Ruggedized Digital Video Recording and Transmission System for Vehicle Fleets

May 2014
Introduction

- Introduction - HeiTel by Xtralis Cam4mobile Product overview
- Ruggedized live video streaming and high quality recording solutions for mobile & wireless applications
- All-in-one concept - Tailor-made vehicle fleet solutions
- Xtralis fleet management software solutions
- VideoGateway to integrate existing mobile recorders into Xtralis fleet management software

*Designed in Germany*
Xtralis is one of the few global video surveillance technology manufacturers who consistently develop their products for vehicle fleet applications.

Our product offering includes a range of ruggedized digital recording and transmission systems, a proven mini PTZ camera to be mounted on the car roof, a windshield camera as well as a rear window camera.

Our proprietary video compression technology HTcompress guarantees fast and secure transmission of video, audio and GPS data over cellular networks to our tailor-made fleet management software which is especially designed for Central Monitoring Stations (CMS).

Integration into 3rd party fleet management systems via our SDK rounds off our product offering for vehicle fleets.
Applications for this solution. The possibilities are endless!

Cam4mobile streams and records live high definition video for detection & visual verification of threats over any cellular network.
Product Overview
HeiTel by Xtralis VideoGateways for Mobile Applications

Cam4mobile on YouTube
Transmission and Recording of Video, Audio and Alarms for Mobile Applications

CamServer VG 4c  Cam4mobile VG 4c  Cam4mobile VG 4/10s
Mobile VideoGateways for Road Vehicles and Light Rail Vehicles – Existing Solutions

**Cam4mobile VG 4c**
Digital video transmission system with recording for 1 analogue and 3 IP camera or 4 IP cameras with built-in HDD

**CamServer VG 4c**
Digital video transmission system with recording for 1 analogue and 3 IP camera or 4 IP cameras. Recording onto CF card or external HDD

**Cam4mobile VG 4**
Ruggedized digital video recording and transmission system for mobile applications with 4 analogue or IP cameras with removable HDD

**Cam4mobile VG 10s**
Ruggedized real-time digital video recording and transmission system for mobile applications with 10 analogue or IP cameras with removable HDD
Where to position Cam4mobile range?

- In any vehicle, moving or portable object where the combination of Live Video Transmission over low bandwidth, High Quality Recording and/or GPS tracking provides huge security advantages for driver, passengers and/or goods, assets

- ‘Remotely deployable’ applications where use of 3G/4G/GPRS is the only option

- Markets where apart from optimising security our features can also drastically reduce operational expenses

- Where meeting EN certifications is key

- Where a comprehensive management software is required to manage a large fleet of vehicles
Tailor-made Vehicle Fleet Solutions

- Dedicated hardware technology developed specifically for security applications….
  - Module hardware design offers full flexibility
    - Removable HDD (except C4M VG4c)
    - Cascadable up to 1000 video channels
    - High rate of reliability since no PC hardware
    - Embedded Linux, no licences required
    - Unlimited number of transmitters connectable to EMS

Improved anti vibration kit embedded into HDD-tray. Ruggedized tray equipped with tailor-made anti vibration kit for 2,5" hard drives especially designed for mobile applications (1TB HDD-M VG)
Anti vibration kit embedded into HDD-tray
CamServer VG 4c / Cam4mobile VG4c

- GPS- 3G/UMTS Antenna
- 1 analogue and 1 IP camera or 2 IP cameras
- Audio
- Video
- Power Supply
- Local Evaluation TCP/IP
- CamServer VG 2c
- Touchpad PC
- HDD case incl. HDD M
- Local Evaluation via Ethernet (TCP/IP)
- Remote Evaluation via GSM, CDMA, HSCSD, GPRS, EDGE, UMTS/3G, HSPA
Available option for CamServer VG 4c and Cam4mobile VG 4c

CamServer VG 4c

- Integrated Audio Module
  CamServer VG 4c/A
- Integrated 3G Module
  CamServer VG 4c/3G
- Integrated Audio Module and 3G Module
  CamServer VG 4c-A3G

Cam4mobile VG 4c

- Integrated Audio Module
  Cam4mobile VG 4c/A
- Integrated 3G Module
  Cam4mobile VG 4c/3G
- Integrated Heater
  Cam4mobiler VG 4c-A3G
- Integrated Audio Module and Heater
  Cam4mobile VG 4c/AH
- Integrated Audio Module and 3G Module
  Cam4mobile VG 4c/A3G
- Integrated Heater and 3G Module
  Cam4mobiler VG 4c/H3G
- Integrated Heater, Audio Module and 3G Module
  Cam4mobiler VG 4c/AH3G
Cam4mobile VG 4, Cam4mobile VG 10s

