



EX 5000 Wireless Video Communicator



Zone 1 and 2
EX ib [ib] mb IIC



communication      reinvented

What it is

The Xcaster is the worlds first high definition wireless video communications device. The explosion proof product features innovative collaboration technologies and the latest wireless technologies. Integrated in a rugged, waterproof and intrinsically safe impact proof design, the Xcaster is extremely versatile and ready to take on any communication task

What it does

The Xcaster enables high quality audio and video communications to and from any location, using any network and any video communication device or computer. The product helps organizations operate more efficiently by enabling better safety, better and more rapid decisions, lower travel costs, better environment and more efficient use of all resources



WWW.PIXAVI.COM

phone: +47 909 43 156

web: www.pixavi.com

email: sales@pixavi.com

fax: +47 387 06 021



Video communication
saves the environment

High **D**efinition is now Wireless

Imagine the the possibilites of taking a full featured HD video conference out in the field, wherever you are. Capture high resolution still images and record HD video and communicate in real time, wirelessly with anyone / anywhere over the internet. All of this is now possible, with the introduction of the Pixavi Xcaster.



PIXAVI

High Definition is now Wireless

Introduction

Imagine a device so innovative and feature rich that it is supposed to belong way into the future. The Xcaster is our rendition of such a device. Pixavi has been working on this product since 2002 and we are proud to present the Xcaster high end PDA size high definition video communication device. The product features the latest streaming and video conferencing standards available.

State of the art technology

The Xcaster is combining state of the art hardware and peripheral technologies with the Linux operating system running Pixavi's latest video conferencing signaling, QoS, collaboration and streaming software. With the addition of state of the art wireless networking technology like 802.11a, 802.11g and the brand new 802.11n, the Xcaster is simply as close you can come to the ultimate video communication device.

The Pixavi approach

The general idea of video conferencing today is based on face to face communication to enable participants in meetings to see each other from different locations. Pixavi has since 1999 offered a new way of utilizing video conferencing technology. Having the benefit of the latest wireless technology, video compression codecs and the fastest processing power in a compact, wearable design, the Pixavi customers are able to take the organizational expertise to wherever it is needed.

Quality from end to end

The Xcaster is utilized when there is a need for rich communication, beyond what telephones, cellulers, PDAs, videophones and stationary video conferencing systems can offer. The Xcaster brings the ability to share information with anyone, anywhere. High quality video (HD), CD quality audio and high resolution still images (5 megapixels) are transferred in real time full duplex between users. The participants can also interact through image and application sharing. Due to the Xcaster's rugged properties it can be utilized in virtually any environments.



Video and Imaging

- 4X Optical + 12X lossless digital zoom
- Advanced Image stabilization
- Auto focus with 30 mm close range
- H.264/AVC industry standard codec
- HD Internet Streaming /w audio return
- Two way HD Video conferencing
- 5.1 Mega Pixel photos (JPEG)
- High resolution Touch Enabled LCD
- HD/SD input and output
- Onboard 16GB flash for recording



Audio

- Digital omni directional microphone
- Full duplex audio communication
- Stereo support
- Hands-Free support
- Bluetooth audio headset support
- Integrated mic and stereo speakers
- AAC LC/LD cd quality
- Echo cancellation
- Headset connection
- Line in/out



Wireless

- Brand new 802.11n
- Bluetooth v. 2.0 with coexistence
- 802.11abgn (2,4 + 5 ghz)
- Extended range support
- WI-FI location service (RF-ID)
- Seamless roaming
- WPA2 security (Enterprise)
- 802.11e, quality of service
- Internal dual band antennas
- External antenna



Networking

- Video conferencing (SIP, H.323)
- ISMA 2.0 streaming
- Collaboration (H.239)
- Diffserv QoS
- Universal Plug and Play (UPnP)
- Firewall traversal technology
- STUN server support
- RJ-45 Ethernet
- Power over Ethernet support
- USB 2.0 for computer connection

Connections

- HD/SD video I/O
- Audio /Headset
- Ethernet (RJ-45)
- USB
- SMA antenna
- External display
- DC input/charging
- External camera

General features

- Laser pointer
- Tripod mount
- 3W power LED
- Status LEDs
- Integrated stylus
- 200 h standby
- IR port for RC
- 6 hour talk time

