

## Product Brief

Intel-powered clamshell  
classmate PC  
Part of the Intel® Learning Series

# Intel-powered clamshell classmate PCs: purpose-built netbooks for education



With new features including a 10-inch screen and enhanced connectivity, the Intel-powered clamshell classmate PC makes it easier than ever to bring powerful, affordable computer technology into classrooms worldwide.

The Intel-powered clamshell classmate PC was developed after years of classroom-based ethnographic research, resulting in a netbook that delivers an innovative learning methodology for students and offers new ways for teachers to engage their students. The latest clamshell model is based on Intel® architecture and Intel® Atom™ processors, and provides a premium suite of 1:1 eLearning software applications such as classroom collaboration, access management, a child-friendly desktop, and a robust webcam.



Child-friendly, ultra-compact, and easy-to-carry, the netbook doubles storage capacity and offers a larger display and keyboard, as well as a more rugged design to ensure a better and longer-lasting user experience. Teachers, students, and administrators can also enjoy faster and more reliable Internet connections thanks to 802.11b/g/n WiFi and an expansion slot for 3G connectivity.

The Intel-powered clamshell classmate PC is part of the Intel® Learning Series, a family of hardware and software products, reference designs, and services created to meet the educational needs of young students. Local technology companies that customize products and services for their markets are an important part of this program. These local, sustainable, and scalable solutions are now being deployed around the globe.



## The power of eLearning

Governments and educational leaders worldwide are seeking smart, sustainable ways to increase educational quality. Recent research on eLearning—the use of information and communication technology (ICT) in education—indicates eLearning can deliver the desired education improvements:

- **Students are more engaged and able to develop 21st century skills:** A meta-analysis of 42 peer-reviewed papers showed eLearning has a positive impact on student performance.<sup>1</sup>
- **Teachers are more productive and efficient:** Teachers can deliver more personalized learning opportunities with differentiated instruction that better meets each child's needs.<sup>2</sup>
- **Family interaction and parental involvement may increase:** eLearning can give parents greater visibility of schoolwork and open new avenues for discussion.<sup>3</sup>
- **Communities are better able to meet the educational needs of all students:** At-risk and low-achieving students are among those experiencing the greatest positive impact from deployment of 1:1 eLearning.<sup>4</sup>
- **Economic progress helps bridge the digital divide:** eLearning can lead to job creation in the technology industry and development of a better-educated workforce.<sup>5</sup>



Intel® Learning Series  
Advancing Education Worldwide



### Closing the digital divide

UNESCO estimates that only 5 percent of the world's 1 billion<sup>6</sup> primary and secondary school children currently have access to PCs. Results of Intel's efforts to reduce the digital divide in education include:

- More than 160 programs in over 60 countries
- Investment of more than USD 1 billion in the past 10 years
- More than 4 million teachers in over 40 countries have been trained through the Intel® Teach Program, a professional development program that helps classroom teachers effectively integrate technology to enhance student learning.

## A big world of learning in a small package

When children and teachers work and play with the Intel-powered clamshell classmate PC, they reap many of the established benefits of eLearning. Along with conducting research on the Internet, students can take advantage of enhanced software designed to meet the needs of young learners. They can practice their language skills by interacting with audio programs, post questions to teachers, blog, conduct virtual experiments, create animated presentations, play educational games, and engage in many other interactive learning opportunities.

Teachers can use the Intel-powered clamshell classmate PC to play an active role in transforming the learning experience for their students. Using online resources and a wide array of applications, teachers can deliver rich media curriculum, monitor student progress, test and assess students, and easily adapt lessons to individual learning modalities. Parents can also become more involved in their children's education by interacting more frequently with teachers and helping their children work on the Intel-powered clamshell classmate PC at home.

### Delivering value

#### Student usage

Enriches the learning experience through interactivity and by providing access to the Web and locally available digital content. An Intel-powered clamshell classmate PC helps facilitate group and project-based learning, encouraging collaboration with peers and teachers. Students can create rich and interactive digital content as part of their learning process.

#### Teacher support

Administration of class tests, managing computer-induced distractions, sharing rich-media content, and providing feedback on student performance to school administrators and parents

#### Teacher-parent interaction

Can help parents stay closely involved in their children's education by accessing feedback from teachers and facilitating parent-teacher as well as parent-child communication