Integrated Onboard Information System

Audio

Vehicle Cameras

Video

Power Supply

Interface

Local Evaluation TCP/IP

Cam4mobile VG 10s

Touchpad PC

GPS-Receiver

Evaluation via removable hard disk drive

Local Evaluation via Ethernet (TCP/IP)

Remote Evaluation via GSM, CDMA, HSCSD, GPRS, EDGE, UMTS/3G, HSPA
Available option for Cam4mobile VG 4 and Cam4mobile VG 10s

CamServer VG 4

Cam4mobile VG 10s

Audio Feature is always integrated for Cam4mobile VG 4 and Cam4mobile VG 10s!

- Integrated Heater
  Cam4mobile VG 4/H

- Integrated Heater
  Cam4mobile VG 10s
Power management for all Cam4mobile Devices

<table>
<thead>
<tr>
<th>Detect</th>
<th>Alarm</th>
<th>Record</th>
<th>Transmit</th>
<th>Log</th>
</tr>
</thead>
</table>

Vehicle cameras

- Operating voltage 12 V DC, max. 10W
- On-board power supply 8-30 V DC
- Wiring variations w/wo device timer

Cam4mobile VG

Data transmission
HeiTel by Xtralis Fleet-Management Software Solutions
Fleet management related software

- Platform independent live image transmission and camera remote control using standard PC, Smartphone and PDA Web browser.
- Operation and alarm verification software available as CamControl Android, CamControl iPhone and CamControl Windows Phone.
- Software for stand-alone applications for operation, alarm verification and configuration.
- Software for stand-alone applications with Multi-Site functionality for operation, alarm verification and configuration.
- Video wall software for the display of up to 64 live video streams with freely definable layout on up to 4 monitors as well as access to local stored image archives of the connected VideoGateway and notification of motion events.
- Playback and evaluation software for CamDisc SVR and VideoGateway recordings and PC archives. Integral Part of: CamControl Lite/PRO/CLIENT.
- Autonomous control centre solutions with CamControl SERVER and Event SERVER, with up to 50 multiple operator stations consisting of CamControl CENTRAL and Event CLIENT, including alarm management tool with dynamic alarm processing, alarm database and interactive site map administration by HeiTel.
- Event Management System EMS
  - Event Client
  - CamControl Client

The HeiTel SDK (Software Development Kit) enables receiver-sale integration of HeiTel video transmitters into 3’rd party monitoring centre software 4) Using CamControl SERVER and CamControl CLIENT or 5) Using CamControl SERVER and video integration by a 3’rd party manufacturer 6) Using CamControl MultiClient.

- Web-Browser
- CamControl App
- CamControl LITE
- CamControl PRO
- CamControl MV
- CamControl PLAYER
- Event Management System EMS

- CamTel VG
- CamServer VG 2c
- CamDisc VG 2c
- CamDisc VG 2s
- CamDisc SVR
- CamDisc VG
- CamDisc VG HVNR
- Cam4mobile VG 2c
- Cam4mobile VG

- Detect
- Alarm
- Record
- Transmit
- Log

- IMS Motion Detectors
- CBO Adapter
- External Input/Output adapter with up to 50 additional salvo/image monitored alarm control inputs an 8 relay.
- High-performance Passive Infrared Motion Detectors for outdoor surveillance purposes for detection and reporting of alarm events.
Event Management System & HTconnect
Surveillance Server

Fleet Management System based on EMS

- View Status of IP connection to police car
- PinPoint vehicles GPS location
- GPS data to be transmitted through HTconnect
Integration into 3\textsuperscript{rd} party fleet management software

Multi-user solution with 3\textsuperscript{rd} party monitoring centre software and CamControl MultiClient for configuration, monitoring, verification, documentation and evaluation of mobile devices

Digital video transmission system with local long-term recording for 2 cameras

Shock resistant video transmission system suitable for mobile operation for 2 cameras

Shock resistant digital video recording and transmission system for mobile applications for 4 or 10 cameras
Cam4mobile including Health Check and GPS Tracking
Recently released: EMS HThealth Check MONITOR with GPS Watcher functionality

- Availability list of VideoGateways including GPS data
  - Armed/disarmed state
  - HDD status
  - Hardware issues
  - Video loss indication
  - Device temperature
  - Firmware version
  - Latest GPS position

With the GPS Watcher functionality it is now possible to display current positions and live GPS data on a map (Google Earth) of those VideoGateways which are connected via HTconnect. The EMS also records a route and position data which are displayed in the history of the GPS Watcher.
Enhanced Security using GeoFencing

Geo Fencing:

- No-go area: The transmitter should not enter this area.
- No-leave area: The transmitter should not leave this area.
- Arrival area: This is the area the transmitter shall reach.
Reduce operational costs

Telematics:

Speed Control – Monitoring bus speed can reduce fuel consumption by 15-20%!