Certifications

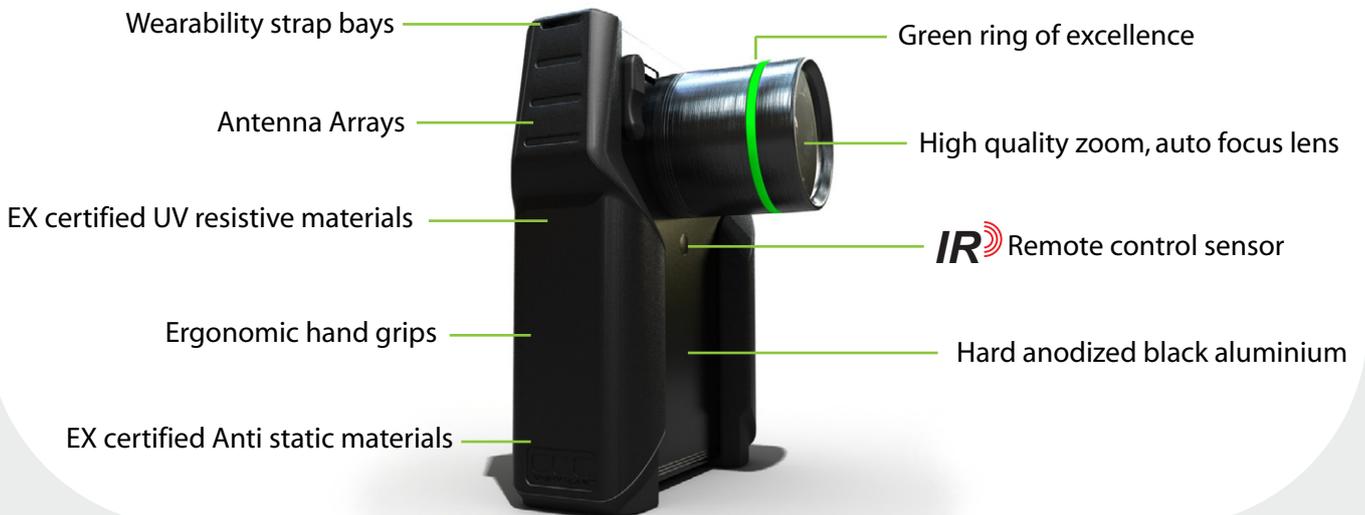
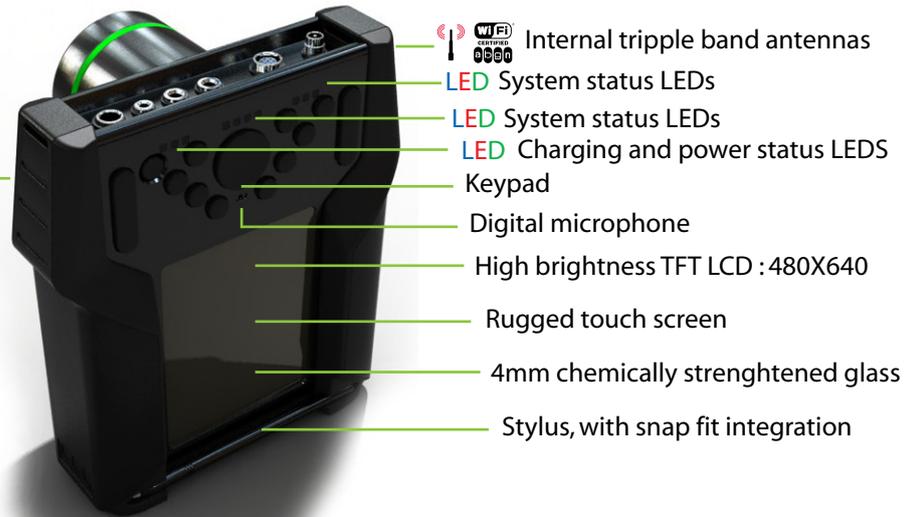
- IP68 waterproof
- CE certified
- 4 joule impact proof
- EX zone 1 and 2
- Shock proof
- IEC /ATEX
- FCC certified
- EX ib[ib] m IIC

Design and functions



Tripod mount

The Xcaster comes with an integrated tripod mount, making it possible to use the product as a had hoc CCTV camera or special applications like Internet Broadcasting sessions and special surveillance applications.



Design and functions

Collaborate, Interact, document and share what you are seeing live or via recorded media



Wearable



GLOVE ready

Laser pointer for advanced collaboration.

