

Title (en)  
HIGH DEFINITION THERMAL IMAGING FOR MEDICAL APPLICATIONS

Title (de)  
HOCHAUFLÖSENDE THERMISCHE BILDGEBUNG FÜR MEDIZINISCHE ANWENDUNGEN

Title (fr)  
IMAGERIE THERMIQUE HAUTE DÉFINITION POUR APPLICATIONS MÉDICALES

Publication  
**EP 3212064 A4 20180411 (EN)**

Application  
**EP 15854988 A 20150807**

Priority  
• US 201462072557 P 20141030  
• US 2015044233 W 20150807

Abstract (en)  
[origin: WO2016069086A1] An apparatus for high resolution thermal imaging in medical applications has a single channel EMI shielded sensor, remote cable, and laptop controller with real time image processing software. The apparatus provides high resolution, real-time viewable infrared (IR) images with a variable focus distance adjustable from six inches to infinity. The present invention enables crisp, clear imagery of the thermal band for greater awareness of everything within the field of view. Various medical applications which would benefit from high resolution thermal imagery are presented.

IPC 8 full level  
**A61B 5/00** (2006.01)

CPC (source: EP)  
**A61B 5/0077** (2013.01); **A61B 5/489** (2013.01); **A61B 5/7217** (2013.01); **A61B 5/725** (2013.01); **H01L 2924/3025** (2013.01)

Citation (search report)

- [Y] US 2013329054 A1 20131212 - HOELTER THEODORE R [US], et al
- [A] US 2012037803 A1 20120216 - STRICKLAND WILLIAM B [US]
- [AP] WO 2015061128 A1 20150430 - BAE SYS INF & ELECT SYS INTEG [US]
- [IY] TIMOTHY E. WHITE ET AL: "Digital IR imaging capability for medical applications", PROCEEDINGS OPTICAL DIAGNOSTICS OF LIVING CELLS II, vol. 3712, 13 July 1999 (1999-07-13), US, pages 35 - 46, XP055448266, ISSN: 0277-786X, ISBN: 978-1-5106-1324-9, DOI: 10.1117/12.353021
- [A] MICHAEL P. ALTMAN ET AL: "Lockheed Martin's 640x480 uncooled microbolometer camera", PROCEEDINGS OPTICAL DIAGNOSTICS OF LIVING CELLS II, vol. 3698, 26 July 1999 (1999-07-26), US, pages 137, XP055448440, ISSN: 0277-786X, ISBN: 978-1-5106-1324-9, DOI: 10.1117/12.354514
- [A] KENNETH S. KUBALA ET AL: "Increasing the depth of field in an LWIR system for improved object identification", PROCEEDINGS OPTICAL DIAGNOSTICS OF LIVING CELLS II, vol. 5784, 12 May 2005 (2005-05-12), US, pages 146, XP055448990, ISSN: 0277-786X, ISBN: 978-1-5106-1324-9, DOI: 10.1117/12.354514
- [A] NICHOLAS A. DIAKIDES: "MEDICAL APPLICATIONS OF IR FOCAL PLANE ARRAYS", ADVANCED CONCEPTS ANALYSIS INC FALLS CHURCH VA, 15 March 1998 (1998-03-15), Fort Belvoir, VA, XP055447677, Retrieved from the Internet <URL:http://www.dtic.mil/dtic/tr/fulltext/u2/a344309.pdf> [retrieved on 20180206], DOI: 10.21236/ADA344309
- [A] SPIE EUROPE LTD: "ULIS and BAE Systems push thermal imaging performance", 17 June 2014 (2014-06-17), XP055449187, Retrieved from the Internet <URL:http://optics.org/news/5/6/22> [retrieved on 20180207]
- [A] AJAY KUMAR ET AL: "Fixed pattern noise correction and implementation for infrared focal plane array based staring system using scene statistics", INTERNATIONAL JOURNAL OF IMAGING SCIENCE AND ENGINEERING (IJISE), 1 January 2007 (2007-01-01), XP055449291, Retrieved from the Internet <URL:https://www.google.nl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKewjbieyhtJbZAhVlKvAKHbVhBfiQFggqMAA&url=http%3A%2F%2Fciteseerx.ist.psu.edu%2Fviewdoc%2Fdownload%3Fdoi%3D10.1.1.400.5215%26rep%3Drep1%26type%3Dpdf&usg=AOvVaw3YQcMy2kHsS1B4X6pWeFAG> [retrieved on 20180208]
- [A] TIONG TIEN NEO ET AL: "NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA THESIS Approved for public release; distribution is unlimited FUSION OF NIGHT VISION AND THERMAL IMAGES Co-advisors", 1 December 2006 (2006-12-01), XP055449297, Retrieved from the Internet <URL:http://www.dtic.mil/dtic/tr/fulltext/u2/a462662.pdf> [retrieved on 20180206]
- See references of WO 2016069086A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2016069086 A1 20160506**; EP 3212064 A1 20170906; EP 3212064 A4 20180411

DOCDB simple family (application)  
**US 2015044233 W 20150807**; EP 15854988 A 20150807