• Providing information on speeding/aggressive driving.
• Respecting speed limits may result in 15 to 20% lower fuel consumption
Product Approvals for Cam4mobile
## Product Approvals / Product Certificates

<table>
<thead>
<tr>
<th>Norm</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>EN 50155</strong></td>
<td>Basic standard European Norm for electronic devices.</td>
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<tr>
<td>(EN61373)</td>
<td>shock test: 50m/s² in 3 directions</td>
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<tr>
<td></td>
<td>vibration: 0,9m/s² in 3 directions, 5-150 Hz, 5h</td>
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<tr>
<td></td>
<td>temperature: -25°C up to +70°C</td>
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<tr>
<td></td>
<td>safety: 500V isolation. / 0.6; 1.4 x nominal voltage</td>
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<tr>
<td><strong>EN 50121</strong></td>
<td>European Norm for EMC</td>
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<tr>
<td></td>
<td>radiated emission</td>
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<tr>
<td></td>
<td>conducted emission</td>
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<tr>
<td></td>
<td>burst / surge</td>
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<tr>
<td><strong>E-mark</strong></td>
<td>EMC Directive: Electromagnetic compatibility in motor vehicles and installed electrical/electronic components</td>
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<tr>
<td>2004/104/EC</td>
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Available Sales Tool
## Reference List

### Mobile Solution References (sample)

<table>
<thead>
<tr>
<th>Project</th>
<th>Country</th>
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<tbody>
<tr>
<td>1</td>
<td>BVB Basler (Public Transportation) Switzerland</td>
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<td>2</td>
<td>AAGL (Public Transportation, Liestal) Switzerland</td>
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<td>AAR (Public Transportation, Aarau) Switzerland</td>
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<td>17</td>
<td>Dubai Police Dubai</td>
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<tr>
<td>18</td>
<td>Spanish Police Spain</td>
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Tram application - Belgium

Police fleet application - Dubai
CamControl LITE – Demo Software

CamControl LITE
Single user solution for operation, alarm verification, and configuration of up to 6000 VideoGateways and storage of all transmitted images in a PC receiver archive.

The demo software is available at:


New C4M Demo Device with GPS Tracking!
Xtralis Product Selection Guide

Please Select Your Required Features *Bank Environment*

- Number of cameras:
  - 11 - 2 cameras
  - 3 - 4 cameras
  - 5 - 10 cameras
  - 11 - 16 cameras

- Video Inputs:
  - Analogue Cameras
  - IP Cameras
  - Hybrid Systems

- Recording Speed:
  - Not relevant
  - Real-time for each channel (25/30fps per camera)

- Storage Options:
  - Internal Hard Disk Drive
  - Removable Hard Disk Drive
  - Increased storage capacity (max. 8TB)
  - Compact Flash Card (CF Card) support

- Transmission/Recording:
  - Transmission only
  - Recording only
  - Transmission/Record

- Transmission Options:
  - TCP/IP (Internet)
  - Internal 3G module
  - External 3G module
  - PSTN
  - ISDN

- Audio Inputs:
  - No audio needed
  - 1 Audio for each channel
  - Bidirectional Audio

- Audio Inputs:
  - IP cameras with built-in analytics

- Product Approvals:
  - BSI Kitemark
  - FCC Approval
  - CE Approval
  - VDS 2455.3 Protocol

- Monitoring Software:
  - Xtralis Xcalibur
  - Xcalibur Plus
  - M3000 Server/Client
  - CamControl Lite / PRO
  - CamControl MV

Product Recommendation:

<table>
<thead>
<tr>
<th>Product Recommendation</th>
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<tbody>
<tr>
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<td>CanDisc VG NVR</td>
<td>FastTrace 2 Hybrid Ix</td>
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<td>FastTrace 2c Lite</td>
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<td>CanDisc VG 8</td>
<td>CanDisc DVR 4</td>
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<td>CanDisc DVR 10</td>
<td>FastTrace 2K Hybrid</td>
</tr>
</tbody>
</table>

The Tool is available at:

Storage Calculator

The Tool is available at:

The Planning Aid is available in the HeiTel Partner Forum:

Thank You