High power 3W LED light for supreme low light performance

PIXAVI

Xcast technology

Recording & Photo

Internet Streaming Video Conferencing

Real time collaboration

Head features



Video Conferencing

- ⓪ SIP v 2.0 and H.323 v 5.0
- ⓪ Firewall traversal technology
- ⓪ MS LCS support



Advanced Collaboration

- ⓪ Laser technology
- ⓪ H.239 support
- ⓪ Touch screen sharing



Internet streaming

- ⓪ Stream video to any computer
- ⓪ High definition AAC audio
- ⓪ Audio back channel



Recording and photo

- ⓪ High Definition h.264 video,
- ⓪ 5 megapixel still images
- ⓪ Store to network or local storage

Sub features



HD support

High definition, full duplex progressive video
720P resolution (1280x 720 pixels)



H.264 / MPEG-4 AVC video codec

Stream HD video to any computer
Windows media player, Quicktime, VLC



Megapixel support

5.1 megapixel JPEG photos
Real time transfer



High End CMOS

HD video + 5.1 megapixel resolution
Supreme SNR ratio



Image Stabilization

MEMS micro gyro sensor assist
Lossless stabilization



Recording

Conference/streaming recording
Record to local/network storage feature



Camera control functions

H.281, H.323 Annex C
Control all cameras via keypad



AAC, High End audio codec

AAC-LD and AAC-LC
CD quality audio



Player support

Windows Media player and Quicktime
All Platforms: VLC player



Integrated microphone and speaker

Digital microphone
2w speaker + high quality amp



Acoustic echo cancellation

Handsfree audio without Echo
Precise algorithm technology



Digital microphone

Unique signal noise characteristics
Noise cancelling properties



Stereo speakers

Stereo line output
High fidelity, ultra low noise



Wireless networking

802.11 abg and the new 802.11n (draft)
State of the art security



Bluetooth 2.0 support

Audio headset support
Handsfree support



Fast Ethernet

RJ-45 connector
POE support, also charges battery



Firewall traversal technologies

H.323: H.460.1x, SIP: Stun server support
Streaming: UPnP gateway support/port fixing



WPA2 enterprise security

EAP/PEAP/802.1X authentication
AES / TKIP encryption



Wi-Fi location service /RFID

Position the device within 2 meters
Integrate with tracking applications



SSL/AES encryption

Secure transfers and communication
H.235 security



Quality of service

802.11e (Wi-Fi)
Diffserv (Ethernet)



IP version 6 support

Future internet protocol
Enables better QoS functionality



Universal Plug and Play

Maximum compatibility
Easy firewall traversal



Power over Ethernet

Use Xcaster as ad hoc CCTV camera
Simultaneous charging and system power



IR port

Operate with a remote control
IR light sensor



Integrated Web Server

Configure all system parameters
Simplify streaming functions



Windows ready

Stream to Windows Media player 11
Connect to Office communicator/Live messenger



Directory services/address book

Local address book
Company directory



Advanced GUI

VisiWears new Xcast user interface
Rich graphic interface, customizable



Headset connection

Microphone and headphone
2.5 mm jack



HDTV connection

Connect to any HD ready tv (Component)
3.5 mm jack.



External Camera source connector

HD Component input
SD Composite input + 7 Volt power output



USB 2.0 connection

Copy recorded Video and Still images to PC
High speed transfers



Compact flash storage (internal)

Up to 16 GB of storage
Up to 48 hours of video / 10 000 still images



SDIO (internal)

Add your own SDIO device
Integrate with your own solutions



Lithium Polymer battery

6600 Ah, high capacity integrated pack
6 hours battery time, 200 hours standby



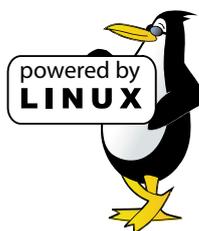
Power LED technology

3w powerfull LED
Provides illumination up to 20 meters



Future WiMax upgrade

Hardware is ready for future 802.16e adapters
World frequency coverage



AV specifications



Video

Codecs: H.264, H.263, MPEG-4 part 10, AVC, JPEG
 Resolutions: 720P (1280x720), 4CIF, CIF,
 Framerates: 720p: 25 fps., 4CIF: 25 fps, CIF: 25 fps
 Bitrates: 64 kbps - 8000 kbps
 Latency: 200 ms (point to point, ethernet)
 Special feature: Image stabilization (lossless)



Audio

Codecs: G.711, G.722, G722.1, G.728, AAC-LC/LD
 Maximum Sampling rate: 48 khz
 Maximum resolution: 16 bit
 Bit rates: 4 kbps - 128 kbps
 Channels: Stereo and Mono
 Special feature: Accoustic echo cancellation



AV Storage

Storage size: Up to 16 Gb of local storage
 Local storage capacity: 48 hours video (4CIF)
 Interface: High speed CF interface
 Special feature: Record to network storage
 Record unlimited video on network storage
 External connectivity: USB/Computer/PDA



TFT LCD

Resolution: 480 x 640 pixels
 Type: Touch sensitive (resistive)
 Brightness: 200 cd brightness
 Video mode: two 271X480 canvases
 Backlight technology: Transflective/LED
 Special feature: Sunlight readable



