus or rail transit fleets to obtain a accurate real-time passenger information.Modern video-based people counting uses IP cameras with embedded video analytics for maximum accuracy and reliability. The cameras are typically placed above the area where you want to count the people that enter. Authorized users can then view real-time and historical statistics from any device and location. The system is easy to add to your existing network as it's based on IP cameras.The system includes: Bus Passenger Count Processor, 3D Camera(s) and an IPAS Report function (Intelligent Passenger Analysis System).

SYSTEM COMPONENTS



5 OR 8 INCH TFT MONITOR



BUS PEOPLE COUNTING MODULE



PRODUCTS

SYSTEMS

MOBILE ELECTRONIC DETECTION

Our tablet touchscreen software interface that allows police officers to have local access to and interact with their in-car Mobile CCTV system. Their in-car CCTV system records video evidence from all the live vehicle cameras, including their ANPR & Body-Worn officer protection cams. This provides police investigators with an integrated chain of evidence relating to all their voice and video, whilst the officer is out on-patrol. It also provides senior officers at Police Command & Control Centres with the ability to dial-in LIVE via 3G-4G to support police officers at risk, when they are responding to real-time incidents on the streets. In addition, The ANPR system captures and reads vehicle number plates whilst driving from up to 4 lanes of traffic at speeds up to 240 km/h (combined speed) with 99.9% accuracy in 4K Ultra HD.



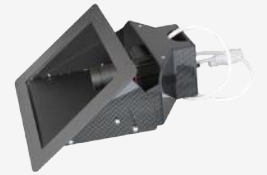
SYSTEM COMPONENTS



ANPR
PROCESSOR



FULL HD HYBRID
DVR/NVR



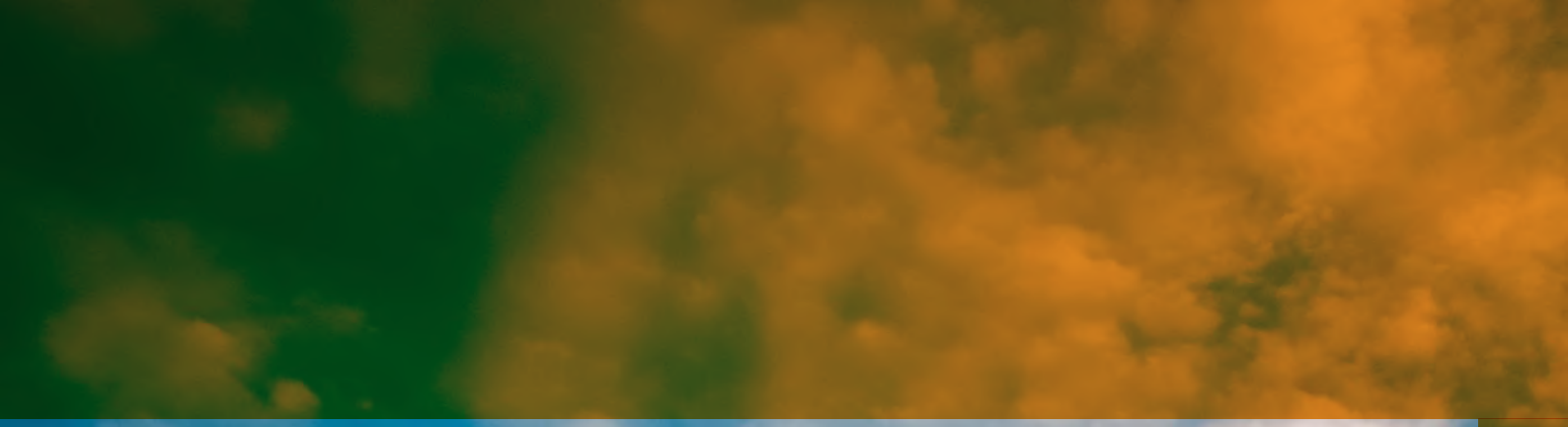
4K ULTRA HD FRONT/
BACK FACING ANPR
CAMERA



WIMS CLIENT MODULE



ANPR DC-DC PSU
WITH UPS



PRODUCTS

CAMERAS



12MP VANDAL RESISTANT IR FISHEYE CAMERA

- Easy installation with DirectIP NVR
- 12MP Sensor / 9.4MP (3200 x 2944) resolution
- Fixed-focal lens (f=1.98mm)
- micro SD/SDHC/SDXC, Smart Failover (Up to 256GB)
- Two-way audio
- Alarm in / out
- IK10 / IP67 supports
- PoE (IEEE 802.3af Class 3), 12VDC