# Education-oriented features ensure superior, lasting performance

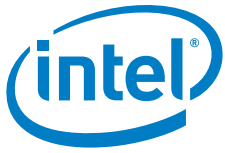
## System configuration of the Intel-powered clamshell classmate PC



| Model                     | ECS E09  | ECS E10IS2   | JP Sá Couto MG10T-PV   |
|---------------------------|--|--|--|
| <b>Processor</b>          | Intel® Atom™ Processor N270 at 1.6GHz  | Intel® Atom™ Processor N450 at 1.66GHz   |  |
| <b>Chipset</b>            | Intel® 945GSE  | Intel® NM10 Express Chipset  |  |
| <b>Memory</b>             | 1GB  | 1GB  |  |
| <b>Storage</b>            | 2GB (Linux* only)<br>4GB<br>8GB SSD<br>1.8" HDD  | 8G/16G/32G Flash (SATA)<br>160GB 2.5" HDD (SATA) with<br>HDD Protection  |  |
| <b>Operating System</b>   | Windows* or Linux*   | Windows XP SP3*<br>Windows 7 Starter/Home Basic/Professional<br>Moblin Linux*—available soon                             |  |
| <b>LCD</b>                | 7" 800 x 480 pixel color LCD<br>8.9" 1024 x 600 pixel color LCD  | 10.1" LCD 1024 x 600   | 10.1" LCD (1024 x 600) with light sensor to auto adjust brightness                 |
| <b>Connectivity</b>       | 10/100 MB Ethernet,<br>IEEE 802.11b/g (WiFi)<br>pre-IEEE 802.11s Mesh Networking<br>(Linux* only)                | 10/100M Ethernet<br>802.11b/g/n WLAN (2.4GHz)<br>Internal 3G module (optional)<br>Internal WiMAX* 6250 module (optional) |  |
| <b>Keyboard</b>           | Water-resistant keyboard<br>Touch pad (integrated vertical scrolling)  | Water-resistant keyboard<br>Anti-microbial (optional)  |  |
| <b>Battery Life**</b>     | 4.5/6.5 hours of battery usage<br>Power charging indicator LED for quick feedback when stored/stacked in cabinet | 6-cell battery (7.5 hours)<br>4-cell battery (5 hours)   |  |
| <b>Audio</b>              | Integrated 2-channel audio   | Integrated 2-channel audio   |  |
| <b>Speaker/Microphone</b> | Built-in speaker and microphone  | Built-in speaker and microphone  |  |
| <b>Dimension</b>          | 238 x 195 x 42mm   | 263 x 255 x 38mm   | 263 x 263 x 38mm   |
| <b>Weight</b>             | <1.4 Kg  | 1.4 Kg (with 4-cell battery)—1.6 Kg (with 6-cell battery)  |  |
| <b>System I/O</b>         | 2x USB 2.0 ports, 1 SD slot  | 3x USB 2.0 ports, 1 VGA port<br>SD/MMC/MS/MS Pro memory card   |  |
| <b>Camera</b>             | Inbuilt 0.3Mpx camera with 640 x 480 30 FPS video support and still photography features                         | 1280 x 1024, 1.3M  |  |
| <b>Digital Pen</b>        |  |  | Optional digital pen with software—allows simultaneous paper and on-screen writing |
| <b>Drop Test</b>          | 60 cm***   | 70 cm***   |  |

\*\* Based on 10" LCD and defined brightness, WiFi off, and camera disabled. Actual battery life may vary based on product settings, usage patterns, and environmental conditions

\*\*\* Industry standard drop test 30cm



# Benefits of the Intel-powered clamshell classmate PC

## School Administrators



- Minimal infrastructure requirement to set up and maintain
- Locally available IT support due to widespread technical knowledge base
- Preloaded with education-focused software
- Runs hundreds of popular applications

## Parents



- Worry-free computer and Internet access for children
- Increased parental involvement in child's education through interaction with teachers and coaching
- Education-specific features and software designed to help your child learn

## Teachers



- Simple digital-content distribution capabilities and support for multiple learning styles
- Ability to share up-to-date digital resources for lesson preparation
- Opportunities for professional growth and development

## Students



- Multimodal and peer-driven learning through interaction and collaboration
- Ability to create and access up-to-date rich, interactive digital content
- Experience in working with real-world computing and software skills

For more information, visit: [www.classmatePC.com](http://www.classmatePC.com), or [www.intel.com/go/classmatePC](http://www.intel.com/go/classmatePC).

For sales information, contact your Intel® Authorized Reseller.

### Footnotes:

1. Waxman, Hersch C., Lin, Meng-fen, and Michko, Georgette M. A Meta-Analysis of the Effectiveness of Teaching and Learning with Technology on Student Outcomes. Learning Point Associates, 2003.
2. Warschauer, Mark, et al. Promoting Academic Literacy with Technology; Successful Laptop Programs in K-12 Schools. Elsevier, 2004.
3. Mitchell Institute. One-to-One Laptops in a High School Environment: Piscataquis Community High School Study, Final Report. February 2004.
4. Texas Center for Educational Research. eTxTIP: Evaluation of the Texas Technology Immersion Project: Final Outcomes for a Four-Year Study (2004-05 to 2007-08), January 2009.
5. Measuring the Economic Impact of Magellan; A First Look, June 1, 2009, Vital Wave Consulting
6. Source: UNESCO Institute for Statistics. [www.uis.unesco.org](http://www.uis.unesco.org)

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