CMOS:

1/2.5 inch size
 Resolution: 5.2 million pixels (2692 x 1964)
 Signal noise ratio: 50 db
 Dynamic range : 70 db
 Operation: Combined HD and still image mode
 Special feature: Rolling shutter



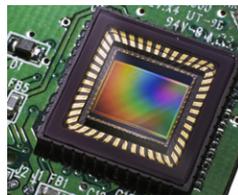
Optics

4X Optical zoom, 60 degrees Field of view
 Auto Iris Range: F2.0-F6.5
 Focal range: 3 mm to Infinity
 Mechanical shutter for precise still images
 Auto Focus with laser focus assist
 Auto macro mode , 3 mm close limit

High end color reproduction



CMOS: The future of imaging



High end optics



Auto Macro mode



Signaling specifications



RFC 3261, RFC 2237, RFC 3264,
 RC 3311, RFC 3550, RFC 3407,
 RFC 2032, RFC 2190, RFC 2429



H.323, H.350, H.235, H.239,
 H.281, H.460.17, H.460.18,
 H.460.19



ISMA 2.0, IETF, TCP, UDP,
 RTCP, RTSP, RTP, UPnP, IPv4,
 IPv6



The comprehensive signalling features of the Xcaster makes it possible to connect to any of the above product categories

Custom technologies



Integrated custom laser

- ⊗ Collaboration function
- ⊗ Auto focus assist function
- ⊗ Pointer function



Photo + Video mode

- ⊗ Capture stills while recording
- ⊗ Capture/Record while streaming
- ⊗ Capture/Record while VC



Magnetic switch technology

- ⊗ Enables watertight switching
- ⊗ EX technology enabler
- ⊗ Unique tactile user feedback



Gyroscope micro sensor

- ⊗ Provides image stabilization
- ⊗ User interface input
- ⊗ Customizable API

User Interface

The Xcaster user interface is feature rich and provides a blend between mobile the common interface principals used in phones and video conferencing terminals. This unique combinations provides a well known interface for most end users. The High resolution display provides a feature rich experience and high quality. The touch panel provides an alternative to the keypad for user interaction and also important collaboration features like live sharing of drawings and still images. The interface has been divided to provide a simple end user experience, but at the same time advanced features for the system administrator.



Power and mechanical data



Mechanical data

Size: 130mm X 110mm X 30 mm
 Weight ST 5000: 500 grams
 Weight EX 5000: 800 grams
 Temperature range: -10 to 35 degrees Celsius
 Extended (EX5000): -20 to 40 degrees Celsius



Power data

Voltage: 4.2V
 Power consumption: 4W maximum
 Battery time: 6-8 hours, 200 h standby
 Charge time: 4 hours
 POE "charge and power device" feature

In the box



Xcaster



rugged carry case



headset



Power adapter /charger



remote control



Wearability



software and manual



USB cable



External 3 dBi antenna



Reset tool

Accessories

Headsets



Wired Headset



Standard bluetooth headset



Hearing protection
bluetooth headset



EX wired headset

Storage



1 hour HD recording
3 hour SD recording



2 hour HD recording
3 hours SD recording



2 hour HD recording
6 hour SD recording



4 hour HD recording
12 hour SD recording

CompactFlash[®]

Integrated

Miscellaneous



External zoom camera



External miniature camera



Head mounted display



CCTV mount



Table top tripod



Floor tripod

Certifications

The Xcaster has gone through excessive certifications to ensure that the product can access any area without risking safety or operability. The EX certification ensures the ability to operate the Xcaster in hazardous area. The IP68 rating ensures operation in any weather condition, even accidental drops into water. The Cisco Compatibility certification ensures interoperability towards Cisco wireless infrastructure products. The Shock and Impact tests ensures that the product is rugged enough for any handling. The UPnP certifications ensures that the product can operate with other UPnP certified equipment.

Certification details



II 2G EEx (ib ib) mb T6
DNV-2008-OSL-ATEX-19089X

Certified for use in hazardous areas, EX zone 1 and 2

The Xcaster EX 5000 has been certified according to IECEx and ATEX to conform to the worlds most common standards for Eex equipment for global compliance in hazardous applications.



Cisco Compatible
Security standards
Interoperability standards



Fcc certified



Waterproof
Waterproof, submerged 1 hour
@ 1 meter depth (EX5000)



Security cam
Quality of Service
Internet camera



CE certified
EN 50013,
EN 50012, RTT&E



Shock and Impact proof
2 meter drop test
4 joule Impact test

Product labels