5MP 31X IR PTZ CAMERA

- Easy installation with DirectIP NVR
- 5MP (3072 x 1728) resolution
- AF optical zoom lens (f=6.5 - 202mm), 31x zoom
- micro SD/SDHC/SDXC, Smart Failover (Up to 128GB)
- Two-way audio
- Alarm in / out
- IK10 / IP66 supports
- PoE (IEEE 802.3bt), 24V AC



FULL HD VANDAL-RESISTANT IR DOME CAMERA

- Easy installation with DirectIP NVR
- Full HD (1080p) resolution
- Motorized Vari-focal lens (f=2.8 - 12mm)
- micro SD/SDHC/SDXC
- Two-way audio
- Alarm in / out
- IK10 / IP67 supports
- PoE (IEEE 802.3af Class 3), 12V DC



12MP IR BULLET CAMERA WITH HEATER

- Easy installation with DirectIP NVR
- 12MP (4000 x 3000) resolution
- Motorized Vari-focal lens (f=4.5 - 10mm)
- micro SD/SDHC/SDXC, Smart Failover (Up to 256GB)
- Two-way audio
- Alarm in / out
- IK10 / IP67 supports
- PoE (IEEE 802.3af Class 4), 12VDC



PRODUCTS

CAMERAS



8MP IR BULLET CAMERA WITH HEATER

- Easy installation with DirectIP NVR
- 4K UHD (3840 x 2160) resolution
- Motorized Vari-focal lens (f=3.6 - 9.8mm)
- Two-way audio
- Alarm in / out
- IK10 / IP66 supports
- Built-in heater
- PoE (IEEE 802.3af Class 3), 12VDC

PREDATOR ULTRA THERMAL CAMERA PRODUCT RANGE

- Thermal camera only
- Dual 640 Thermal Cameras
- Thermal camera Side Mounted plus 1080P HD colour / Mono camera
- Thermography camera plus 1080P HD colour / Mono camera
- Thermal camera plus 1080P HD colour / Mono camera
- SWIR Thermal camera plus Analogue colour / Mono camera



ECLIPSE TC STAINLESS STEEL

- **Thermal Imager:** Uncooled VOx Microbolometer
- **FPA / Digital Video Display:** 640x512
- **Full Frame Rates:** 25Hz (PAL)
- **Sensitivity:** <50mK at f/1.0
- **Scene Range (High Gain):** -40°C to + 160°C
- **Image Compression:** H.264, MPEG4, MJPEG



4K ULTRA HD BODY-HD DVR

- Ambarella Super Clear Chipset
- 32 Megapixel Camera
- 32GB/64GB Storage Capacity
- 3000mAh Lithium Battery
- 140 Degree Field of View
- IP67 Water, drop and shock resistant

PRODUCTS

HARDWARES



RSE650 DSRC TRANSCEIVERT

- Max vehicle speed: > 200 km/h
- Operating frequency: 5.7975, 5.8025, 5.8075 and 5.8125 GHz
- Typical communication zone: 3 x 4 m (W x L) @ 6m height, 45° installation angle
- Downlink bit rate: 500kbps
- Uplink bit rate: 250kbps
- Sub carrier frequencies: 1.5 MHz (profile 0) and 2.0 MHz (profile 1)
- RTTT profiles: EN13372 Set A and Set B

NETWORK KEYBOARD

- Remote control of NVRs, network video transmitters, network video receivers and network cameras via network connection
- Control of NVRs by using a USB mouse via network connection
- Two-way audio communication
- Convenient firmware upgrades via either the USB port or ethernet
- Firmware duplication and auto-recovery functions to enhance system stability
- Management of multiple network keyboards via network connection
- Programmable by using the LCD screen



DIRECTIP 8300 SERIES H.265 4K RECORDER

- Total incoming throughput 900Mbps
- Up to 1920ips Full HD real-time recording
- Supports H.265 / H.264 codec
- Supports UHD display
- Up to 1920ips live display
- Easy to install, set-up, and play with DirectIP cameras
- Expandable up to 144TB using eSATA storage
- Supports RAID 1, 5, 10
- Supports redundant power

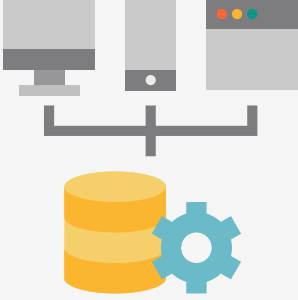


OBU615S DSRC TRANSPONDER

- Future-proof OBU with radio-frequency immunity to all Wi-Fi sources
- New low-power technology with ultra-fast, state-of-the-art DSRC processing
- Standard version (OBU615S) with seven-year lifetime

PRODUCTS

SOFTWARES



FLEX AUTOMATION

Automate workflows. More work in less time.

Design custom workflows to streamline communications and automate routine tasks to efficiently manage your daily work.

A simple way to organize and control internal processes.

5 Base features in flex automaiton

It helps you optimize your business processes and create clear tasks that help ensure that resources are used seamlessly in your organization. A powerful task management module called flex library creates workflow automation. System users without IT help or coding information can design complex processes in the system within a few hours or days.

- Multi-Programming Language
- Export - Import
- Debugging
- Flex Library
- Drag & Drop Design



PRES CONNECT

PreSConnect enables business users to optimize customer engagement through the design and delivery of personalized, consistent, coherent communications delivered everywhere, everytime.

Business processes in most companies are still predominantly manual, hence all the paper. For every business process, there is a corresponding document: a purchase order, an invoice, a proof of delivery, etc. Each of these transactional documents is very important in maintaining the cash flow of a company. If they are misfiled or lost, this can considerably slow down business. Dealing with important documents in paper format is error-prone, and very time-consuming. This problem can be solved with automation. By automating these paper processes, documents are digitally produced and stored, making them easy to retrieve. Other processes, such as approvals or invoicing, can even be automatically triggered. And finally, since employees don't need to handle everything manually, they can spend their time on more important tasks.

FLEX CMS

Flex CMS is designed to help you easily identify and manage marketing campaigns and deliver the right message to the right person in the right channel. Flex CMS is a web-based e-mail marketing solution that can help businesses add new subscribers, send e-mail bulletins, and produce various reports. Suitable for businesses of all sizes. Finance, telecommunications, insurance, service bureaux, agencies, education, energy, manufacturing and retail are the main usage sectors.

Flex Campaign Management solution helps you plan and execute effective marketing campaigns and provides many benefits:

The solution offers a very simple WYSIWYG Editor feature that allows organizations to create email or html-plain text that can customize their own brand as well as the various features they need to run email marketing campaigns.

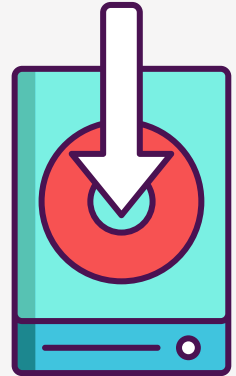
Campaign tracking feature allows users to customize and enlarge email lists; so the correct content is transmitted to the right person. It also provides real-time information about email performance and campaign activity. Users can track the behavior and participation of audiences against e-mail, content sharing, and active action elements.



FLEX ARCHIVE

Important business documents, such as digital and printed documents, digital files in multimedia and visual format, can achieve significant volumes and receive valuable and expensive storage space over time.

In addition, manually searching for relevant data may consume the uncounted amount of employee time. The Flex Archive Solution helps organizations save disk storage costs, reduce work hours and significantly speed up business processes by transforming business documents into electronically archived, efficiently managed and easily accessible digital recordings.



PRODUCTS

SOFTWARES



FLEX PRINT

Move your print job to a completely different level

Corporate B2B Web-to-Print Solution

Print Service Providers, Advertising Agencies, Marketing Communication optimizes the process of creating personalized marketing materials for companies and reduces product costs.

- User Friendly Interface
- WYSIWYG Editor
- Preview
- Easy Integration
- Control Panel - Report
- Inter - Unit Cooperation
- Online Approve
- PO Support
- Variable Data
- Troubleshooting



PRINT FLOW

Digital & Offset Printing
CRM SOLUTION

It helps to manage all of your employees, possible sales, accounts, sales lines and customer activities from a single platform

- All-In-One
- Platform Independent
- Process Tracking
- User Based Management
- Process Information
- Proposal Form
- Archive
- Stock Tracking
- Report
- Delivery Management

PROCESS TRACKING

The job information is entered.

The job is assigned to the operator. The operator defines the work details and sends the job to the print

Print steps are carried out and sent to the bind step.

The job invoices are completed.

Invoiced jobs are shipped.



CONTACT

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